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# Environmental and Personal Contexts as Predictors of Students' Drive to Pursue Librarianship

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**Abstract.** Identifying the factors influencing students' intentions to enroll in specific courses is crucial for developing effective strategies to attract prospective students. Career decision-making often poses challenges for potential college students. This research focuses on assessing Grade 12 students' perceptions of a career in librarianship, examining both environmental and personal factors and their motivation to pursue such a career. The study employs a descriptive-correlational methodology using a standardized questionnaire to collect data from 205 Grade 12 students at Saint Michael College of Caraga. Results indicate that environmental and personal factors significantly influence students' desire to enter the field of librarianship. Regression analysis revealed that the perception of the librarian's role and students' self-efficacy are strong predictors of their inclination toward this profession. This suggests that students' self-assessment of their abilities and how they manage situations with the skills they possess play a crucial role in their career decisions. Educational institutions should create targeted marketing campaigns to highlight the benefits and opportunities in librarianship, aligning with students' goals and the factors influencing their career choices. To boost enrollment, librarians and associations must employ effective promotional strategies. Additionally, recognizing library and information science as a priority by the Commission on Higher Education emphasizes the critical need for expanding the librarian workforce through strategic outreach and education.

**Keywords:** Career decision-making; Environment factors; Librarianship; Self-efficacy; Student motivation

## 1.0 Introduction

Deciding on a future career is a significant challenge that potential college students frequently face. Making informed decisions is crucial for selecting appropriate career paths, and numerous career guidance applications have been developed to ensure students follow compelling career trajectories. Career decision-making describes the choices individuals make when selecting a specific career (Ghuangpeng, 2011). However, the existing literature has predominantly focused on broader fields such as business, engineering, and healthcare, leaving a substantial gap in understanding the specific factors influencing students' decisions to pursue librarianship.

Librarianship requires specialized knowledge and skills, with its essential function being to provide broad access to information for recreational and professional needs. Despite the incentives and marketing strategies implemented by departments and institutions, enrollment in library and information science (LIS) courses remains low. This gap in enrollment persists despite various initiatives, including scholarships from the Commission on Higher Education (2021) and the Department of Science and Technology (2019), aimed at encouraging students to enter the field.

Recent studies have highlighted the importance of understanding the environmental and personal contexts influencing students' career choices (Baglama & Uzunboylu, 2017; Brown et al., 2021). However, limited research specifically addresses the predictors of students' motivation to pursue librarianship, particularly in the context of Grade 12 students. The evolving landscape of information science and the critical role of librarians necessitate a deeper exploration of these factors to develop effective strategies for attracting prospective students to the profession.

This study aims to bridge this gap by examining how environmental influences, such as perceived value and opportunities within the field, alongside personal factors, including self-efficacy and outcome expectations, impact Grade 12 students' decisions to pursue a career in librarianship. By identifying these predictors, this research provides valuable insights that can inform targeted interventions and strategies to attract more students to this pivotal profession. Understanding these factors is essential for developing initiatives that can effectively address the enrollment challenges in LIS programs and ensure a robust future workforce in librarianship.

## 2.0 Methodology

### 2.1 Research Design

This study utilized a descriptive-correlational research design. According to Lappe (2000), descriptive-correlational research aims to describe the relationship between variables rather than infer cause-and-effect relationships. This design was appropriate for the study as it aimed to explore the relationship between environmental and personal contexts and the motivation of Grade 12 students to pursue a career in librarianship.

### 2.2 Research Locale

The research was conducted at Saint Michael College of Caraga, located in Barangay 4, Atupan St., Nasipit, Agusan del Norte, beside Saint Michael Parish. Founded on July 1, 1948, SMCC is a Roman Catholic private school. Over the years, it has developed various educational programs and facilities, earning recognition for its academic excellence and compliance with ISO 9001:2015 standards.

### 2.3 Research Respondents

This study's respondents were Grade 12 students from Saint Michael College of Caraga for the school year 2020-2021. A stratified sampling method was employed to ensure a representative student population sample. 205 Grade 12 students participated in the study, providing a comprehensive dataset for analysis.

### 2.4 Research Instrument

The researchers have utilized Anino's (2019) questionnaire in his study entitled, Environmental and Personal Context as Predictors of Senior High School Students' Intent to Pursue Librarianship." The first part of the questionnaire dealt with librarianship's environmental context, which comprises three (3) assessment indicators: employment opportunities of librarianship, tangible rewards of librarianship, and image of a librarian. The second part of the questionnaire assessed the librarianships context, which has three (3) assessment indicators: students' self-efficacy in librarianship, outcome expectations of librarianship, and personal goals on librarianship. The third part of the questionnaire determined the students' level drive to pursue librarianship. The respondents were asked to indicate their responses by checking the corresponding number 4-point Likert type scale.

The questionnaire underwent a thorough validation process to ensure its reliability and validity. Initially, the instrument was reviewed by a panel of experts in education and librarianship to assess its content validity. This process ensured that the items in the questionnaire were relevant and adequately covered the measured constructs. After the expert review, a pilot study was conducted with thirty (30) Grade 12 students who were not part of the main study. The responses from the pilot study were analyzed to determine the instrument's reliability using Cronbach's alpha. The results indicated that the questionnaire had high internal consistency, making it a reliable tool for data collection in the main study.

### 2.5 Data Gathering Procedure

The data-gathering procedure involved several steps. Initially, the researchers obtained permission from the Principal of the Senior High School Department to conduct the study and access the list of Grade 12 students. The researchers then coordinated with the teachers of each strand to distribute the questionnaires to the students. Due to the COVID-19 pandemic, data collection was conducted online using Google Forms to ensure the safety of respondents. Completed questionnaires were collected electronically. The researchers ensured that the data was securely stored and only accessible to authorized personnel involved in the study.

Specific statistical tools were employed to analyze the collected data. The weighted mean and standard deviation were used to address the first three research questions, providing a way to understand the average significance of various factors under consideration and the variability of responses. Regression analysis was conducted to determine whether the respondents' assessments of environmental and personal context significantly predicted their motivation to pursue a career in librarianship. These statistical tools were essential for interpreting the complex data sets and deriving meaningful conclusions from the study.

### 2.6 Ethical Considerations

Researchers ensured informed consent by providing respondents with a consent letter detailing the study's purpose, procedures, and their rights. Anonymizing responses and securely storing data maintained confidentiality. Participation was voluntary, with respondents informed they could withdraw without consequences. Questions were designed to pose minimal risk, and participants could skip any they were uncomfortable answering.

## 3.0 Results and Discussion

### 3.1 Environmental Context

*Employment Opportunities*

**Table 1.** Environmental context in terms of employment opportunities

| Indicators | Mean | SD | Interpretation |
|---|---|---|---|
| 1. Librarianship will help me get a professional job quickly | 3.06 | 0.75 | Agree |
| 2. Librarianship will help me have higher employment qualifications | 3.03 | 0.78 | Agree |
| 3. Librarianship will help me apply to different organizations or agency | 3.02 | 0.74 | Agree |
| 4. Librarianship will help me get quickly promoted | 2.95 | 0.81 | Agree |
| 5. Librarianship will help me acquire professional growth | 3.10 | 0.72 | Agree |
| 6. Librarianship will help me become a dignified and respected professional | 3.08 | 0.77 | Agree |
| 7. Librarianship will help me become more engaged in a job-related task | 3.10 | 0.70 | Agree |
| 8. Librarianship will help me feel safe sharing my plan, program, and policies relevant to my work | 3.07 | 0.76 | Agree |
| **Average** | **3.05** | **0.75** | **Agree** |

Table 1 shows the respondents' perceptions of the environmental context of librarianship, specifically regarding employment opportunities. The findings reveal that respondents perceive librarianship as offering satisfactory employment opportunities with an overall mean rating of 3.05, corresponding to an agreement. This suggests that the respondents believe librarianship can provide them with positive outcomes, likely due to its broad employment possibilities. This finding aligns with recent studies highlighting the significant employment prospects in the LIS field (Khan & Hussain, 2022).

*Tangible Rewards*

Table 2 shows the respondents' perceptions of the environmental context of librarianship, particularly regarding tangible rewards.

**Table 2.** Environmental context in terms of tangible rewards

| Indicators | Mean | SD | Interpretation |
|---|---|---|---|
| 1. Librarianship will offer me a regular salary | 2.89 | 0.79 | Agree |
| 2. Librarianship will offer me job security | 2.94 | 0.77 | Agree |
| 3. Librarianship will offer me fringe benefits | 2.94 | 0.75 | Agree |
| 4. Librarianship will offer me a good income. | 2.93 | 0.78 | Agree |
| 5. Librarianship will offer me materials and equipment that I need to do my work right | 3.03 | 0.73 | Agree |
| 6. Librarianship will offer me bonuses and cash incentives | 2.87 | 0.80 | Agree |
| 7. Librarianship will offer me a pay rise | 2.87 | 0.79 | Agree |
| 8. Librarianship will offer me free access to the information I need. | 3.07 | 0.74 | Agree |
| 9. Librarianship will offer me a job promotion. | 2.91 | 0.76 | Agree |
| 10. Librarianship will offer me gift certificates. | 2.96 | 0.75 | Agree |
| 11. Librarianship will offer me awards for a job well done. | 3.03 | 0.74 | Agree |
| **Average** | **2.95** | **0.76** | **Agree** |

Respondents rated their satisfaction with tangible rewards in librarianship with an overall mean of 2.95, indicating agreement. This suggests that respondents are content with job promotions and recognition for their work. Librarians benefit from bonuses and other financial incentives that can cover their expenses, but importantly, librarianship fulfills their informational needs. This implies contentment with job promotions and recognition, aligning with findings by Singh et al. (2013) that highlighted the appeal of LIS due to promising job opportunities.

*Image of Librarian*

Table 3 shows the respondents' perceptions of the environmental context of librarianship, which pertains to the image of librarians, yielded an average weighted mean of 3.18.

**Table 3.** Environmental context in terms of image of librarian

| Indicators | Mean | SD | Interpretation |
|---|---|---|---|
| 1. A librarian is highly knowledgeable and well-informed. | 3.22 | 0.68 | Agree |
| 2. A librarian is well-respected in the community | 3.23 | 0.67 | Agree |
| 3. A librarian plays a vital role in society | 3.20 | 0.69 | Agree |
| 4. A librarian has unique personal and professional skills | 3.26 | 0.65 | Agree |
| 5. A librarian is technologically savvy. | 3.10 | 0.73 | Agree |
| 6. A librarian is an organized, innovative, and creative professional | 3.22 | 0.66 | Agree |
| 7. A librarian possesses high morale and respected by many | 3.20 | 0.68 | Agree |
| 8. A librarian provides a positive impact on student | 3.20 | 0.70 | Agree |
| 9. A librarian facilitative, approachable, and accommodating | 3.18 | 0.71 | Agree |
| 10. A librarian can perform multiple tasks | 3.18 | 0.72 | Agree |
| 11. A librarian can contribute to the national development | 3.18 | 0.71 | Agree |
| 12. A librarian is a noble professional | 3.19 | 0.70 | Agree |
| 13. A librarian possesses favorable character | 3.07 | 0.74 | Agree |
| 14. A librarian is information literate and research-oriented | 3.18 | 0.73 | Agree |
| 15. A librarian has a positive image and is recognized globally. | 3.18 | 0.72 | Agree |
| **Average** | **3.18** | **0.70** | **Agree** |

The verbal interpretation of "agree" suggests that respondents recognize the characteristics and contributions of librarians to society. This supports Alansari's (2011) study, which found that job function and positive personal attributes significantly motivate career choice in librarianship.

### 3.2 Personal Context

*Self-Efficacy*

Table 4 shows the the respondents rated their outcome expectations in librarianship with an overall mean of 3.01, indicating agreement.

**Table 4.** Personal context in terms of self-efficacy

| Indicators | Mean | SD | Interpretation |
|---|---|---|---|
| 1. I feel I can deal with suppliers and books publishers | 3.01 | 0.77 | Agree |
| 2. I feel I can organize the library collections effectively for efficient retrieval of Information | 3.01 | 0.75 | Agree |
| 3. I feel I can handle multiple tasks | 2.95 | 0.79 | Agree |
| 4. I feel I can perform Librarians' duties and responsibilities | 3.05 | 0.76 | Agree |
| 5. I feel I can work well with the library staff | 3.12 | 0.74 | Agree |
| 6. I feel I can handle issues and conflicts in the library environment | 3.00 | 0.78 | Agree |
| 7. I feel I can do library networking and linkage | 2.96 | 0.80 | Agree |
| 8. I feel I can easily find a solution to workplace issues and problems | 2.97 | 0.79 | Agree |
| 9. I feel I can market the library's collection and services | 2.98 | 0.78 | Agree |
| 10. I feel I can quickly deal with library users of different personalities | 3.03 | 0.75 | Agree |
| **Average** | **3.01** | **0.77** | **Agree** |

This suggests a belief in their ability to perform various librarianship tasks, aligning with studies showing that self-efficacy is a major predictor of academic performance and professional commitment (Girelli et al., 2018).

*Outcomes Expectations*

Table 5 shows the respondents' perceptions of the context of librarianship in terms of outcome expectations. Respondents rated their outcome expectations in librarianship with an overall mean of 3.10, indicating agreement.

**Table 5.** Personal context in terms of outcomes expectations

| Indicators | Mean | SD | Interpretation |
|---|---|---|---|
| 1. Doing librarianship task will increase my self-worth and self-satisfaction | 3.06 | 0.75 | Agree |
| 2. I believe librarianship skills will be fruitful for my career | 3.12 | 0.72 | Agree |
| 3. Becoming involved in librarianship will lead to the kind of career I most want. | 3.01 | 0.74 | Agree |
| 4. Being involved in librarianship will contribute to my development as a professional | 3.13 | 0.71 | Agree |
| 5. My involvement in librarianship will lead to meaningful contributions to the field | 3.05 | 0.73 | Agree |
| 6. People I respect well approved of my involvement in librarianship | 3.12 | 0.72 | Agree |
| 7. Librarianship involvement is valued by the significant people in my life | 3.10 | 0.74 | Agree |
| **8.** Performing librarianship tasks increases my confidence as a professional | 3.13 | 0.70 | Agree |
| 9. Librarianship involvement can increase my intrapersonal and interpersonal skills | 3.12 | 0.72 | Agree |
| 10. Librarianship as my career can contribute meaningfully to my family and the community. | 3.11 | 0.73 | Agree |
| **Average** | **3.10** | **0.73** | **Agree** |

This finding suggests that respondents believe librarianship can provide them with satisfactory outcomes, likely due to its diverse employment opportunities and economic benefits. This is consistent with research emphasizing the importance of career outcomes and self-efficacy in motivating students (Restubog et al., 2010). Walters (2020) highlighted that through hard work, a well-planned path, and deep reflection, individuals could set themselves on the right trajectory toward a rewarding and fulfilling career that meets family needs and converts efforts into happiness.

***Personal Goals***

Table 6 shows the overall mean of 3.03 for personal goals, with standard deviations ranging from 0.70 to 0.79, indicating agreement.

**Table 6.** Personal context in terms of personal goals

| Indicators | Mean | SD | Interpretation |
|---|---|---|---|
| 1. The library is the suitable workplace that I most want | 2.95 | 0.79 | Agree |
| 2. Being a librarian will earn me social acceptance and approval | 3.04 | 0.74 | Agree |
| 3. Librarianship offers me sufficient income and benefits | 2.93 | 0.78 | Agree |
| 4. Librarianship offers me opportunities to travel both locally and abroad | 2.98 | 0.77 | Agree |
| 5. Librarianship will enhance my professional being | 3.02 | 0.75 | Agree |
| 6. Librarianship allows me to meet people from all walks of life. | 3.05 | 0.73 | Agree |
| 7. Being a Librarian will increase my worth in the society | 3.03 | 0.72 | Agree |
| **8.** Being a Librarian will make me knowledgeable on the current trends and issues | 3.08 | 0.70 | Agree |
| **9.** both locally and abroad. | | | |
| 10. Being a Librarian will help develop my personal and professional skills. | 3.11 | 0.71 | Agree |
| 11. Being a Librarian will help me achieve fulfillment in life. | 3.08 | 0.70 | Agree |
| **Average** | **3.03** | **0.74** | **Agree** |

This suggests that the respondents see librarianship as a profession that can provide personal and professional fulfillment. This aligns with findings that highlight the satisfaction and fulfillment associated with a career in librarianship (Li & Yin, 2022).

### 3.3 Level of Drive to Pursue Librarianship

Table 7 shows the respondents' motivation to pursue librarianship.

**Table 7.** Descriptive statistics of the level of drive to pursue librarianship

| Indicators | Mean | SD | Interpretation |
|---|---|---|---|
| 1. I will enroll in Bachelor of Library and Information Science (BLIS) | 2.50 | 0.85 | Agree |
| 2. I will make BLIS my priority course | 2.53 | 0.83 | Agree |
| 3. I will not choose any course except BLIS | 2.58 | 0.81 | Agree |
| 4. I will encourage my friends and classmates to pursue Librarianship | 2.84 | 0.76 | Agree |
| 5. I will encourage other family members and relatives to pursue librarianship. | 2.78 | 0.79 | Agree |
| **Average** | **3.03** | **0.74** | **Agree** |

Table 7 shows the respondents' motivation to pursue librarianship. The overall mean is 2.65, indicating a low intention to choose librarianship as a future career. Factors such as imperfect job markets, personal interests, and fulfillment from assisting others through information services have been identified as reasons for choosing the library profession (Onyancha, 2018; Morton, 2015).

**Table 8.** Regression analysis for the factors driving librarianship

| Model | | Unstandardized Coefficients B | Unstandardized Coefficients Std. Error | Standardized Coefficients Beta | t | Sig. |
|---|---|---|---|---|---|---|
| 1 | (Constant) | .217 | .296 | | .733 | .464 |
| | Employment opportunities | .180 | .117 | .132 | 1.543 | .124 |
| | Tangible rewards | .157 | .112 | .126 | 1.404 | .162 |
| | Image of librarian | -.261 | .112 | -.220 | -2.337 | .020 |
| | Self-efficacy | .436 | .134 | .334 | 3.257 | .001 |
| | Outcome expectations | .221 | .133 | .176 | 1.655 | .099 |
| | Personal goals | .067 | .104 | .053 | .644 | .521 |
| **Model Summary** | | | | | | |
| R = .561 | Adjusted $R^2$ = .294 | F = 15.157 | p = .000 | | | |

Table 8 displays a model summary from the regression analysis incorporating all predictor variables. Analyzing students' motivation to pursue librarianship as the outcome variable yielded a model with a moderately positive correlation of 0.561. This indicates a 29.4% variation in the students' motivation to pursue librarianship. Regression analysis showed the significance of the independent variables: (A) Employment opportunities ($p=.124$), which is greater than the significance level $\alpha=0.05$; (B) Tangible rewards ($p=.162$), also greater than $\alpha=0.05$; (C) Image of a librarian ($p=.020$), which is less than $\alpha=0.05$; (D) Self-efficacy ($p=.001$), less than $\alpha=0.05$; (E) Outcome expectations ($p=.099$), greater than $\alpha=0.05$; and (F) Personal goals ($p=.521$), greater than $\alpha=0.05$. This reveals that the image of a librarian and self-efficacy significantly predict the drive to pursue librarianship, with a moderate positive correlation of 0.561. This suggests that while other factors are relevant, these two variables influence students' career choices. Studies have shown that personal interest and self-efficacy are significant motivators for pursuing a career in librarianship (Nguyen & Pham, 2011). Busayo's (2017) study revealed that most respondents were drawn to librarianship through personal interest, while others entered the field by chance.

## 4.0 Conclusion

This study shows that environmental and personal contexts significantly influence students' intentions to pursue a career in librarianship. Among these, the image of the librarian and self-efficacy emerged as the strongest predictors. These findings align with the Social Cognitive Career Theory (SCCT), emphasizing the interplay between individual actions and environmental factors. Additionally, the results support Krumboltz's Happenstance Learning Theory, highlighting the role of both planned and unplanned learning experiences in shaping career outcomes.

Students see librarians as important and respected community members and believe in their ability to handle the profession's required tasks. To attract more students to librarianship, schools, and library organizations need to focus on improving the profession's image and boosting students' confidence through targeted programs and activities. Engaging students in library activities can enhance their appreciation of the profession. Librarians should actively promote the profession through approachable and interesting programs.

Campaigns targeting Grade 12 students, using special programs, flyers, and social media, can increase interest in LIS careers. Investing in employee training ensures motivated staff and improves organizational performance. Future research should explore additional factors influencing LIS career choices to address current challenges and contribute to program development. Effective promotional strategies highlighting the benefits of librarianship are essential for expanding the librarian workforce and attracting more students.

## 5.0 Contributions of Authors

Mariel C. Alcontin led the study's conception and design, focusing on developing the framework and methodology. She was also instrumental in collecting and initially analyzing the data. Eloisa A. Ambal played a crucial role in analyzing and interpreting the data, contributing significantly to writing the results and discussion sections. Jolo Van Clyde S. Abatayo provided critical revisions to the manuscript, ensuring the findings were robust and presented. All authors collaborated on the final writing and approval of the manuscript.

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# Best Practices in Health Emergency Management: Lessons from COVID-19 Response

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**Abstract.** The local government units (LGUs) in the First District of Negros Oriental confronted significant challenges during the COVID-19 pandemic. This research article aims to identify and analyze the best practices in health emergency and risk reduction management responses within the district. The study focuses on several critical dimensions: Policies, strategies, and legislation; Planning and coordination; Human resources; Financial resources; Information and knowledge management; Risk communications; Health infrastructure and logistics; and Health and related services. Employing a mixed-method design, the research draws on the framework of Social Systems Theory, particularly emphasizing its four functional imperatives: adaptation, goal attainment, integration, and latency. These imperatives serve as lenses to understand how the LGUs navigated and responded to the evolving challenges posed by the pandemic. In 2020, the district recorded 166 COVID-19 cases, a number that sharply increased to 2,440 in 2021, underscoring the escalating impact of the virus over time. The study identifies several sub-themes encapsulating the best practices of the LGUs in health emergency and risk reduction management. These include pro-active adaptation, emphasizing the importance of anticipating and swiftly responding to emerging challenges; the principle that frequency is key, highlighting the significance of consistent and regular actions; the more the merrier, signifying the value of deploying adequate human resources; busy bank accounts, reflecting the essential role of sufficient financial resources; official "marites" and "marites at work," emphasizing effective communication strategies; and build-build-build, symbolizing investments in health infrastructure to enhance response capabilities. These practices are not merely reactive measures to address inconsistencies in national government policy implementation but are rooted in the LGUs' proactive adoption of functional imperatives. By analyzing these dimensions and sub-themes, this research aims to provide insights into effective strategies for managing health emergencies at the local level, contributing to broader efforts in pandemic preparedness and response planning.

**Keywords:** Health emergency management; COVID-19; Negros Oriental; Philippines.

## 1.0 Introduction

The Republic of the Philippines experienced its first pandemic and faced a public health crisis (Logrosa et al., 2021). The COVID-19 pandemic and its consequences presented an unprecedented and enormous challenge to the Philippine government at the national and local levels, requiring full attention and massive resources (Dolo et al., 2021; Logrosa et al., 2021). The COVID-19 pandemic has put a tremendous amount of strain on healthcare capacity and disaster management infrastructures, not only in the Philippines but also around the world, as the majority of countries struggle to contain the virus and its devastating effects on life and economies (Duma et al., 2022; Tabuga et al., 2020).

The pandemic highlighted the importance of coordination and synergy between and among national and local government agencies (Tabuga et al., 2020). The solution is the National government issuance of executive orders that mandate LGUs to implement certain levels of containment protocols (Community Quarantine, General

Quarantine, Enhanced Community Quarantine, Lockdown, hard Lockdown) (Executive Order 112, 2020). The Philippine response to COVID-19 has been described as one of the world's longest and most stringent lockdowns. Entire provinces and cities were locked down, restricted mobility, and mask-wearing and social distancing were strictly enforced (Dolo et al., 2020; Hapal, 2021). All national agencies and local governments have been directed to allocate resources and take steps to eliminate the COVID-19 threat (Dolo et al., 2020). Punishment was laid out for violations. The government relied heavily on the police and the military to keep order and follow all health protocols (Hapal, 2021). Different levels necessitate a different emergency response system, which varies from city to city based on the policy issued by local government officials following a meeting with health committee experts with varying degrees of success (Amit et al., 2021).

Espia et al. (2021) describe that since the National government's policies are ineffective in response to COVID-19, the local government unit's intervention scheme resulted in various legislation and imposed guidelines within one region or province. Local Chief Executives (LCEs) upgraded or downgraded quarantine classifications and imposed, removed, or extended quarantine periods that included the regional equivalent of the IATF. Other local governments imposed additional entry requirements and prohibited OFWs (Overseas Filipino Workers) from returning. Another example is the requirement that those who previously tested positive undergo a repeat test before returning to normal activities. This policy deviates from DOH (Department of Health) guidelines that do not require repeat tests and instead count such cases as "recoveries." Furthermore, some local government units have lockdown zones manned by the Philippine National Police or the Army, while others have a local task force (Espia et al., 2021). Talabis et al. (2021) said that to address differences in the local COVID-19 transmission dynamics caused by heterogeneity and diversity in communities, local government units (LGUs) considered granular policies as well as real-time interventions. Some of the policies in place, such as voluntary physical separation, wearing Facemasks and shields, mass testing, and school closures, could be useful in one location but not in another (Talabis et al., 2021). The reactive policymaking by the national government and the variety of policy implementation at the local level added to the public's confusion.

The COVID-19 pandemic was fought, and its effects were kept under control by the local governments in the first districts of Negros Oriental. In order to establish the foundation for future policy formulation about health risk assessments and containments to protect the lives of its constituents and prevent unnecessarily depleting the finances of the government and individuals, it is necessary to evaluate the governance of each city and municipality in one of the poorest provinces in the country (Salindo, 2021). This study sought to answer the following questions: What were the local governments' best governance practices in the 1st District of Negros Oriental that contributed to the containment and control of the COVID-19 pandemic? These are the pertinent issues that this study will address and investigate in order to formulate future policies concerning health emergencies and hazards.

In order to address the challenges posed by local or global disasters like the pandemic and to save lives and protect health, the World Health Organization (2019) published the Health Emergency and Disaster Risk Management Framework. The framework places a strong emphasis on prevention, preparedness, and readiness, as well as response and recovery. This also emphasizes the importance of working together as a health system (WHO, 2019). The framework outlines the following components. Policies, strategies, and legislation; Planning and coordination; Human resources; Financial resources; Information and knowledge management; Risk communications; Health infrastructure and logistics; Health and related services (WHO, 2019). The framework aided national and local governments in the Philippines in developing their own health emergency and disaster risk management plans. This is to achieve the highest possible standard of health and well-being; this can be incorporated into the established International Health Regulations (2005), the Sendai Framework for Disaster Risk Reduction 2015-2030, the Sustainable Development Goals, and the Paris Agreement (WHO, 2019).

Numerous academics have looked into the reaction to the COVID-19 pandemic and the policies of the Philippine government. The actions and responses of the Philippine cities of Ilo-ilo and Cebu were documented by Espia et al. (2021), who attributed them to their close relations to Malacañang Palace. Interventions were identified by Bonardi et al. (2020) to lower infection and mortality among Filipinos. Talabis et al. (2020) said economic and demographic factors influence the communities' COVID-19 epidemiological parameters. The concept of "pasaway" was created due to the government's harsh action, and the COVID-19 response shows different degrees of usefulness (Duma et al., 2022; Hapal, 2021). Risk assessment and decision-making methods were incorporated in the analysis of COVID-19 outbreaks (Logrosa et al., 2021). Philippine policy was also described as punitive and unequal among pandemic victims (Bekema, 2021). However, little has been done to assess qualitatively and quantitatively the effectiveness of the local policies in preventing and containing the virus in the localities.

This paper examines the local government units' health emergency and risk reduction management response through the components of the Health Emergency and Disaster Risk Management Framework, which include local policies, strategies, and legislation; planning and coordination; human and financial resources; risk communications and information and knowledge management; and health infrastructure and logistics. These elements are critical components in the best practices of local government units that employ the Social Systems Theory. This analysis contends that the selected municipalities and cities' best health emergency response practices in response to the COVID-19 pandemic should serve as the foundation for prospective policy formulation for future emergencies.

The Social System Theory of Talcott Parsons serves as the guiding framework for analyzing the local governments' health emergency response and risk reduction management. The theory has been applied to explain phenomena in economic sociology (Tittenbrun, 2014), to link sociology and criminology (Chriss, 2007), to establish an entrepreneurship system (Elam & Sardana, 2008), to investigate the COVID-19 healthcare response model (Ahmed et al., 2021), and to analyze the establishment and development of an academic institution (Salindo, 2021).

How effectively did the local government units use the COVID-19 pandemic response's risk reduction management and health emergency components? The four functional imperatives of Talcott Parsons' Social System Theory provide the answer to these questions. The first is adaptation, which involves gathering sufficient resources from the environment and distributing them throughout the systems (Salindo, 2021). In this context, the pandemic compelled local government units to respond immediately to the pandemic. Municipalities and cities have identified human and financial resources to address the public health crisis. The second is goal attainment, which entails prioritizing system goals and allocating system resources to achieving them (Salindo, 2021). To stop and control the spread of the COVID-19 virus within the area, local policies, strategies, legislation, planning, and coordination of the local government units and all other concerned agencies were put in place. The third concept is integration, which refers to managing potential connections and coordinating their activities among system components. Harmonization of society as a whole necessitates the existence of solid and sufficiently convergent values and norms (Salindo, 2021). To protect the health of their constituents, this necessitates, for example, a strong connection and understanding among local government units at the local, provincial, and national levels through local government risk communications and information and knowledge management. The last one is Latency, which covers two related issues. These influence the survival and maintenance of order among social units in a social system by kinship systems, values and norms, and beliefs and ideologies (Salindo, 2021). Because of this functional imperative, it is under societal pressure to maintain some level of integration. In other words, maintaining a progressive and responsive health infrastructure and logistics. According to this point of view, effective governance must be ongoing within the constraints of required and available resources.

The analysis of the health emergency and risk reduction management response of the local government units in the 1st District of Negros Oriental in this study cannot only be interpreted as a reaction to the National Government's ineffective policy implementation in response to the COVID-19 pandemic. The response is the result of the harmonious coordination of functional systems. The interaction of social systems with their adaptation, goal attainment, integration, and latency also contributed to the sound and responsive health emergency and risk reduction management response in the COVID-19 pandemic.

## 2.0 Methodology

### 2.1 Research Design

This study aims to assess the health emergency and risk reduction management in response to the COVID-19 pandemic. It uses mixed methods (i.e., surveys and one on one interviews) to identify the best practices of the COVID-19 pandemic response of the local government units in the first District of Negros Oriental.

### 2.2 Research Locale

This study focused on five municipalities: La Libertad, Tayasan, Ayugon, Bindoy, and Manjuyod. Two cities, Guihulngan and Canlaon, are located in the First District of Negros Oriental. The area is 107.8 kilometers from Manjuyod to Canlaon City, which are 67.2 kilometers and 175 kilometers from the provincial capital, Dumaguete City.

### 2.3 Research Participants

The authors selected the participants using purposive sampling, focusing on individuals who are local heads of the Inter-Agency Task Force within the 9 Local Government Units (LGUs) in the First District of Negros Oriental. The selection included nine respondents in total. Those who were not part of the LGUs in the First District were excluded from the study.

### 2.4 Research Instrument

The interview questionnaire was adapted from the World Health Organization's framework for managing health emergencies and risks. The questionnaire was left open-ended so respondents could respond in their own words. The quantitative data were derived from the Provincial Health Office's statistical records of COVID-19 cases/mortality in the Province of Negros Oriental from 2020 to 2021.

### 2.5 Data Gathering Procedure

The qualitative data were collected through one-on-one interviews, and the quantitative data were identified through appropriate literature research. Nine one-on-one interviews were conducted with the Inter-Agency Task Force on COVID-19 response's local head of office. Key informants were purposely chosen. Consistent with established protocols, a communication letter was drafted and transmitted to the appropriate authorities. In-person meetings were conducted in each LGU to distribute the survey instrument to the respondents. Throughout the survey administration, the researchers diligently offered comprehensive explanations for each item in the questionnaire to improve the respondents' understanding and guarantee the precision of the obtained data. Additionally, strict procedures were put in place to ensure the privacy of the participants' responses. After the poll was finished, the collected data underwent automated tallying and a tabulation method.

### 2.6 Data Analysis

The quantitative data were analyzed using frequency analysis. Qualitative data were analyzed using Virginia Braun and Victoria Clarke's six-step approach (2012). Initially, codes were derived from interview transcripts. Themes were identified based on semantic domains within the responses of selected key informants. These themes were then reviewed and refined to capture patterns, relationships, and overarching themes accurately. Finally, the identified themes were systematically analyzed to draw meaningful conclusions from the data.

### 2.7 Ethical Considerations

This study followed ethical principles by collecting all participants' informed consent, maintaining confidentiality and privacy, and receiving ethical approval from an institutional review board. The researchers prioritized goodwill and kindness to enhance the community while reducing harm. Cultural sensitivity was maintained throughout the study, and attempts were made to reduce prejudice while ensuring transparency and accountability. Community engagement was essential, with residents participating in the research process to reflect their perspectives and needs. The findings were shared with local governments and the community to inform and improve future health emergency and risk reduction management actions.

## 3.0 Results and Discussion

### 3.1 COVID 19 Cases in Negros Oriental

The statistical data of COVID-19 cases across municipalities and cities in 2020 and 2021 reveals a detailed progression of the pandemic in the region. In 2020, Guihulngan City recorded the highest number of cases, peaking at 39 in October and gradually declining to 67 cases by December. La Libertad followed with 31 cases, showing a significant rise in November. Tayasan had 24 cases overall, while Canlaon City recorded 20 cases, with a peak in September. Ayungon reported its first cases in September and October, reaching 11 cases by November. Bindoy recorded cases sporadically, totaling 9, and Manjuyod had 4 cases throughout the year. The data reveals that COVID-19 cases emerged as early as June 2020, peaking in October, with municipalities and cities implementing effective policies and strategies to mitigate the virus's spread, leading to a decline in cases by the end of 2020.

In 2021, Guihulngan City experienced fluctuating numbers, starting with 5 cases in January and peaking at 134 in October and 135 in November, totaling 515 cases by December. Canlaon City followed a similar pattern, beginning with 1 case in January, reaching a peak of 155 in October, and ending the year with 510 cases. Among the municipalities, La Libertad topped the list with significant increases, peaking at 96 and 99 cases in October and November, totaling 364 cases. Manjuyod saw a steady rise, particularly from June to November, culminating in 361 cases. Ayungon experienced its highest number of cases in June and November, ending the year with 295 cases. Bindoy had a notable increase in October and November, totaling 282 cases, while Tayasan, although lower in numbers, peaked in October, finishing with 113 cases. This data highlights a substantial increase in COVID-19 cases in the First District of Negros Oriental during 2021, with peaks in June and October attributed to relaxed policy implementations. The relaxation led to a surge in cases as constituents forgot pandemic protocols, necessitating local government units (LGUs) to tighten policies to bring the numbers down by the year's end.

The spike in COVID-19 cases seriously affected Negros Oriental's economic operations, particularly tourism and trade. The pandemic's impact spread to academic institutions, which were forced to close again, harming the micro-market and micro-industries that rely on them. Such disruptions severely affected people and the economy (Tabuga et al., 2020; Duma et al., 2022). In response, the Philippine government established a national health response strategy emphasizing collaboration between national and local governments (Tabuga et al., 2020). Local governments were entrusted with contributing money and enforcing COVID-19 prevention measures (Dolo et al., 2020). The success of these interventions varied, depending on the precise policies implemented by local government representatives in cooperation with health committee professionals. This highlighted the importance of personalized emergency response systems that could adapt to the specific needs of different cities and municipalities (Amit et al., 2021).

### 3.2 Best Practices

Table 1 shows how the cities and municipalities in the First District of Negros Oriental responded to the health emergency and managed risk reduction. The themes, inspired by the World Health Organization's framework, cover Policies, Strategies, and Legislation; Planning and Coordination; Human Resources; Financial Resources; Information and Knowledge Management; Risk Communication; and Health Infrastructure and Logistics and other Health Services. Sub-themes identified include Pro-active adaptation, Frequency is key, The more the merrier, Busy bank accounts, Official Marites, Marites at work, and Build build build.

**Table 1.** The best practices of the LGUs in COVID-19 response

| Themes | Sub-Themes |
|---|---|
| Policies, Strategies, and Legislation | Pro-active adaptation |
| Planning And Coordination | Frequency is key |
| Human Resources | The more the merrier |
| Financial Resources | Busy bank accounts |
| Information And Knowledge Management | Official Marites |
| Risk Communication | Marites at work |
| Health Infrastructure and Logistics and Other Health Services | Build build build |

Local government units (LGUs) took a proactive stance on virus prevention and containment, implementing policies, strategies, and legislation. They held regular planning and coordination meetings and boosted human resources to handle the challenging situation. They allocated significant financial resources for emergencies. Effective information and knowledge management kept everyone informed, much like the "Marites" who spread gossip, but in a more official and useful capacity. The "Marites at work" concept emphasized the importance of risk communication in reducing community vulnerability. The "build build build" initiative ensured that health service infrastructure was built and operational to meet community needs.

#### *Policies, Strategies, and Legislation*

The health emergency in the First District of Negros Oriental prompted local governments to adopt the National Policy on COVID-19 and supplement it with localized policies, strategies, and legislation. This adaptive approach involved establishing Barangay Health Emergency Response Teams (BHERTs) to manage health emergencies at the grassroots level, providing immediate response and monitoring within their respective barangays. Another key strategy was the "closed, crowded, and close contact" (3C) approach, aimed at minimizing virus spread in high-risk settings. Lockdowns and granular lockdowns were meticulously planned and coordinated with various local agencies, allowing for targeted restrictions in specific areas with high infection rates. These measures balanced public health needs with economic and social considerations (Espia et al., 2021; Talabis et al., 2021). Local legislation supported these strategies by enforcing health protocols, such as mandatory mask-wearing and physical distancing, and imposing penalties for non-compliance. Financial resources from the Local Disaster Risk Reduction and Management Fund (LDRRMF), Quick Response Funds, Special Purpose Appropriations, and the National Government's "Bayanihan Grant" ensured the monetary capacity to respond robustly. The collaboration and integration of efforts across different levels of government and sectors were crucial, involving national agencies, non-governmental organizations, and the private sector to mobilize resources and expertise. As one respondent added:

*"In times of crisis, our commitment to safety is reflected in our unified approach: adopting national protocols, activating local response teams, and ensuring that preventive measures are in place for everyone's well-being."*

***Planning and Coordination***

The local Inter-Agency Task Force (IATF) and Emergency Operations Center (EOC) play critical roles in the community's response to COVID-19, emphasizing the significance of regular meetings as a foundation of their coordinated strategy. These meetings are pivotal for continuously reviewing and updating health protocols in response to evolving epidemiological data and governmental directives. According to the Philippine Department of Health (DOH), these gatherings enable ongoing assessment of COVID-19 statistics, such as active cases, recoveries, and fatalities, thereby guiding informed decision-making (DOH, 2023). The EOC's involvement ensures the efficient allocation of resources to support these strategies, as emphasized in the World Health Organization's (WHO) guidelines on pandemic preparedness and response (WHO, 2022). Speedy contact tracing, underscored by the United Nations Development Programme (UNDP) as essential for outbreak control, involves rapid identification, testing, and isolation of contacts to interrupt transmission chains (UNDP, 2021) effectively. Concurrently, Barangay Health Emergency Response Teams (BHERTs) are integral to enhancing community-level preparedness through their participation in regular meetings focused on orientation, information dissemination, and coordinated response efforts. This comprehensive approach, which is documented in community health reports, demonstrates its effectiveness in enabling prompt and effective responses to COVID-19 challenges (Community Health Report, 2023). As the head of office recalled:

*"The local IATF holds regular meetings to update health protocols, analyze COVID-19 data, and plan responses, working closely with Barangay Captains and BHERTs to ensure our community is well-prepared and coordinated in our fight against the pandemic."*

***Human and Financial Resources***

In response to the challenges posed by the COVID-19 pandemic, authorities have taken proactive measures to bolster their ability to respond effectively. This includes strategically deploying additional personnel in critical locations such as provincial borders, local communities, and quarantine facilities. By increasing staffing in these areas, authorities aim to enhance their capacity for early detection, rapid response, and effective management of outbreaks (Bonardi et al., 2020; Espia et al., 2021; Talabis et al., 2021). However, the decision to escalate manpower is accompanied by substantial financial requirements. Local government units (LGUs) have demonstrated resourcefulness in securing necessary funding through various channels, including the Local Disaster Risk Reduction and Management Fund (LDRRMF), Quick Response Funds, Special Purpose Appropriations, and the National Government's "Bayanihan Grant" (Bonardi et al., 2020; Talabis et al., 2021). These financial resources are instrumental in recruiting and deploying additional personnel. They also facilitate the continuous operation of key points of entry and quarantine sites, crucial for preventing the further spread of the virus within communities (Espia et al., 2021). This coordinated effort shows the commitment of local authorities to prioritize public health and safety amid the evolving challenges posed by the pandemic. By ensuring adequate staffing and financial support, LGUs aim to mitigate the immediate impacts of COVID-19 and strengthen their resilience and preparedness for future health emergencies (Talabis et al., 2021). As another interviewee has disclosed:

*"By strategically deploying more personnel and securing essential funding, we are enhancing our ability to respond to the pandemic, prioritizing the health and safety of our communities amidst these ongoing challenges."*

***Information and Knowledge Management***

Local governments have set up a strong system for managing and sharing knowledge to ensure everyone gets the latest and most reliable information during the COVID-19 pandemic. This system, discussed in studies by Duma et al. (2022) and Bekema (2021), focuses on centralizing platforms that gather, process, and distribute important updates efficiently to the public. Using tools like social media, radio broadcasts, and direct communication between different government departments, officials work hard to ensure accurate information gets to all parts of the community quickly and effectively. This approach is like the "Marites" concept, which emphasizes being proactive and responsive in how information is shared, but with an added emphasis on ensuring the information is trustworthy and accurate (Bekema, 2021). This is important for countering false information and building trust within the community, especially during times of uncertainty. By keeping communication channels open and reliable, authorities not only educate people about crucial health guidelines and updates but also involve the community in working together to tackle the ongoing challenges posed by the pandemic. This was emphasized by the respondent when he said:

*"During the COVID-19 pandemic, local governments have established a strong system to ensure everyone receives accurate information quickly. Using platforms like social media and radio, they work hard to share updates people can trust, fostering community and unity in tackling these challenges together."*

***Risk Communication***

The local government unit (LGU) stepped up its game in managing COVID-19, drawing on insights from Amit et al. (2021) and Bekema (2021). They did not rely on traditional methods; they used Salta Radio and Barangay Health Emergency Response Teams (BHERTs) to get crucial information through Information, Education, and Communication (IEC) campaigns. Collaborating closely with the City Epidemiology and Surveillance Unit (CESU), they ensured everyone stayed updated on COVID-19 cases via Facebook. It was not just about online efforts; they plastered barangays with signs and informative materials and even invested in a text-blasting machine for lightning-fast updates (Amit et al., 2021; Bekema, 2021). On top of that, they made full use of radio airtime for official announcements. They adopted a style that caught people's attention, known as the rekorida style, showing they understood the importance of clear communication during crises (Bonardi et al., 2020). Following templates from the Department of Health (DOH), their regular risk communication efforts included everything from educational lectures to radio broadcasts and engaging posts on Facebook, showing just how serious they were about keeping everyone informed (Amit et al., 2021). To protect privacy and ensure efficiency, they set up exclusive chat groups for different sectors. They carefully restricted sharing of official swab test results to the Rural Health Unit (RHU) chat group. This move was not just about data security; it also showed their commitment to handling sensitive information responsibly within the community (Bekema, 2021). As one respondent recalled:

*"We utilized radio, BHERTs, and social media to inform everyone about COVID-19. From signage to text updates and the engaging rekorida style, information was clear and accessible. Privacy was a priority with secure chat groups and restricted data access to the RHU, ensuring community safety and transparency."*

***Health Infrastructure and Logistics and Other Health Services***

Their strategy was comprehensive and community focused. Recognizing the importance of public awareness, they conducted extensive education campaigns through local channels, ensuring everyone understood and adhered to COVID-19 precautions and guidelines. This approach, supported by Duma et al. (2022), emphasized practical communication methods to effectively reach diverse segments of the population. In terms of healthcare infrastructure, rather than constructing new facilities, they optimized existing resources like schools for quarantine purposes, as Duma et al. (2022) highlighted. This resourceful approach enabled them to swiftly accommodate and isolate suspected cases without unnecessary delays or expenses. To bolster their response capabilities, they prioritized the procurement of testing kits, enabling regular and widespread testing. Amit et al. (2021) underscores the importance of robust testing and monitoring protocols in managing COVID-19 effectively. Concurrently, they deployed health workers to frontline roles, provided essential supplies, and established dedicated monitoring teams, as Tabuga et al. (2020) advocated. Their proactive measures and resourceful strategies, informed by Duma et al. (2022), Amit et al. (2021), and Tabuga et al. (2020), exemplified their steadfast dedication to safeguarding public health and maintaining community well-being throughout the pandemic. As the respondent explained

"*Our approach focused on community education and resourceful management. We prioritized local outreach for COVID-19 precautions, optimized existing facilities like schools for quarantining, and ensured robust testing and monitoring,*" and "*By deploying health workers and dedicated teams, we aimed to uphold public health and safety as our top priorities, demonstrating adaptive governance and resilience throughout the pandemic,*" he concluded.

## 4.0 Conclusion

This study indicates that Social Systems Theory may be used to find best practices in health emergency and risk reduction management by local government units (LGUs) in Negros Oriental's First District. Using this approach, the study gives a solid foundation for examining local policies, tactics, and legislative initiatives. The comprehensive identification of planning and coordination efforts, human and financial resources, information and knowledge management, risk communication, and healthcare infrastructures contribute greatly to our understanding of effective emergency response systems.

The entire framework developed in this study demonstrates how proactive policies can result in significant gains in human and financial resource allocation, information management, and risk communication. These components are essential for creating an institutionalized health emergency and risk reduction management strategy. The empirical data presented shows a rise in COVID-19 instances between 2020 and 2021, emphasizing the significance of a well-coordinated and resourceful emergency response system. Furthermore, the study reveals practical sub-themes such as proactive adaptation, frequency is vital, the more the merrier, active bank accounts, official Marites, Marites at work, and build build build. These sub-themes provide useful information about efficient health emergency management's dynamic and diverse character. They present a realistic blueprint for other regions looking to improve their emergency response tactics, outlining the importance of proactive and comprehensive measures.

The study contributes greatly to the existing level of knowledge by combining theoretical concepts with practical applications. It shows how Social Systems Theory may inform and improve real-world health emergency responses by providing a comprehensive picture of emergency management, including policy, resources, communication, and infrastructure. The focus on the First District of Negros Oriental provides context-specific insights that can be applied to similar places, expanding the worldwide understanding of health emergency management.

Future studies should compare regions to uncover similarities and differences in best practices. Longitudinal studies that follow the evolution of emergency response tactics throughout time might provide more insight into their long-term usefulness. Furthermore, evaluating the influence of specific policies on health outcomes, analyzing the role of emerging technology in emergency management, and researching community engagement in health emergency responses will all help to improve the field and advise successful policymaking.

## 5.0 Contributions of Authors

Philner P Salindo –conception of research, the conduct of research, writing, and editing of the manuscript, supervising, June Keziah B Salindo –data gathering, proofreading, encoding, Eden Grace V. Tabanao – data gathering, data analysis, proofreading

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## 7.0 Conflict of Interests

The authors have no conflicts of interest to disclose.

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# Research Writing Competence of Grade 12 Students: Towards Research Culture Improvement

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**Abstract.** This study examined the research writing competence of Grade 12 students using a descriptive-correlational design. The sample comprised 315 students from various academic tracks, assessed with a validated teacher-made survey questionnaire. Results indicated a moderately high level of research writing competence overall, with the STEM strand showing the highest proficiency. Significant differences in research competence among academic tracks were noted, reflecting the influence of diverse instructional methods and socio-economic factors. A positive correlation between academic grades and research competence was found, suggesting that students with higher academic performance generally possessed better research writing skills. Recommendations to enhance research writing competence included improving instructional quality, promoting collaborative research projects, providing regular practice and feedback, establishing mentorship programs, integrating research skills throughout the curriculum, fostering a research culture, and involving parents and the community. These strategies aim to improve students' research writing skills and academic performance, preparing them for future educational and professional challenges.

**Keywords:** Research writing; Grade 12; Research culture.

## 1.0 Introduction

Research writing competence is a critical skill that all students should strive to develop. It enhances critical thinking and analytical skills and cultivates the ability to communicate ideas and findings effectively (Trudel et al., 2022). In today's information-driven world, conducting thorough research and presenting it coherently is invaluable. Moreover, honing research writing competence equips students with the tools to contribute meaningfully to their fields of study (Tamban & Maningas, 2020). Whether in the sciences, social sciences, humanities, or any other discipline, articulating well-researched arguments and insights is fundamental to academic and professional success (Binh & Nguyen, 2020).

Additionally, research writing competence empowers individuals to engage with and contribute to the broader intellectual discourse in their respective fields. It allows for the dissemination of knowledge, the exploration of new ideas, and the enrichment of existing scholarship. Therefore, nurturing this competence is beneficial on an individual level and contributes to advancing knowledge and understanding within the academic community (Aljaaidis et al., 2020). Furthermore, research writing competence is closely linked to career development. Professionals in various industries must conduct research, write reports, and communicate findings effectively (Castillo-Martínez & Ramírez-Montoya, 2021).

Strong research writing skills not only set individuals apart in the job market but also open doors to opportunities for advancement and recognition. By developing research writing competence, students and professionals are better equipped to contribute to the academic community, advance their fields of study, and excel in their careers. In conclusion, the ability to write academically and conduct research is crucial for students' academic and career development.

While research writing competence is undoubtedly valuable in certain academic and professional contexts, it is important to acknowledge that not all fields or careers prioritize this skill to the same extent. Some may argue that overemphasizing research writing competence can detract from other equally important skills and aptitudes (Nikoulina, 2020). For example, in practical and vocational fields such as trade professions, technical skills, and hands-on experience often precede the ability to conduct extensive research and write scholarly papers. In these fields, individuals may find that their time and energy are better spent honing practical abilities rather than investing heavily in research writing competence.

Moreover, the emphasis on research writing competence may inadvertently marginalize individuals who excel in other areas, such as creative arts or interpersonal communication (Khalifa, 2018). By prioritizing research writing competence, there is a risk of undervaluing diverse talents and strengths integral to the academic and professional landscape. While research writing competence certainly has its place, it is essential to recognize that it should be balanced with a holistic approach to skill development and career readiness. This includes acknowledging and nurturing a wide range of talents and proficiencies equally important to academic and professional success (Tan et al., 2021).

**Role of Research Writing Among Senior High Schools in the Philippines**

The role of research writing among senior high school students in the Philippines cannot be underestimated. It equips students with essential academic skills and prepares them for higher education and the demands of the professional world (Vacalares et al., 2023). Research writing helps students develop critical thinking skills, improve their ability to gather and analyze information, and communicate their ideas effectively (Nedjai, 2023). While the importance of research writing competence has been highlighted in various academic and professional contexts, its significance in the educational journey of high school students cannot be overstated.

Research writing equips students with essential academic skills and fosters a culture of inquiry and academic rigor from an early age (Kappal, 2023). Engaging in research writing encourages students to think critically, question assumptions, and seek evidence to support their ideas. This process helps them develop a deep understanding of their subjects and the ability to think analytically, skills that are invaluable for their future educational pursuits and professional endeavors (Kanwal & Butt, 2021). Furthermore, research writing prepares students for the rigors of higher education by familiarizing them with the process of gathering, evaluating, and synthesizing information. It hones their ability to navigate various sources, discern credible information, and present their findings coherently and persuasively (Saka et al., 2021). These skills contribute to their academic success and empower them to become informed and discerning individuals in an information-driven world.

Additionally, research writing instills in students the importance of effective communication, both in written and verbal forms. As they learn to articulate their ideas and findings through research writing, they cultivate the ability to convey complex information clearly and compellingly (Haryono & Adam, 2021). This skill is indispensable in their future academic pursuits and professional endeavors, where the ability to communicate effectively can greatly impact their success. Moreover, cultivating research writing competence at the high school level allows students to explore their interests, delve into new ideas, and contribute to the broader intellectual discourse. It encourages them to engage with diverse perspectives, develop original insights, and participate in meaningful knowledge creation (Jamil et al., 2016).

Therefore, research writing among senior high school students in the Philippines is crucial in nurturing a generation of critical thinkers, effective communicators, and informed individuals who are well-equipped to excel in higher education and the professional world. By embracing research writing as an integral part of their educational journey, students are empowered to develop the skills and competencies necessary for their academic and career advancement.

**Educational Strategies to Improve Research Writing Skills**

Educational strategies to improve research writing skills include providing explicit instruction on research methodologies, teaching students to analyze and evaluate sources critically, offering opportunities for collaborative research projects, and regular practice in drafting, revising, and editing research papers (Bakri, 2023). Expanding upon the educational strategies mentioned, explicit instruction on research methodologies should encompass the technical aspects of conducting research and the development of critical thinking skills. By guiding students through formulating research questions, identifying relevant sources, and evaluating the credibility and reliability of information, educators can instill a deeper understanding of the significance of rigorous inquiry (McMillan, 2023). Encouraging students to question assumptions, consider alternative viewpoints, and connect across diverse sources can enrich their research writing competence by fostering a more profound engagement with their subject matter.

In addition to honing critical analysis and evaluation skills, collaborative research projects can provide a platform for students to delve into complex topics from various perspectives. Engaging in interdisciplinary collaboration fosters an enriched understanding of the multifaceted nature of academic inquiry, allowing students to synthesize diverse perspectives and contribute to a more comprehensive body of knowledge (Saw & Jiang, 2020). Moreover, collaborative research endeavors nurture essential teamwork and communication skills, empowering students to navigate the complexities of working with others to achieve common academic goals. Furthermore, offering regular practice in drafting, revising, and editing research papers not only cultivates proficiency in written expression but also promotes a deeper comprehension of the iterative nature of scholarly inquiry.

By guiding students through refining their initial drafts, addressing feedback, and honing their arguments, educators can instill a profound appreciation for the iterative nature of knowledge production and the value of continuous refinement in academic discourse (Wu & Schunn, 2020). These educational strategies enhance students' research writing skills and cultivate a more profound academic depth by nurturing critical thinking, collaboration, and resilience in the face of complex scholarly challenges.

**Challenges in Cultivating Research Writing Skills Among Students in Schools**

Challenges in cultivating research writing skills among students in schools include a lack of emphasis on critical thinking and inquiry-based learning, limited exposure to diverse sources and perspectives, inadequate support and guidance from faculty, and a lack of opportunities for revision and feedback (Hart & Annear, 2020). There is also a need for greater integration and coherence in the research process, as many students struggle with research anxiety, overestimation of their skills, lack of time management, difficulty in selecting appropriate sources, and disconnect between different stages of the research process.

Therefore, it is essential to develop strategies that address these challenges and promote the development of research writing skills among students (Supriyadi et al., 2020). Educators must prioritize critical thinking and inquiry-based learning to address these challenges and foster the development of research writing skills among students. They should create an environment encouraging students to explore diverse perspectives and engage in independent research. Educators should also provide ample support and guidance to students, offering regular opportunities for revision and feedback to help them improve their research writing skills (Peters et al., 2019).

In addition to providing explicit instruction on research methodologies, educators should create an environment that fosters critical thinking and inquiry-based learning. This involves encouraging students to delve deeper into their research questions, critically analyze diverse perspectives, and consider alternative viewpoints (Setiawan & Islami, 2020). Educators can nurture a more profound engagement with their subject matter by guiding students to question assumptions and make connections across diverse sources. This approach develops their research writing competence and cultivates a mindset of intellectual curiosity and rigorous inquiry (Peterson, 2020). Furthermore, limited exposure to diverse sources and perspectives can be addressed by introducing students to various scholarly materials. Educators should strive to integrate interdisciplinary perspectives into the curriculum, allowing students to explore complex topics from various angles (Supsiloani et al., 2021). This exposure enriches their understanding of the multifaceted nature of academic inquiry and cultivates a broader intellectual outlook. However, overexposure to research writing might deprive other cognitive and practical skills of development. Especially in technical and vocational strands, teachers must know how to balance research tasks and the competencies demanded by the subject. Nonetheless, research is integral and is a core of every learning endeavor.

**Promoting Integration and Coherence in the Research Process**

Educators should emphasize the integration and coherence of research writing to mitigate the disconnect between different stages of the research process. This can be achieved by guiding students through the entire research journey, from formulating research questions to refining their final drafts (Reynolds et al., 2020). By promoting a seamless flow between research stages, educators can help students overcome research anxiety, improve time management, and develop a comprehensive understanding of the iterative nature of knowledge production. Thus, educators can effectively address the challenges in cultivating research writing skills among students by prioritizing critical thinking, providing exposure to diverse perspectives, offering adequate support and guidance, and promoting integration and coherence in the research process. This holistic approach enhances students' research writing abilities and nurtures a deeper academic depth by fostering critical thinking, collaboration, and resilience in the face of complex scholarly challenges.

**Fostering Research Culture Among Students in Schools**

To foster a research culture among students in schools, creating an environment that encourages and supports inquiry-based learning is crucial. Educators should allow students to engage in research projects and collaborate with their peers. Additionally, integrating research skills and writing throughout the curriculum can help students see the relevance of research in different subject areas (Arrieta & Marasigan, 2021). By incorporating research activities and assignments in diverse disciplines, educators can help students understand the interdisciplinary nature of academic inquiry and develop transferable research skills. This approach promotes a research-oriented mindset and equips students with valuable skills for future academic and professional endeavors.

Mentorship plays a pivotal role in fostering a research culture among school students. Educators and experienced researchers can serve as mentors, guiding students through the intricacies of research projects and providing valuable feedback and support (Dahlberg & Byars-Winston, 2019). By offering mentorship opportunities, schools can create a nurturing environment where students feel encouraged to explore their research interests and pursue scholarly endeavors. Mentorship also fosters a sense of community and collaboration, as students benefit from the guidance of seasoned researchers while also learning the importance of supporting their peers in their research pursuits (Krim et al., 2019).

**Role of School Policies and Environment in Supporting Research Education**

School policies and the overall environment are crucial in supporting student research education. Schools should have policies that prioritize and support research activities to create a conducive environment for research education. This includes allocating dedicated time and resources for research projects, establishing partnerships with external research institutions or experts, and providing access to well-equipped research facilities and materials (Quitoras & Abuso, 2021).

In addition, schools should encourage a culture of open inquiry and critical thinking, where students are free to explore their research interests and ask meaningful questions without fear of judgment or constraints (Arrieta & Marasigan, 2021). Schools can inspire a love for learning and discovery among students by creating an environment that values research. This can lead to a more enriched educational experience and allow students to develop their research skills and contribute to advancing knowledge in their chosen fields.

Thus, to make research more interesting and stimulating for junior high school students, educators should review the curriculum and identify research concepts and theories appropriate for their age group. They should also provide teachers with training, development, and mentoring opportunities to enhance their research capabilities. Additionally, schools should prioritize establishing a research culture by providing students with mentorship opportunities and creating a supportive environment that values research and encourages open inquiry and critical thinking (Haeger & Fresquez, 2016).

By doing so, students will be empowered to engage in research, develop scientific skills, and cultivate a sense of ownership and involvement in their educational journey. With this, students will be empowered to engage in research, develop scientific skills, and cultivate a sense of ownership and involvement in their educational journey. Furthermore, schools should also consider the role of parental involvement and community support in research education. By actively involving parents and the community in research education, schools can create a holistic approach that further enhances students' learning experiences (Boonk et al., 2018). Schools can create a holistic approach that further enhances students' learning experiences by actively involving parents and the community in research education.

**Comparative Studies on Research Competence of the Students in the Philippines**

Analyzing the research competence of students in the Philippines, it has been observed that there is a need for greater emphasis on research skills development among students across different educational institutions. To address this need, it is important for schools and educational institutions in the Philippines to prioritize the integration of research skills training and development into their curriculum (Cerbito, 2023). This can be achieved by implementing research-focused courses, workshops, and projects that provide students with opportunities to enhance their research capabilities (Arrieta & Marasigan, 2021).

By equipping students with research skills, they will not only be better prepared for higher education and future careers. However, they will also develop critical thinking, problem-solving, and analytical skills essential for success in various academic and professional endeavors. Additionally, schools must provide resources and support for teachers in their research endeavors. Teachers will be better equipped to guide and support their students in their research journeys by providing professional development opportunities, access to research resources, and mentorship programs.

Furthermore, collaboration among educational institutions, government agencies, and industry stakeholders is essential in creating a research ecosystem that promotes the development of research competencies among students and fosters a culture of research in the country. Integrating research skills development into the curriculum, providing resources and support for teachers, and fostering collaboration among stakeholders are key steps toward enhancing research competence.

## 2.0 Methodology

### 2.1 Research Design

The study utilized the descriptive-correlational research design. According to Creswell, a descriptive-correlational design is a research approach that combines both descriptive and correlational elements (Asio & Dios, 2019). In this study, the researcher aimed to describe the characteristics or relationships among variables without establishing a causal connection. The researcher wanted to see the research competence of each strand and their relationship to their academic grade in research subjects. The findings will serve as a reference for research improvement strategies in schools that can be benchmarked in the Division of Manila.

### 2.2 Research Participants

The participants in this study were Grade 12 students. They came from different tracks offered by the institution. The sampling technique used in this study was purposive sampling. Purposive sampling is a sampling technique by the researcher, and it depends on his/her judgment upon selecting the population that will participate in the study. It is also the most appropriate sampling technique considering the nature of the study concerning time and resources available. There were 315 students, which the researcher purposefully chose. They represented 50% of the total population of the senior high school department. The students were chosen from the school's Academic and TVL Tracks.

### 2.3 Research Instrument

The primary instrument in this study was a teacher-made survey questionnaire. Three experts validated the survey for content and language validity. Their comments were considered in creating a valid survey questionnaire for the pilot testing. Then, the questionnaire was pilot-tested on 20 students who were not included in the actual study. Their answers were tallied and subjected to a reliability test using Cronbach's Alpha. The reliability test revealed a 0.98 score in internal consistency with excellent interpretation.

**2.4 Data Gathering Procedure and Analysis**
The survey questionnaire was administered through Google Forms. The researcher asked permission from Grade 12 advisers to supervise and facilitate the completion of the survey. The respondents were given one week to complete the survey. After accomplishment, the data were gathered automatically and computed for analysis. The data gathered were subjected to statistical treatment for analysis and interpretation. For the demographic profile of the respondents, weighted mean, percentage, and standard deviation were used. For the research competence of different tracks, the researcher used ANOVA to determine the significant differences among the groups and Pearson R for the significant relationship between the overall research writing competence and academic standing in the Practical Research subjects of Grade 12 students.

**2.5 Ethical Considerations**
The researcher followed ethical guidelines in conducting this study. The respondents were given time to read the informed consent form and the survey data privacy disclaimer. The researcher assured the respondents that their answers would be strictly confidential and would be utilized for research investigation only.

## 3.0 Results and Discussion

**3.1 Demographic Profile of the Respondents**
Table 1 data were primarily derived from the retrieved responses from the questionnaire. Data were analyzed and tabulated for a better perception of theence for the HUMSS strand among students, indicating a strong interest in humanities and social sciences, and the STEM strand, with 21% of the students reflecting a substantial interest in science and technology fields, which are critical for future technological advancements and innovation. The ABM strand, while still popular, has the lowest enrollment among academic tracks at 6%, suggesting that fewer students are pursuing business-related courses. Among the TVL tracks, HRS is the most popular, attracting 12% of the students.

**Table 1.** Demographic profile of the respondents

| Strand | Track | Frequency | Percentage |
|---|---|---|---|
| ABM | Academic | 23 | 6% |
| STEM | Academic | 73 | 21% |
| HUMSS | Academic | 120 | 43% |
| ICT | TVL | 33 | 10% |
| HRS | TVL | 42 | 12% |
| SMAW | TVL | 24 | 8% |

The data suggested a growing interest in the hospitality industry, a significant economic sector. ICT, with 10% of the students, highlights a considerable interest in information and communications technology, aligning with the global trend towards digitalization. The SMAW track, with 8% of the students, indicates a niche interest in specialized vocational skills like welding. The data also revealed the diversified students from both Academic and TVL Tracks offered by the school's SHS program. They all have undergone practical research subjects necessary to complete their respective strands. Moreover, skills and competencies gained from previous research subjects were needed in a more complex research subject, Inquiries, Investigations, and Immersion (3 I's), wherein they were required to write a full-blown thesis paper.

**3.2 Research Writing Competence of Grade 12 Students**
In Table 2, the data revealed the students' research competence in terms of research writing competence across various strands offered in the school. A moderately high level of competence across all groups, with an overall mean score of 3.87. This uniformity suggested that students, irrespective of their academic tracks, have developed a consistent proficiency in these essential research skills. However, with a mean score of 4.18, the STEM group indicated superior research skills, likely due to the rigorous research methodologies inherent in STEM education (National Research Council, 2012).

The data also revealed minimal score variation within each group, as evidenced by the low variance and standard deviation. For instance, the STEM group, which recorded the highest average score of 4.18, had a variance of 0.18 and a standard deviation of 0.43, reflecting a tightly clustered performance around the mean. Similarly, the HUMSS group, despite having the largest number of students (120), exhibited a variance of 0.33 and a standard deviation of 0.57, indicating a consistent level of competence among the students.

**Table 2.** Descriptive statistics of the research writing competence of Grade 12 students

| Groups | Count | Sum | f | Variance | SD | Average | Descriptor |
|---|---|---|---|---|---|---|---|
| ABM | 23 | 88.70 | 7.300 | 0.250 | 0.500 | 3.86 | Moderately High Level of Competence |
| HUMSS | 120 | 440.0 | 38.10 | 0.326 | 0.571 | 3.67 | Moderately High Level of Competence |
| STEM | 73 | 305.4 | 23.17 | 0.183 | 0.428 | 4.18 | Moderately High Level of Competence |
| ICT | 33 | 126.1 | 10.48 | 0.357 | 0.598 | 3.82 | Moderately High Level of Competence |
| SMAW | 24 | 93.03 | 7.620 | 0.388 | 0.623 | 3.88 | Moderately High Level of Competence |
| HRS | 42 | 158.9 | 13.33 | 0.267 | 0.517 | 3.78 | Moderately High Level of Competence |
| **Overall** | | | | | | **3.87** | **Moderately High Level of Competence** |

According to Peterson (2020), high-quality instructional practices significantly enhance students' research writing abilities, regardless of their academic specialization. Additionally, a study by Martinez and Gonzalez (2019) emphasizes the positive impact of structured writing programs on students' proficiency in crafting research introductions and problem statements. These studies corroborated with the current data, suggesting that the observed levels of competence can be attributed to effective teaching methods and well-structured curricula across various educational tracks.

Thus, the data underscored the importance of consistent, high-quality instruction in developing students' research writing skills. The data further highlighted that well-implemented educational interventions can lead to uniform levels of competence among students from different academic backgrounds. Contextually, the data revealed reflects the combined efforts of research teachers and students. It suggested the hard work and collaboration of all research teachers, regardless of their specialization, in delivering the lesson despite the subject's complexities. Lastly, the data revealed was seen as evidence and manifestation of the student's competence. They won in different national and international contests and presentations with their research papers.

### 3.3 Difference of the Research Writing Competence of Grade 12 Students

Table 3 revealed a significant difference among the groups, as indicated by an F-statistic of 8.55, greater than the critical value of 2.24, and a P-value of 1.34E-07, far below the common alpha level of 0.05. Consequently, the null hypothesis was rejected, confirming significant differences in research writing competence among the students. Although the groups had almost similar averages in research writing, the data revealed the differences through the ANOVA.

**Table 3.** Analysis for the difference of the research writing competence among Grade 12 students

| Source of Variation | SS | df | MS | F | P-value | F crit | Decision | Interpretation |
|---|---|---|---|---|---|---|---|---|
| Between Groups | 12.29 | 5 | 2.458 | 8.549 | 1.34E-07 | 2.243 | Reject | Significant |
| Within Groups | 88.83 | 309 | 0.287 | | | | | |

This finding is supported by similar studies that have explored educational competencies across different student groups. For instance, Smith (2019) found that variations in instructional methods and resources contributed to significant differences in writing skills among high school students. Additionally, Jones and Brown (2020) highlighted the impact of socioeconomic factors and access to educational support on student performance in research writing.

These findings align with the present study, which suggests that various factors, including instructional quality, resources, socio-economic background, and differing skills, play crucial roles in shaping students' research writing abilities. The students from the Academic Track were trained and taught rigorous research-related subjects that were completed with their chosen learning path. In contrast, students from the TVL track focused more on practical exercises and applications of the theoretical models born out of research subjects. The data confirmed the heterogeneity of the students in terms of their skills, competence, and learning abilities in research writing while studying the same curriculum.

Given the significant results, it is recommended that educators and policymakers consider these factors to enhance the effectiveness of research writing instruction. Tailored interventions and resource allocations could be implemented to address the disparities and improve overall student competence in research writing. Yet the data revealed disparities in research competence described within the level of high competence. The Department of

Education, as well as other stakeholders, must not be complacent and continue to address learning gaps not only in research subjects but also in the curriculum.

**3.4 Relationship Between Academic Performance and Research Competence of Grade 12 Students**

Table 4 revealed the relationship between academic grades and research competence among grade 12 students. The mean academic grade is 89.5732 with a variance of 31.2039, indicating a relatively high and consistent performance among students. The mean research competence score is 3.84915, with a variance of 0.32305, suggesting that students generally exhibit moderate to high research skills. The Pearson correlation coefficient of 0.35909 demonstrates a positive correlation between academic grades and research competence. This correlation indicates that as students' academic grades improve, their research competence also increases.

**Table 4.** Analysis for the relationship of academic grades and research competence of Grade 12 students

| | **Academic Grade** | **Research Competence** |
|---|---|---|
| Mean | 89.57 | 3.849 |
| Variance | 31.20 | 0.323 |
| Observations | 314.0 | 314.0 |
| *Pearson Correlation* | *0.359* | |
| *df* | *313.0* | |
| *t Stat* | *280.9* | |
| *P(T<=t) one-tail* | *0* | |
| *t Critical one-tail* | *1.650* | |
| *P(T<=t) two-tail* | *0* | |
| *t Critical two-tail* | *1.967* | |

The statistical analysis included a t-test to assess the significance of the relationship between academic grades and research competence. The t-statistic is 280.885, with a corresponding p-value of 0.00000 (both one-tailed and two-tailed), which indicates that the observed correlation is statistically significant at the conventional levels. The degree of freedom (df) for the test was 313. The critical values for one-tailed (1.64974) and two-tailed (1.96757) tests are lower than the t-statistic, further confirming the significance of the results.

These findings align with previous research indicating a positive relationship between academic performance and research competence of the Grade 12 Senior High School students at Manuel A. Roxas High School. Synonymously, Kuh and Umbach (2004) found that students who engage more in research activities have better academic outcomes, suggesting that research competence can enhance overall academic performance. The data showed that the students' overall grades have a positive relationship with their research skills, as seen in their research outputs.

Also, Lopatto (2007) highlighted that undergraduate research experiences positively impact students' academic and professional development, which may translate into better academic performance in high school settings. Furthermore, Russell, Hancock, and McCullough (2007) demonstrated that research involvement enhances students' understanding of scientific concepts and boosts their academic confidence. Terenzini et al. (1995) highlighted that involvement in research activities fosters critical thinking and problem-solving skills essential to academic success. Hunter, Laursen, and Seymour (2007) supported these findings by showing that research experiences help students develop higher-order thinking skills and a deeper understanding of their field of study.

Thus, the data supported the hypothesis that a significant positive relationship exists between academic grades and research competence among grade 12 students. This suggested that enhancing students' research skills could improve academic performance. The Department of Education must capitalize on these research findings since it will allow them to formulate interventions to improve quality teaching strategically. Also, it can be a benchmark for curriculum revisions highlighting research-based topics or lessons that will enhance the critical and creative thinking of the students. This can improve test scores, especially since the Philippines is participating in the PISA International Examination. Therefore, educational institutions should consider integrating more research-based activities into their curricula to foster students' academic and research competence.

## 4.0 Conclusion

The study on the research writing competence of Grade 12 students revealed significant insights into proficiency levels across various academic strands. The findings indicated a moderately high level of research writing competence among students. Notably, the STEM strand exhibited the highest competence, which could be attributed to the rigorous research methodologies inherent in its curriculum. Diverse students from different tracks participated in this study, yet they yielded a similar level of competence in research writing.

The analysis showed significant differences in research writing competence among the different academic strands, as confirmed by the ANOVA results. This highlighted the impact of diverse instructional methods, resources, and socio-economic factors on students' research skills. Moreover, the study found a positive correlation between academic grades and research writing competence, suggesting that students with higher academic performance tended to have better research writing skills. These skills were evident when the students joined and participated in research presentations. They were encouraged and motivated to participate because of their confidence in exhibiting the research skills learned from the school.

Lastly, the study underscored the importance of high-quality instruction and well-structured curricula in developing students' research writing skills. By integrating research-based activities into the curriculum and providing adequate support and resources, educational institutions could significantly enhance students' academic performance and research competence. The Department of Education must review the curriculum in the Practical Research subjects to underline competencies that need improvement. Similarly, the department must ensure that the teachers are well-equipped with the necessary training and skills to ensure quality teaching of research-based subjects.

## 5.0 Contributions of Authors

The researcher collected, computed, interpreted, and analyzed data and revised the manuscript for publication.

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## 7.0 Conflict of Interests

There was no conflict of interest between all parties in this research endeavor. Consent forms were given to the students for their participation in the study.

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# 3D Unity Snake Game to Demonstrate Control System Transfer Function in Both Time and S-Domain

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**Abstract.** The transfer function, a key concept in control systems, is essential for undergraduate engineering students. This study aims to enhance the understanding and appreciation of control systems by visualizing transfer functions. The 3D Snake Game, developed using the Unity game engine, offers a real-time gaming experience that integrates both s and t domain transfer functions. It follows the function path using activated quantization, time, and input settings. The game features customizable settings, including game speed, pin tail, joystick, and collision toggle. It is deployable on Android, computers, and the WebGL online platform. The game was highly effective in the target population of 48 Electronics Engineering students enrolled in Control Systems. The majority of students reported that the game helped them visualize control systems (83.04%, $\bar{x}$=4.15, p=0.004), appreciate their applications (89.13%, $\bar{x}$=4.46, p<0.001), and apply various transfer functions (85.65%, $\bar{x}$=4.28, p<0.001). Additionally, the game was considered presentable (80.00%, $\bar{x}$=4.00, p<0.001), aided in obtaining correct settling times (83.91%, $\bar{x}$=4.20, p<0.001), and was user-friendly (82.50%, $\bar{x}$=4.13, p<0.001). Overall, the 3D Snake Game is a valuable educational tool, enhancing the learning experience by making complex control system concepts more accessible and engaging for students. The game's ability to provide a hands-on, interactive approach to learning allows students to grasp theoretical concepts better and see their practical applications in real-time. This innovative teaching method improves comprehension and increases student interest and motivation in the subject matter.

**Keywords:** Control system; Snake game; Transfer function; 3D unity; WebGl.

## 1.0 Introduction

Transfer functions are fundamental in control systems engineering, simplifying complex systems into manageable mathematical models. These models, often expressed through equations, can be analyzed using tools like Laplace transforms and frequency response analysis, aiding in designing controllers to meet specific performance criteria. In the context of visualization and human-robot collaboration, research by Brooks and Szafir (2020) emphasizes the role of visualization tools in enhancing shared control acceptance. Similarly, Vrba et al. (2011) highlight the growing use of technologies like Google Web Toolkit and HTML5 for dynamic user interfaces. As explored by Dichev and Dicheva (2017), gamification in education increases engagement by integrating game elements into learning environments. Studies, such as Boldadora's (2019) study of digital game-based learning in Davao, show that these strategies improve educational outcomes. Bangcaya et al. (2019) found that game-based learning significantly boosts science learning and motivation among senior high school students in the Philippines. Additionally, Sutiangso's (2023) study in Pangasinan confirmed the effectiveness of using the Snake Game to visualize control systems, with 90% of participants finding it helpful and 92% appreciating the control systems7.

Visualizing transfer functions of high-dimensional systems presents significant challenges due to the inherent difficulty in representing more than three dimensions in a two-dimensional space, as noted by Gribkova et al. (2019). The complexity of poles and zeros in transfer functions further complicates visualization, lacking straightforward geometric interpretations. Stability analysis aids in identifying these poles and zeros, which are crucial for determining system stability, yet this process is particularly arduous for high-order systems (Jairath, 2020). While various visualizations, such as those by Brooks (2020) in human-robot interaction, Vrba (2011) in production control systems, and Danehy et al. (2009), demonstrate transfer functions' applications, they often require specific hardware. They are limited to niche research interests, making them unsuitable for classroom settings. Undergraduate engineering students encountering transfer functions in control systems courses must grasp their importance, as these functions encapsulate the transformation between the s and time domains, block diagram simplifications, signal flow charts, and applications to electronic and electrical components.

Snake games have proven effective in various educational contexts, such as teaching Pancasila (Setiawan et al.), encouraging walking (Chittaro and Sioni), and fostering children's social-emotional development (Wardhani et al.). However, a gap exists in applying snake games to teach technical knowledge, such as mathematics and transfer functions. International research by Vlachopoulos and Makri highlights the positive impact of games and simulations on learning goals in higher education, while studies by Ghavifekr and Rosdy and Schindler et al. demonstrate the significant effects of ICT integration and digital games on student engagement and learning quality. Local research in the Philippines, such as Boldaroda's work in Davao, Bangcaya's study on gamification in science education, and Bautista and Bautista's research at Bulacan State University High School, supports the effectiveness of digital game-based learning in various subjects. Despite these findings, there remains a gap in applying such methods to the specific technical topic of transfer functions, suggesting a need for innovative approaches like using snake games to enhance visualization and understanding in control systems education. Interviews with electronics engineering department heads revealed a lack of laboratory equipment and dedicated computer labs for control systems, highlighting the need for accessible online tools. A graduating student emphasized the challenges of complex mathematical concepts and programming in control systems, noting the potential of snake games to simplify these aspects by directly solving transfer function characteristics. Research by Sutiangso in Pangasinan demonstrated a snake game for visualizing transfer functions using SciLab and WebGL, but this study was limited to three transfer functions. This research proposes using the Unity Game Engine for better optimization and deployment across various platforms, offering customizable transfer functions and parameters such as settling time and rise time.

The research aims to visualize and demonstrate control system transfer functions through gamification, specifically using a Snake game. The objectives include determining how the Snake game reflects control system transfer functions, its applicability and appreciation in a laboratory classroom setting, and how it facilitates deeper comprehension of concepts for students. The hypotheses propose that the responsiveness and accuracy of the Snake game's control system are directly proportional to the precision of the transfer function parameters and button interface and that using the Snake game as a teaching tool will significantly improve students' comprehension of control system dynamics and their ability to predict system behavior, and that employing the Snake game in control systems coursework will lead to a statistically significant increase in students' understanding and application of transfer function principles, as evidenced by positive feedback on learning experience surveys.

Also, the research aims to enhance the understanding of control system transfer functions by integrating video games, specifically the Snake Game, as an educational tool. This innovative approach contributes to motion theory by using transfer functions to manage real-time movements, making the concepts more accessible and engaging for users. Traditionally, transfer functions are explained through extensive book chapters and visual aids like pole-zero plots and block diagrams, but a direct relation to output is often missing. Applying transfer function characteristics to the Snake Game provides immediate feedback on input-output relationships without relying on complex methods like Laplace transforms. By integrating this interactive game into the curriculum, the research aims to demystify complex theoretical concepts, thereby facilitating a more engaging and effective learning experience. Using the Snake Game as a visual aid allows students to interact with and internalize the principles of control systems dynamically, fostering a deeper understanding and appreciation for the subject matter. Furthermore, the research posits that by augmenting traditional teaching methodologies with this interactive visualization tool, students' academic performance and interest in control systems will likely improve. This enhancement aligns with the broader objective of SDG 4, as it not only elevates the quality of education but also encourages students to pursue further studies and careers in this field, contributing to the advancement of global education standards. In essence, the research can potentially transform educational practices in control systems by presenting a novel approach to learning that is both effective and enjoyable. By doing so, it supports the overarching aim of SDG 4, fostering an environment where quality education is accessible and appealing, thereby equipping students with the necessary skills and knowledge to thrive in an increasingly complex and technological world.

## 2.0 Methodology

### 2.1 Research Design

The research designs used are quantitative, descriptive, and experimental.

### 2.2 Research Participants

Forty-eight participants were selected by obtaining a list of ECE students studying the control system subject under a similar faculty handler. The general participants of the data source are as homogenous as possible and have similar course and subject approaches. Inclusion criteria for the participants must have taken or are currently taking control systems as their subject. This subject is usually given to undergraduate engineering students. The research excludes participants who are non-knowledgeable in control systems subjects. The research still includes whether they have excellent or poor knowledge as long as they have information regarding the control system transfer function.

### 2.3 Research Instrument

The snake game was done and entirely written by the author. The game would support the directional input from the user, the transfer function, and several behavioral settings for the input, output, and snake characteristics. The snake game was programmed using Unity and deployed through the WebGL engine. This would make the game available on the internet. Their devices can access the online resource face-to-face, as mentioned in the link. A backup device can be used, which the Android version of the snake game has installed on the device. Each user would play the snake game on the device one by one.

The pilot survey was administered in a private university in Pangasinan, Philippines. A registered professional psychometrician analyzed the results and found that the survey was reliable, with a Cronbach's alpha of 0.909.

### 2.4 Data Gathering Procedure

The researcher informed the participants about the research survey based on other published game-based learning questionnaires and game-based learning analysis research. This was done using Google Forms, an online lecture session through Google Meet, and a face-to-face meeting. The permission to obtain data was requested from their subject teacher in control systems, the department head of their course, and their dean. The survey and experimentation setup were performed individually, both online and face-to-face. The survey and experimentation setup would only be once and would take around one to three hours for the participant, either through online or face-to-face setup. The activity was conducted through their online platform, Google Classroom, and then in a face-to-face session. The activity will not be graded or required; thus, there is no coercion and voluntary participation. The participant can withdraw anytime and can contact the researcher. The data would be removed immediately and deleted.

### 2.5 Ethical Considerations

The research ensures informed consent from participants 18 years of age and above enrolled in control systems. Participation remains voluntary, with no consequences for opting out or withdrawing. The Data Privacy Act governs data privacy—RA 10173—which maintains the confidentiality of collected information, including email addresses. The snake game used poses no harm, being virtual and visually designed. Risks are minimal, as the study is fully participant-controlled. Additionally, the research aims to develop a laboratory tool for control systems education.

## 3.0 Results and Discussion

### 3.1 3D Snake Game as Visualization Tool for Transfer Functions

Table 1 presents the t-test and descriptive statistics of responses to the snake game as a visualization tool for transfer functions.

**Table 1**. Analysis of the utilization of snake game as a visualization tool for transfer functions

| | t | df | Sig. (2-tailed) | Mean | Percentage | Category |
|---|---|---|---|---|---|---|
| Question 1 | 3.01 | 43 | .004 | 3.61 | 72.3% | Good |
| Question 2 | 9.41 | 47 | .000 | 4.23 | 84.6% | Very Good |
| Question 3 | 1.29 | 47 | .000 | 4.35 | 87.1% | Very Good |
| Question 4 | 4.42 | 47 | .000 | 3.71 | 74.2% | Good |
| Question 5 | 6.37 | 47 | .000 | 3.94 | 78.8% | Good |

The columns of significant meaning are the Sig. (2-tailed), mean, percentage, and category are based on region. The Sig. (2-tailed) is considered significant on 0.05 or 5% significance level since all values are less than 0.05. The mean is calculated using the average and using the statistical tool SPSS. The percentage is obtained by dividing the mean by the total perfect score of the Likert Scale, which is 5. The category is discussed in the table below. The degree of freedom (df) and t-value are used to determine the p-value.

The table shows that the snake game indeed reflects the control system transfer function since the t-domain equation and s-domain equation provided are all correctly represented, as proven by the p-value of less than 0.05, meaning that all questions are statistically different from neutral and proves the hypothesis, the responsiveness and accuracy of the Snake game's control system are directly proportional to the precision of the transfer function parameters and button interface. Thus, accept the alternative hypothesis, the responsiveness and accuracy of the Snake game's control system are directly proportional to the precision of the transfer function parameters and button interface and reject the null hypothesis. The Snake Game's Graphical User Interface (GUI) is as interactive, more customizable, and responsive as the research by Sanchit Gupta and Ashutosh Kumar (2017)

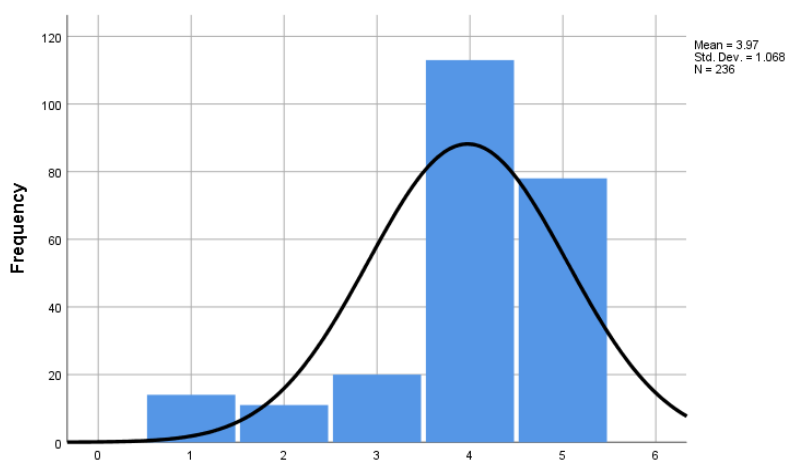


**Figure 1.** Frequency distribution histogram with normal curve on the responses of the questions on snake game as visualization tool for transfer functions

Forty-eight students answered the survey and found that question 3, the normal snake game, got the highest score. This is due to the assumed high level of knowledge of the participants of the classic Snake. This is also proven by Chittaro and Sioni (2012), who is "the classic Snake mobile game, in which users can control the snake." The lowest score is found in question 1, with a mean of 3.61, which is attributed to the technical nature of the transfer function, which now is 1-e^-x. This can be related to feedback from a student who could not place the function. Two other questions also have a mean at line 3, implying that some, at around 20% of the students, cannot follow the provided equation. This can be attributed to how they encoded the functions with proper multiplication sign (*) and parenthesis, as mentioned in the question. Nevertheless, the statistics show that it is statistically significantly different from neutral and was interpreted qualitatively as Good. The last column of the table is categorized using the Likert scale. [a] The categories are from the division of intervals where 1 to 5 comprises five categories: thus, (5-1)/5=0.8 interval. For each interval, it is classified as Very Good (4.2-5.0), Good (3.4-4.2), Neutral (2.6-3.4), Bad (1.8-2.6), Very Bad (1-1.8), which is similar to how Altanis et al. (2018) categories in excellent, ok, and weak in their research.

Figure 1 is obtained by creating a histogram for the frequency of the five questions mentioned. The normal curve shows that the mean is leaning to the right, implying a positive in an agreement as a response. There are still those who answered 1 and 2, which can belong to the 20% who did not agree. Nevertheless, a mean of 3.97, as implied in the skewered normal distribution table, shows an agreeing response.

**3.2 Acceptance and Appreciation Towards 3D Snake Game in a Laboratory Classroom Setting**

Table 2 presents the t-test and descriptive statistics of responses on the acceptance and appreciation of the snake game in a laboratory classroom setting.

**Table 2**. Analysis of the acceptance and appreciation towards 3D snake game in a laboratory classroom setting

| | t | df | Sig. (2-tailed) | Mean | Percentage | Category |
|---|---|---|---|---|---|---|
| Question 6 | 11.19 | 45 | .000 | 4.15 | 83.0% | Good |
| Question 7 | 13.15 | 45 | .000 | 4.46 | 89.1% | Very Good |
| Question 8 | 10.43 | 45 | .000 | 4.28 | 85.7% | Very Good |
| Question 9 | 6.160 | 45 | .000 | 4.13 | 82.5% | Good |

The table shows that the snake game is applicable and appreciated in a laboratory classroom setting since the survey is done in a laboratory setup, and students agree with the provided questions. The p-value is less than 0.000, meaning that all questions are statistically different from neutral. It proves the hypothesis that implementing the Snake game as a teaching tool in a laboratory classroom will significantly improve students' comprehension of control system dynamics and their ability to predict system behavior. Thus, accepting the alternative hypothesis and implementing the Snake game as a teaching tool in a laboratory classroom will significantly improve students' comprehension of control system dynamics and their ability to predict system behavior and reject the null hypothesis. Research by Sofyan et al. (2024) further proves that the snake game is indeed a learning tool and, in their case, can be used for speaking skills.

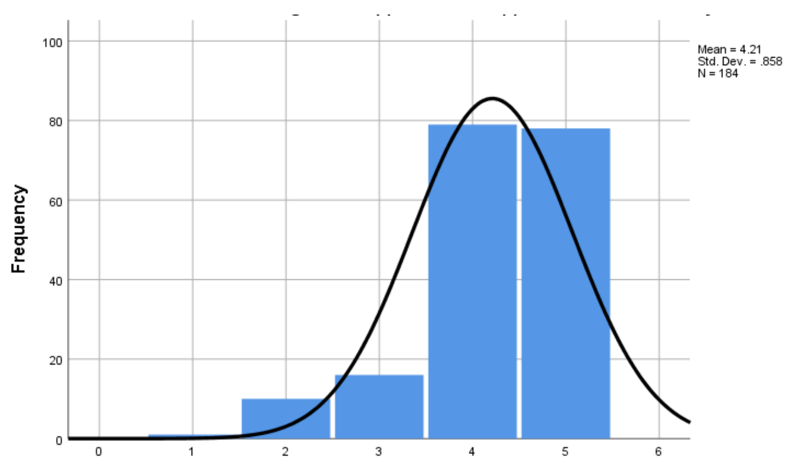


**Figure 2.** Frequency distribution histogram with a normal curve on the snake game as accepted and appreciated in a laboratory classroom setting

Figure 2 presents a frequency distribution histogram with a normal curve on the snake game as accepted and appreciated in a laboratory classroom setting. The normal curve is skewered to the right. This means that the answer is leaning to the right or in agreement. Some answered 2 and 3, which represent the students around 20% that somewhat disagree with the results. Nonetheless, the questions in problem two still garnered one of the highest mean, which is 4.21, categorizing it as the highest rating of Very Good. Thus, the Snake game is applicable and appreciated in a laboratory classroom setting.

### 3.3 Deeper Comprehension of the Concepts

Table 3 presents the t-test and descriptive statistics of responses to the snake game, facilitating a deeper comprehension of the concepts for the students. Item no. 10 in the table was item no. 8 in the survey, and item no. 11 in the table was item no. 9.

**Table 3**. Analysis for the impact of 3D snak game in deepening comprehension of the concepts

| | t | df | Sig. (2-tailed) | Mean | Percentage | Category |
|---|---|---|---|---|---|---|
| Question 10 | 8.542 | 45 | .000 | 3.91 | 78.3% | Good |
| Question 11 | 10.06 | 45 | .000 | 4.20 | 83.9% | Very Good |
| Question 12 | 8.307 | 45 | .000 | 4.00 | 80.0% | Good |
| Question 13 | 8.529 | 47 | .000 | 4.13 | 82.5% | Good |

The table shows that the snake game facilitates a deeper comprehension for the students. The p-value is less than 0.05 or exactly all at 0.000, meaning that all questions are statistically different to neutral and proves the hypothesis utilizing the Snake game as an educational tool in control systems coursework will lead to a statistically significant increase in students' ability to understand and apply transfer function principles, as evidenced by positive feedback on learning experience surveys. As gleaned from the table, the students could simulate settling time and steady state value accurately and visualize the transfer function with a presentable interface and a user-friendly system. These statements are similar and backed by Hsu and Liang (2021), who claim that games enhance inquiry-based learning in science and imply that games enhance learning in education.

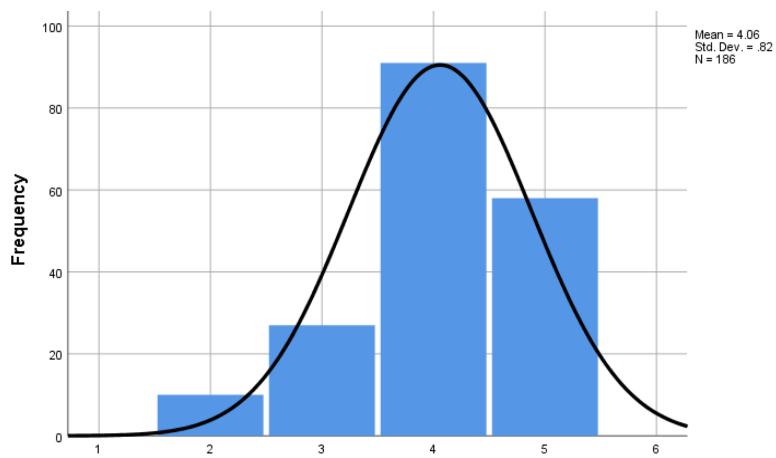


**Figure 3.** Frequency distribution histogram with normal curve on the responses of the questions on snake game facilitates a deeper comprehension of the concepts for the students

Figure 3 presents the frequency distribution histogram with a normal curve on the responses to the questions on the snake game, facilitating a deeper comprehension of the concepts for the students. The normal curve is skewered to the right. This means that the answer is leaning to the right or in agreement. Some answered 2 and 3, representing the students around 20% who somewhat disagree with the results. Nonetheless, the responses addressing the third problem statement still have a mean of 4.06, which is quantitatively categorized as the Snake game, accurately giving a deeper comprehension of the transfer function concepts. Other research, such as by Rahman and Prasetyo (2020), that correlated the Snake Ladder Game and student learning outcomes and motivation has proven deeper comprehension in learning.

### 3.4 Sentiment Analysis

Some students (n=9, 19%) gave the snake game negative feedback due to the interface and easiness, but 20 (42%) students gave positive feedback, 14 (29%) with no feedback, and 5 (10%) with mixed feedback using sentiment analysis. The snake game was applicable to college-level mathematics, which is the transfer function, as opposed to the game developed and researched by Bangcaya et al. (2019), which is for senior high school. Both are mathematical and prove that a higher level of math can be demonstrated and further visualized, helping students appreciate and learn better.

## 4.0 Conclusion

The study on the Snake game as a tool for visualizing control system transfer functions represents a significant advancement in control systems education. The Snake game successfully visualizes complex transfer functions in frequency (s) and time (t) domains, making abstract mathematical concepts more tangible and easier for students and practitioners. Empirical evidence supports the game's accuracy in representing various transfer functions, such as the equation 1 - e^-x (72.27%, $\bar{x}$= 3.61, p = 0.004), the equation 1 (87.08% $\bar{x}$= 4.35, p < 0.001), the function {0.7}/{s+0.7} (74.17%, $\bar{x}$= 3.71, p < 0.001), and the function 1 - e^{-7x} (78.75%, $\bar{x}$ = 3.94, p < 0.001). This validation supports the reliability and accuracy of the game as a teaching tool. Additionally, the Snake game facilitated deeper comprehension of control systems, as evidenced by the population (n=48) being able to verify that the settling time of the Snake game matches the function's settling time (78.20%, $\bar{x}$ = 3.91, p < 0.001), the steady-state value is correct with the time response (83.91% $\bar{x}$= 4.20, p < 0.001)), and they can place various transfer functions in the game (85.60%, $\bar{x}$ = 4.28, p < 0.001). The ability of students to perform the technical side averages 79.37%, implying that they comprehended the control system and could apply it to the given activity questions. Thus, the alternative hypothesis that the Snake game facilitated a deeper comprehension of control system transfer function concepts is accepted.

The educational impact of the Snake game is significant, with students showing improved comprehension of control systems (83.04%, $\bar{x}$ = 4.15, p < 0.001), appreciation for the subject (89.13%, $\bar{x}$= 4.46, p < 0.001), and ability to apply various transfer functions (85.65%, $\bar{x}$= 4.28, p < 0.001). The game is also rated as easy to use (82.5%, $\bar{x}$ = 4.28, p < 0.001), making it accessible to many users. The researcher suggests that the Snake game be part of a laboratory activity in the control system curriculum, particularly during the topic of transfer functions, following the discussion on Laplace transforms. Future studies could explore the inclusion of a broader range of transfer functions, investigate the long-term impact on students' retention of concepts, integrate the game with other educational technologies, develop customizable features, and explore cross-disciplinary applications. By advancing the visualization and understanding of control systems through an interactive and engaging platform, this study paves the way for innovative educational tools to transform how complex mathematical concepts are taught and learned.

## 5.0 Contributions of Authors

The sole author indeed contributed to each section. The author reviewed and approved the final work.

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## 7.0 Conflict of Interests

The authors declare no conflicts of interest about the publication of this paper.

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# Impact of Paraphrasing Strategy on Mathematical Problem-Solving Skills and Performance: Exploring Their Interrelationship

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**Abstract.** This quasi-experimental study was conducted to determine the impact of paraphrasing strategy on the mathematical problem-solving skills and mathematics performance of first-year college students while also exploring the interrelationship between these skills and performance. The 40 participants of this study were randomly assigned into the experimental and control groups following the pre-test and post-test equivalent group design. The instruments used were the Mathematical Problem-Solving Skills Inventory by Chirinda (2013) and a researcher-made performance test. Statistical analyses were the independent sample t-test, paired sample t-test, and Pearson r. The experimental group was taught using a paraphrasing strategy, while the control group was taught using the traditional method. According to the findings, there is a statistically significant difference between the post-test scores of the experimental and control groups, with the experimental group scoring higher. Even though both groups improved in their post-test, the significant difference in the mean gain scores shows that the experimental group performed better than the control group, and this improvement was due to the use of a paraphrasing strategy. A significant correlation also existed between mathematical problem-solving skills and mathematics performance, implying that as the mathematical problem-solving skill increases, performance increases. Theoretically, these findings support the cognitive learning theory, which emphasizes the importance of active engagement strategies like paraphrasing in enhancing understanding and retention. This study suggests that educators should incorporate paraphrasing strategies into their teaching methods to improve students' mathematical performance. It can be concluded that a paraphrasing strategy can be used to increase performance in Mathematics. Further research is recommended to explore the long-term effects of paraphrasing strategy on different student populations.

**Keywords:** Mathematical problem solving skills; Mathematic learning; Paraphrasing.

## 1.0 Introduction

One of the reasons why students have difficulty in solving mathematics is their comprehension skill. A successful problem solver can understand what was expected of the problems they face. In other words, they know all the details surrounding the problem, which is an essential step in solving problems. Studies have found that difficulties in reading comprehension can negatively impact children's development in mathematics skills (Salihu et. Al, 2018). Additionally, studies have highlighted that unfamiliarity with the specialized vocabulary used in math word problems can affect students' performance, as everyday words take on new meanings in a mathematical context (Mulwa, 2015).

Mathematical problem-solving skills are a fundamental aspect of mathematics education, as they enable students to apply mathematical concepts to real-world problems. Research has consistently shown that problem-solving skills are influenced by various factors, including student profiles, teaching methods, and learning environments. The impact of the student profile, such as demographics, prior knowledge, and motivation, on problem-solving skills has been well-documented. For instance, Estonanto and Dio (2019) identified mathematics anxiety among senior high school students as a significant factor affecting their performance in calculus.

Teaching methods also play a crucial role in shaping problem-solving abilities. Studies have demonstrated that varied instructional strategies, such as differentiated instruction and the use of social media-based learning materials can enhance students' understanding and engagement. Hernandez et al. (2021) found that modular and social media-based learning materials significantly improved student performance in basic calculus. Similarly, Chen and Chen (2017) highlighted the effectiveness of differentiated instruction in a calculus curriculum for college students in Taiwan, emphasizing its positive impact on academic achievement and student engagement.

Furthermore, the learning environment, whether online or traditional, significantly influences problem-solving skills. The transition to online learning environments during the COVID-19 pandemic underscored the benefits of Learning Management Systems (LMS) like Moodle. Evardo Jr. and Itaas (2024) demonstrated that a Moodle-based courseware package effectively enhanced students' performance on the least taught topics in basic calculus. In contrast, traditional classroom settings also have their advantages. Kandeel (2017) analyzed errors in solving limits of trigonometric functions and stressed the importance of direct teacher-student interactions in addressing conceptual misunderstandings in a traditional learning environment. The relationship between problem-solving skills and mathematics performance is also a topic of ongoing investigation, with studies highlighting the positive influence of problem-solving skills on learning outcomes (Sinaga et al., 2023).

One key aspect of problem-solving skills is the ability to reflect on one's own thinking and learning. This reflective thinking is critical in identifying and addressing errors and developing effective problem-solving strategies. A study by Toraman et al. (2020) analyzed the relationships between mathematics achievement, reflective thinking of problem-solving, and metacognitive awareness. The findings highlighted the positive influence of problem-solving skills on learning outcomes, emphasizing the importance of reflective thinking in mathematical problem-solving.

Another crucial aspect of problem-solving skills is the ability to learn from errors. When students encounter difficulties or make mistakes, they can either become discouraged or use these experiences as opportunities for growth. A study by Wang et al. (2022) examined the impact of learning from errors on problem-solving skills and mathematics performance. The results showed that students who learned from errors had higher problem-solving skills and better mathematics performance, underscoring the importance of embracing mistakes as a natural part of the learning process.

In addition to reflective thinking and learning from errors, problem-solving skills are also influenced by learning independence. Students who are able to work independently and manage their own learning are better equipped to develop problem-solving skills.

Finally, studies have also explored the effectiveness of various problem-solving strategies and models. A study by Raehanah et al. (2018) evaluated the effectiveness of a problem-solving model, including the search, solve, create, and share (SSCS) and cooperative problem-solving (CPS) methods. The findings showed that students who used these methods had better problem-solving skills and mathematics performance, highlighting the importance of incorporating these strategies into mathematics education. In conclusion, the relationship between problem-solving skills and mathematics performance is complex and multifaceted. Research has consistently shown that problem-solving skills are influenced by various factors, including reflective thinking, learning from errors, learning independence, and the use of effective problem-solving strategies.

Numerous studies have investigated the influence and effectiveness of paraphrasing strategies on problem-solving; however, this study introduces several unique elements that distinguish it and provide novel insights. While many studies have explored paraphrasing strategies in broad problem-solving contexts, this research specifically targets mathematical problem-solving skills and performance. Mathematics presents unique cognitive challenges that require specific strategies, and this focused approach addresses the nuanced needs of mathematical learning, an area often underexplored in general problem-solving research. Additionally, most studies on paraphrasing strategies typically explore their use in language arts and reading comprehension. However, this study uniquely applies this strategy to mathematics, a field where the emphasis is often on numerical and procedural skills rather than linguistic approaches. This cross-disciplinary application opens new avenues for understanding how cognitive strategies from language learning can enhance mathematical problem-solving.

Indeed, the use of a paraphrasing strategy, in particular, could potentially enhance students' problem-solving abilities and, in turn, their mathematics performance. By incorporating these strategies into mathematics education, educators can better support students in developing the problem-solving skills necessary for success in mathematics and beyond. In this study, the researcher made use of paraphrasing strategy to improve performance as well as a possibility in increasing the mathematical problem solving skills of the student.

## 2.0 Methodology

### 2.1 Research Design

The experimental method of research is the only method of research that can truly test hypothesis concerning cause and effect relationship. It represents the most valid approach to the solution of educational problems, both practical and theoretical, and to the advancement of education as science (Gay, 1992). This study used the quasi-experimental pretest and posttest design with equivalent groups. The control group has almost the same characteristics as the experimental group. The participants were selected by pairing of scores based on the result of the pretest.

### 2.2 Research Locale

The study was carried out in Passi City College, City of Passi, Province of Iloilo, Western Visayas, Philippines. Passi City College is located in Barangay Bacuranan, along Iloilo East Coast - Capiz Road, within Passi City, Iloilo, Philippines. It serves as a prominent educational institution in the area, offering a range of academic programs and vocational courses to students. The college plays a vital role in the local community, contributing to the educational advancement and skills development of its students.

### 2.3 Research Participants

The subjects of the study were the 40 first year college students of Passi City College classified into two groups: the experimental group composed of 20 subjects and another 20 subjects for the control group. The subjects were randomly selected through pairing of scores.

### 2.4 Research Instrument

This study utilized an adopted and validated research instrument as its principal tool and primary data source to investigate the research questions. The research adhered strictly to ethical guidelines, with participation from respondents being voluntary. The validation process included several key steps: initially, educational and assessment experts reviewed and refined the research instrument to ensure their alignment with the study's objectives. Subsequently, a pilot test involving a small subset of participants was conducted to pinpoint any ambiguities in question wording and to evaluate the overall clarity and comprehensibility of the instruments.

To further establish the reliability and validity of the research instruments, a validity and reliability test was conducted. The initial questionnaire consisted of 30 questions. After the pilot testing, 26 questions were retained. The reasons for deleting certain items were based on item-analysis which identified ambiguities, redundancies, and questions that did not align well with the study's objectives. The results of the validity and reliability tests confirmed the appropriateness of the remaining questions, ensuring the robustness of the research instruments.

### 2.5 Data Gathering Procedure

This study followed a systematic procedure to gather data. First, participants were selected from first-year college students enrolled in mathematics-related courses, ensuring representation across relevant criteria. Second, participants were randomly assigned to either the experimental group (EG) or the control group (CG) to minimize bias in group composition. Third, pre-test assessments were administered to both groups using validated instruments to establish baseline measurements of mathematical problem-solving skills and performance. These assessments were designed to provide a clear starting point for evaluating the impact of the paraphrasing strategy intervention.

Next, the paraphrasing strategy intervention was implemented exclusively within the EG. A standardized strategy was developed and participants received training on its application to mathematical problem-solving tasks. This step aimed to equip participants with the skills necessary to effectively utilize the paraphrasing strategy. Following a 20-day intervention period, post-test assessments were conducted using the same instruments to measure changes in problem-solving skills and performance across both EG and CG. This comparative approach allowed for an assessment of the intervention's effectiveness in enhancing mathematical problem-solving abilities.

Throughout the data collection process, strict controls were maintained to ensure consistency and reliability. Ethical guidelines regarding participant consent, confidentiality, and fair treatment were strictly adhered to. Participants were assured of the confidentiality of their responses and informed that the study's findings would only be used for academic and educational purposes.

### 2.6 Ethical Considerations

This research study adhered to stringent ethical guidelines to safeguard participants' rights and ensure the integrity of the research process. Participation in the study was voluntary, and participants had the option to withdraw at any point without consequences. Measures were implemented to minimize harm, including physical, social, and psychological risks, ensuring the safety and well-being of all participants, particularly first-year college students enrolled in mathematics-related courses.

Confidentiality of participant information was maintained throughout the study. All data collected were kept strictly confidential and used solely for research purposes. Participants' identities were protected, and their responses were anonymized in reporting and dissemination of findings to uphold privacy and confidentiality standards. Furthermore, the dignity and rights of participants were consistently respected. Ethical guidelines were followed to ensure fairness, respect, and sensitivity in all interactions and procedures related to the study. This included obtaining informed consent from participants, explaining the nature and purpose of the study, and addressing any concerns they may have had regarding their involvement.

## 3.0 Results and Discussion

### 3.1 Mathematics Performance in the Pre-test and Post-test

Mathematics performance refers to the ability of students to solve mathematical problems and demonstrate understanding of mathematical concepts as measured through standardized tests. Table 1 presents the pre-test and post-test mean scores of both the experimental and control groups. It highlights the performance levels before and after the intervention of the paraphrasing strategy for the experimental group.

**Table 1.** Mathematics performance in the pre-test and post-test of the experimental and control group

| Group | Pre-test | | | | Post-test | | |
|---|---|---|---|---|---|---|---|
| | N | Mean | SD | Description | Mean | SD | Description |
| Experimental | 20 | 6.20 | 2.46 | Fair | 12.45 | 3.63 | Good |
| Control | 20 | 6.20 | 2.46 | Fair | 9.30 | 3.34 | Good |

***Note:*** *Excellence (17.00-20.00); Very Good (13.00-16.99); Good (9.00-12.99); Fair (5.00-8.99); Poor (1.00-4.99)*

In Table 1, the performance of both the experimental and control groups in mathematics was assessed through pre-tests and post-tests. Initially, during the pre-test phase, both groups demonstrated similar performance levels, with the experimental group achieving a mean score of 6.20, interpreted as "Fair," and the control group also achieving a mean score of 6.20, similarly interpreted as "Fair." Following the intervention period, marked by the implementation of a paraphrasing strategy within the experimental group, significant changes in performance were observed in the post-test results. The experimental group showed a notable improvement, achieving a mean score of 12.45, interpreted as "Good." In contrast, the control group, which did not receive the intervention, demonstrated a mean score of 9.30, also interpreted as "Good."

These results indicate that the paraphrasing strategy intervention positively impacted the problem-solving skills and overall mathematics performance of the experimental group. The higher mean score in the post-test for the experimental group suggests that the paraphrasing strategy effectively enhanced their mathematical proficiency, highlighting its potential value as an educational intervention strategy in mathematics. Supporting these findings, Çeşme (2022) emphasizes the importance of paraphrasing in academic writing, particularly for second language learners, noting that structured paraphrasing instruction can significantly enhance students' performance. Çeşme's study identifies specific challenges students face when paraphrasing and suggests that explicit instruction and practice can lead to improved outcomes (Çeşme, 2022). This aligns with the observation that a targeted paraphrasing intervention can enhance mathematical proficiency, underscoring the broader academic benefits of paraphrasing strategies as effective educational tools.

### 3.2 Mathematical Problem Solving Skills in the Pre-test and Post-test

Mathematical problem-solving skills refer to the ability of students to apply mathematical concepts and techniques to solve various types of problems effectively and efficiently. Table 2 presents the pre-test and post-test mean scores of both the experimental and control groups. It highlights the performance levels before and after the intervention of the paraphrasing strategy for the experimental group.

**Table 2.** Mathematical problem solving skills in the pre-test and post-test of the experimental and control group

| Group | Pre-test | | | | Post-test | | |
|---|---|---|---|---|---|---|---|
| | N | Mean | SD | Description | Mean | SD | Description |
| Experimental | 20 | 3.25 | .41 | M+MPSS | 3.93 | .44 | +MPSS |
| Control | 20 | 3.26 | .54 | M+MPSS | 3.50 | .38 | +MPSS |

***Note:*** *Highly Positive MPSS (H+ MPSS) [4.20-5.00]; Positive MPSS (+MPSS) [3.40-4.19]; Moderately Positive MPSS (M+ MPSS) [2.60-3.39]; Moderately Negative MPSS (M- MPSS) [1.80-2.59]; Negative MPSS (-MPSS) [1.00 - 1.79]*

In Table 2, during the pre-test phase, both groups exhibited moderately positive mathematical problem-solving skills, with the control group achieving a mean score of 3.26 and the experimental group scoring 3.25. Following the intervention period, characterized by the implementation of a paraphrasing strategy within the experimental group, significant improvements in problem-solving skills were observed in the post-test results. The control group demonstrated a slight increase in mean score to 3.50, indicating positive mathematical problem-solving skills. In contrast, the experimental group showed a more substantial improvement, achieving a mean score of 3.93, also interpreted as positive mathematical problem-solving skills.

These findings suggest that the paraphrasing strategy intervention had a beneficial impact on the problem-solving abilities of the experimental group. The higher post-test mean score for the experimental group underscores the effectiveness of the paraphrasing strategy in enhancing their mathematical problem-solving skills. This highlights the potential utility of paraphrasing strategies in educational settings to improve students' cognitive abilities and problem-solving proficiency.

The finding supports the study of Haidayati (2022) who found a significant positive effect of the paraphrasing strategy on students' comprehension abilities. Haidayati demonstrated that paraphrasing helps in comprehending narrative texts by restating information in their own words. The experimental group in the study, which used the paraphrasing strategy, showed a significant improvement in their post-test scores compared to the control group that did not use the strategy. This further supports the conclusion that paraphrasing strategies are beneficial educational interventions across different subjects.

### 3.3 Subscales of Mathematical Problem Solving Skills in the Pre-test and Post-test

Table 3 presents the mathematical problem-solving skills of both the experimental and control groups broken down by sub-scales. Table 3 presents the mathematical problem-solving skills of both the experimental and control groups, broken down by sub-scales. In the pre-test, the experimental group exhibited the following mean scores across sub-scales: Attitudes towards Mathematics had a mean of 3.34, Willingness to engage in problem-solving activities had a mean of 3.34, Perseverance during the problem-solving process had a mean of 3.94, and Self-confidence with respect to problem-solving had a mean of 2.81. These scores were interpreted as "Moderately Positive Mathematical Problem-Solving Skills." Similarly, the control group showed mean scores of 3.38 for Attitudes towards Mathematics, 3.39 for Willingness to engage in problem-solving activities, 3.39 for Perseverance during the problem-solving process, and 2.71 for Self-confidence with respect to problem-solving, all interpreted as "Moderately Positive Mathematical Problem-Solving Skills.

**Table 3.** Mathematical problem solving skills in the pre-test and post-test of the experimental and control group according to sub-scales

| Indicators | Experimental | | | Control | | |
|---|---|---|---|---|---|---|
| | Pre-test | Post-test | Description | Pre-test | Post-test | Description |
| 1. Attitudes towards Mathematics | 3.34 | 4.06 | +MPSS | 3.38 | 3.56 | +MPSS |
| 2. Willingness to engage in problem-solving activities | 3.34 | 3.85 | +MPSS | 3.39 | 3.56 | +MPSS |
| 3. Perseverance during the problem-solving process | 3.94 | 3.94 | +MPSS | 3.39 | 3.54 | +MPSS |
| 4. Self-confidence with respect to problem solving | 2.81 | 3.91 | +MPSS | 2.71 | 3.26 | $M^+$MPSS |

***Note:*** *Highly Positive MPSS ($H^+$ MPSS) [4.20-5.00]; Positive MPSS (+MPSS) [3.40-4.19]; Moderately Positive MPSS ($M^+$ MPSS) [2.60-3.39]; Moderately Negative MPSS ($M^-$ MPSS) [1.80-2.59]; Negative MPSS (-MPSS) [1.00 - 1.79]*

In the post-test, the experimental group showed significant improvements across all sub-scales. The mean scores were as follows: Attitudes towards Mathematics increased to 4.06, Willingness to engage in problem-solving activities increased to 3.85, Perseverance during the problem-solving process remained at 3.94, and Self-confidence with respect to problem-solving increased to 3.91. All these sub-scale scores were interpreted as "Positive Mathematical Problem-Solving Skills.

On the other hand, the control group showed the following post-test mean scores: Attitudes towards Mathematics increased slightly to 3.56, Willingness to engage in problem-solving activities increased to 3.56, Perseverance during the problem-solving process increased to 3.54, and Self-confidence with respect to problem-solving increased to 3.26. Except for Self-confidence, which remained as "Moderately Positive Mathematical Problem-Solving Skills," the other sub-scales were interpreted as "Positive Mathematical Problem-Solving Skills.

These findings indicate that the paraphrasing strategy intervention had a marked positive effect on the mathematical problem-solving skills of the experimental group, as evidenced by the significant improvements across all sub-scales in the post-test. The control group also showed improvements, but to a lesser extent, particularly in the area of self-confidence. This underscores the potential efficacy of the paraphrasing strategy in enhancing various aspects of mathematical problem-solving skills, particularly in fostering a more positive attitude, increased willingness to engage, greater perseverance, and improved self-confidence among students.

The results of the present study are in line with existing literature on the effectiveness of problem-solving strategies in mathematics education. Tambunan (2019) conducted an extensive study on the impact of problem-solving strategies on students' higher-order thinking skills (HOTS), including mathematical communication, creativity, reasoning, and overall problem-solving abilities. Tambunan's research demonstrated that these strategies significantly enhanced students' mathematical performance and their attitudes towards learning mathematics.

### 3.4 Difference in the Mathematics Performance in the Pre-test and Post-test

The table presents the differences in pre-test and post-test scores between the experimental and control groups, and within the groups.

**Table 4.** Difference on the Mathematics performance in the pre-test and post-test of the experimental and control group

| Group | Mean | Mean Difference | Df | t-value | sig-value |
|---|---|---|---|---|---|
| **Pre-test** | | | | | |
| Experimental | 6.20 | .000 | 38 | .000 | 1.000 |
| Control | 6.20 | | | | |
| **Post-test** | | | | | |
| Experimental | 12.45 | 3.25 | 38 | 2.853* | .007 |
| Control | 9.30 | | | | |

*significant at $p < 0.01$

Table 4 presents the differences in pre-test and post-test scores between the experimental and control groups. The results indicate no significant difference in the pre-test scores of both groups, with a p-value of 1.000 ($p > .05$). This suggests that at the beginning of the study, the experimental and control groups had similar characteristics and performance levels in mathematical problem-solving skills.

In contrast, the post-test results reveal a significant difference between the groups, with a p-value of .007 ($p < .05$). This significant difference indicates that the experimental group, which received the paraphrasing strategy intervention, performed better in the post-test compared to the control group. The findings suggest that the paraphrasing strategy had a positive impact on the experimental group's mathematical problem-solving skills, leading to improved performance compared to the control group, which did not receive the intervention. This highlights the effectiveness of the paraphrasing strategy as an educational tool for enhancing mathematical problem-solving abilities.

This research finding aligns with the study conducted by Kong & Swanson (2017) showing the results that the paraphrasing group achieved significantly higher accuracy in solving word problems compared to the control group, especially benefiting students with initially lower problem-solving abilities. The study also suggests that teaching paraphrasing strategies can effectively improve word problem-solving skills in English learners at risk of mathematical disabilities. Additionally, paraphrasing aids students in better understanding problem statements, an essential step in the problem-solving process. This intervention could be integrated into mathematics instruction to help struggling students and prevent mathematical disabilities.

### 3.5 Difference in the Mathematics Performance of the Experimental and Control Group

The table presents the differences in pre-test and post-test scores between the experimental and control groups, and within the groups.

**Table 5.** Difference on the Mathematics performance of the experimental and control group in the pre-test and post-test

| Group | Mean | Mean Difference | Df | t-value | sig-value |
|---|---|---|---|---|---|
| **Experimental** | | | | | |
| Pre-test | 6.20 | 6.25 | 19 | 7.68* | .000 |
| Post-test | 12.45 | | | | |
| **Control** | | | | | |
| Pre-test | 6.20 | 3.10 | 19 | 3.85* | .001 |
| Post-test | 9.30 | | | | |

*significant at p<.001

Table 5 presents the differences in the pre-test and post-test scores for both the experimental and control groups. For the experimental group, the results indicate a significant difference between the pre-test and post-test scores, with a p-value of .000 ($p < 0.01$). This significant value demonstrates that the experimental group showed marked improvement in their mathematical problem-solving skills following the intervention of the paraphrasing strategy. Similarly, for the control group, the results also reveal a significant difference between the pre-test and post-test scores, with a p-value of .000 ($p < 0.01$). This indicates that the control group also showed improvement in their mathematical problem-solving skills over the course of the study.

These findings suggest that both groups experienced gains in mathematical problem-solving skills, although the improvement in the experimental group is attributed to the paraphrasing strategy intervention. The significant improvement in the control group could be due to factors such as natural progression and exposure to standard instructional methods during the study period. Overall, the results highlight the effectiveness of educational interventions, such as the paraphrasing strategy, in enhancing students' mathematical problem-solving abilities.

Supporting this result, the study conducted by Lein et al. (2020), found a significant improvements in mathematical problem-solving skills among students exposed to structured interventions, with both experimental and control groups showing notable gains. This meta-analysis reported that interventions such as schema-based and strategy instruction led to moderate to large effect sizes, demonstrating their efficacy in enhancing problem-solving abilities. These results reinforce the positive impact of the paraphrasing strategy observed in the experimental group, validating the effectiveness of such targeted instructional methods in improving mathematical performance.

### 3.6 Difference in the Mathematical Problem Solving Skills in the Pre-test and Post-test

The table presents the differences in pre-test and post-test scores between the experimental and control groups, and within the groups for mathematical problem-solving skills.

**Table 6.** Difference on the Mathematical problem solving skills in the pre-test and post-test of the experimental and control group

| Group | Mean | Mean Difference | Df | t-value | sig-value |
|---|---|---|---|---|---|
| **Pre-test** | | | | | |
| Experimental | 3.25 | .006 | 38 | .036 | .971 |
| Control | 3.26 | | | | |
| **Post-test** | | | | | |
| Experimental | 3.93 | .443 | 38 | 3.36* | .002 |
| Control | 3.50 | | | | |

*significant at p<.01

Table 6 presents the differences in the pre-test and post-test scores between the experimental and control groups. The results indicate no significant difference in the pre-test scores of both groups, with a p-value of .971 ($p > .05$). This suggests that at the beginning of the study, the experimental and control groups had similar characteristics and performance levels in mathematical problem-solving skills.

In contrast, the post-test results reveal a significant difference between the groups, with a p-value of .002 ($p < .01$). This significant difference indicates that the experimental group, which received the paraphrasing strategy intervention, performed better in the post-test compared to the control group. This finding suggests that the paraphrasing strategy had a positive impact on the experimental group's mathematical problem-solving skills, leading to improved performance compared to the control group, which did not receive the intervention. Overall, the results highlight the effectiveness of the paraphrasing strategy as an educational tool for enhancing mathematical problem-solving abilities.

The findings from this study are supported by the research conducted by Barua (2020), which demonstrated that paraphrasing significantly enhanced the participants' engagement with the text and increased their motivation to read more. Moreover, the study found that paraphrasing helped students develop a better understanding of the material, as they were required to restate the text in their own words, ensuring a deeper processing of information.

The success of the paraphrasing strategy in improving reading comprehension, as observed by Barua, aligns with the results of the current study, where the paraphrasing intervention led to superior performance in mathematical problem-solving skills. The parallel between these two studies underscores the versatility and efficacy of paraphrasing as a cognitive strategy that can be applied across different domains of learning, from reading comprehension to mathematical problem-solving. Thus, the positive outcomes in Barua's research reinforce the conclusion that paraphrasing is an effective educational tool, capable of enhancing students' comprehension and performance in various academic tasks.

### 3.7 Difference in the Mathematical Problem Solving Skills of the Experimental and Control Group

The table presents the differences in pre-test and post-test scores of the experimental and control groups, and within the groups for mathematical problem-solving skills.

**Table 7.** Difference on the Mathematical problem solving skills of the experimental and control group in the pre-test and post-test

| Group | Mean | Mean Difference | df | t-value | sig-value |
|---|---|---|---|---|---|
| **Experimental** | | | | | |
| Pre-test | 3.25 | .68 | 19 | 8.83* | .000 |
| Post-test | 3.93 | | | | |
| **Control** | | | | | |
| Pre-test | 3.26 | .24 | 19 | 3.71* | .001 |
| Post-test | 3.50 | | | | |

*significant at p<.001

Table 7 presents the differences in the pre-test and post-test scores for both the experimental and control groups. For the experimental group, the results indicate a significant difference between the pre-test and post-test scores, with a p-value of .000 ($p < 0.001$). This significant value demonstrates that the experimental group showed marked improvement in their mathematical problem-solving skills following the intervention of the paraphrasing strategy. Similarly, for the control group, the results also reveal a significant difference between the pre-test and post-test scores, with a p-value of .001 ($p < 0.01$).

This indicates that the control group also showed improvement in their mathematical problem-solving skills over the course of the study. These findings suggest that both groups experienced gains in mathematical problem-solving skills, although the improvement in the experimental group is attributed to the paraphrasing strategy intervention. The significant improvement in the control group could be due to factors such as natural progression and exposure to standard instructional methods during the study period. Overall, the results highlight the effectiveness of educational interventions, such as the paraphrasing strategy, in enhancing students' mathematical problem-solving abilities.

The significant improvement observed in the experimental group due to the paraphrasing strategy is supported by the findings from the study of Hidayati (2022) demonstrating that students exposed to the paraphrasing strategy show greater improvement in their respective areas of learning compared to those who receive traditional instruction. Additionally, in the study of Reilly (2021), which examined the impact of the Summarization/Paraphrasing strategy and the Frayer Model on reading comprehension and student engagement. It was found that the Summarization/Paraphrasing strategy led to significant improvements in student reading comprehension. Furthermore, Reilly's research highlights that educational interventions designed to enhance specific skills can lead to marked improvements in student performance. This reinforces the effectiveness of the paraphrasing strategy used in the experimental group of the current study.

### 3.8 Difference in the Mathematics Performance Mean Gain Scores of the Experimental and Control Group

Table 8 presents the mean gain scores in mathematics performance of both the experimental and control groups.

**Table 8.** Difference in the Mathematics performance mean gain scores of the experimental and control group

| Group | Mean Gain Scores | Mean Difference | t-value | sig-value |
|---|---|---|---|---|
| Experimental | 6.25 | 3.15 | 2.75* | .009 |
| Control | 3.10 | | | |

*significant at p<.01

Table 8 shows that the experimental group's mean gain score was 6.25, while the control group's mean gain score was 3.10, resulting in a mean difference of 3.15. Analysis revealed a significant difference in the mean gain scores, with a p-value of 0.009 ($p < 0.01$). This significant difference indicates that the increase in the post-test scores of the experimental group can be attributed to the intervention. The paraphrasing strategy implemented with the experimental group was effective in enhancing their mathematical problem-solving skills more than the standard instructional methods used with the control group.

The findings of this study are consistent with recent research by Jiang et al. (2022) , which explored factors affecting mathematical problem-solving abilities. Their research highlighted that elements such as self-regulation and paraphrasing can significantly influence problem-solving performance. This suggests that paraphrasing could be a valuable strategy for enhancing mathematical problem-solving skills in older students. These insights further underscore the potential advantages of paraphrasing strategies for improving college students' mathematics performance.

### 3.9 Correlation Between Mathematics Performance and Mathematical Problem-Solving Skills

Table 9 presents the correlation between mathematical problem-solving skills and mathematics performance in the post-test for both the experimental and control groups.

**Table 9.** Relationship of Mathematics performance and mathematical problem solving skills

| | Mathematics Performance | |
|---|---|---|
| | r – value | p – value |
| Mathematical Problem Solving Skills | 0.399 | 0.011* |

significant at p < 0.05

Table 9 presents the correlation between mathematical problem-solving skills and mathematics performance in the post-test for both the experimental and control groups. The analysis reveals a weak positive correlation (r-value of 0.399) between mathematical problem-solving skills and performance. This indicates that there is a tendency for students with better problem-solving skills to also perform better in mathematics, but the relationship is not strong. The statistical significance of this correlation suggests that the observed relationship is unlikely to be due to chance. However, the strength of the correlation (0.399) is weak, which means that while there is a positive association, improvements in problem-solving skills are not strongly predictive of higher mathematics performance.

These findings highlight the importance of enhancing problem-solving skills as one of several factors that can contribute to better mathematics performance. Although the correlation is weak, developing students' problem-solving abilities can still play a valuable role in their overall mathematical success. Educators should consider integrating problem-solving strategies into their teaching methods as part of a broader approach to improving mathematics education.

The results of this study align closely with those of Purwanto et al. (2022), who examined the impact of mathematics problem-solving abilities and learning independence on mathematics achievement in online learning environments. Their findings revealed that students with superior problem-solving skills and greater learning independence achieved higher performance in mathematics, underscoring the necessity of fostering student autonomy. Additionally, research has consistently demonstrated a positive correlation between problem-solving skills and mathematics performance. Similarly, Melawati et al. (2022) investigated the link between problem-solving skills and mathematics performance, confirming that strong problem-solving abilities positively influence mathematics outcomes. These findings highlight the critical role of developing problem-solving skills within mathematics education.

## 4.0 Conclusion

The implementation of the paraphrasing strategy significantly improved the mathematical problem-solving skills and overall mathematics performance of the experimental group compared to the control group. The post-test results revealed a higher mean gain score for the experimental group, indicating that the intervention was effective. Additionally, a significant positive correlation was found between mathematical problem-solving skills and mathematics performance, suggesting that improvements in problem-solving skills lead to better overall performance in mathematics.

**Practical Implications:** These findings underscore the importance of incorporating paraphrasing strategies in educational settings to enhance students' mathematical abilities and performance. Educators and curriculum designers should consider integrating these strategies into mathematics instruction to provide students with effective tools for problem-solving.

**Theoretical Implications:** The study contributes to the existing body of knowledge by providing empirical evidence that supports the positive impact of paraphrasing strategies on mathematical problem-solving skills and performance. It also highlights the potential for these strategies to be applied in other subject areas to enhance learning outcomes.

**Limitations:** This study had several limitations. Firstly, the sample size was relatively small and confined to a specific educational setting, which may limit the generalizability of the findings. Additionally, the study was conducted over a short period, which may not fully capture the long-term effects of the paraphrasing strategy on mathematical performance.

**Directions for Future Research:** Future research should aim to replicate this study with larger and more diverse samples to enhance the generalizability of the findings. Longitudinal studies are also recommended to examine the long-term effects of paraphrasing strategies on mathematical performance. Moreover, future studies could explore the application of paraphrasing strategies in other subject areas and investigate their potential to improve overall academic performance.

## 5.0 Contributions of Authors

I confirm that I am the sole author of this work and have contributed to all sections. I have reviewed and approved the final manuscript.

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## 7.0 Conflict of Interests

The author declares no conflicts of interest about the publication of this paper.

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# Online Physical Education: Insights from the COVID-19 Pandemic Experiences

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**Abstract.** The study aimed to explore the online physical education (OLPE) program of a university in Metro Manila during the COVID-19 pandemic. The researcher used a qualitative- case study research design. It focused on providing an in-depth description of the experiences of students and teachers in OLPE courses during the pandemic and analyzing the experiences concerning the achievement of P.E. and physical literacy goals. Interviews with physical education teachers and students were conducted. It also used information from online synchronous P.E. class observations and documents provided by teachers (course packs and syllabi). Results showed that the different components of the learning environment and class design were affected by the sudden shift to online mode and the consequences of the COVID-19 pandemic effects. The OLPE fell short of achieving the NASPE PE Objectives 1 and 4, the development of sport motor skills and the student's sense of responsible personal and social behavior. On the other hand, the OLPE courses achieved NASPE P.E. objectives 2, 3, and 5. These were the student's fitness and health (physical and mental), the value of physical activity for health, and the knowledge of the principles and concepts of fitness and exercise. The results implied that practical online physical education courses must have meaningful two-way communication across all stakeholders, especially between teachers and students; that physical education teachers should collaborate; that teachers and students should meaningfully connect as part of one community, and that fun and enjoyment in P.E. classes should be a priority in designing the class activities within the learning environment.

**Keywords:** Online physical education; Physical education during COVID-19 Pandemic; OLPE; Physical education.

## 1.0 Introduction

Physical education (P.E.) is a vital component of educational programs. It aims to promote the learner's holistic growth and development. A well-designed, quality physical education program supports students' psychomotor, social, and affective development, creating self-assured and socially responsible citizens (UNESCO, 2012). The COVID-19 pandemic brought challenges to the lives of every Filipino. Educators must provide the best educational experiences to assist each individual and their families. Keeping physically active to keep oneself healthy and fit is one of the challenges the pandemic has brought. The World Health Organization states that regular physical activity benefits the body and mind. It can reduce high blood pressure, help manage weight and reduce the risk of heart disease, stroke, type 2 diabetes, and various cancers. These conditions can increase a person's susceptibility to COVID-19" (WHO, 2020).

Physical education (P.E.) classes are at the forefront of providing knowledge, skills, and the value of a lifetime of physical activity for health and fitness. High-quality physical education provides carefully planned activities "to develop the motor skills, knowledge, and behaviors for active living, physical fitness, sportsmanship, self-efficacy, and emotional intelligence." Regardless of how physical education is delivered, its desired result is to nurture physically literate youth with the proficiency and confidence to delight in daily physical activity for life (Society of Health and Physical Educators, 2018).

Hilgart et al. (2012) specified that every learning environment has a physical, social, and institutional domain. The physical domain is the physical setting where the student completes his class requirements. The social domain consists of the people he relates to, such as his friends, classmates, and teachers. More relevant to the pandemic are the people in the home, which include the immediate and extended family members. The institutional domain includes the department and university plans, policies, goals, and priorities.

Online physical education is adaptable to different types of students and more financially accessible for students (Beard & Konukman, 2020). However, Jeong and So (2020) studied the struggles of operating online physical education (OLPE) classes at the (Daum & Buschner, 2012) (SHAPE America - Society of Health and Physical Educators, 2018) (Society of Health and Physical Educators, 2018) basic education level during the COVID-19 pandemic in Korea. They found that OLPE classes could have varied more with limited environmental conditions and content. This limitation insufficiently imparted the value of physical education. Further, they used trial-and-error methods, which resulted from the need for more proficiency in online physical education classes. They devised approaches to address the challenges. They needed to effect changes in the teaching-learning techniques, harness proficiency through collaboration among physical education teachers, and conduct less formal program evaluations to encourage active student participation.

A well-designed learning environment in online courses plays a vital role in the success of the course and its students (Rice, 2006). Effective teaching methods and learning experiences must be operationalized to promote meaningful student engagement and success. It is in this light that this study was designed. This study aimed to investigate a university's online physical education (OLPE) program in Metro Manila. Its focus was to provide an in-depth description and analysis of the experiences of students and teachers in OLPE courses during the pandemic and to analyze the experiences concerning the achievement of P.E. and physical literacy goals. This study provides new insights for effective teaching and empirical evidence to justify program development and faculty training recommendations. It will allow online physical education programs and teachers to be more flexible and ready for unforeseen events like the pandemic.

## 2.0 Methodology

### 2.1 Research Design

This study made use of a qualitative- case study design. Qualitative approaches focus on looking at issues or phenomena in their usual setting and collecting comprehensive data through case studies, participant observations, descriptive narratives, and in-depth interviews. Specifically, this study used Eisner's Educational Connoisseurship and Criticism Model (Eisner, 1976). It is an expertise-oriented program evaluation approach, which is grounded on the professional expertise of the researcher while exploring and evaluating an institution, program, or activity (Eisner, 1976). The educational expert perceives subtle qualitative distinctions in the phenomenon characteristics or issues. It enables one to appreciate the educational importance of distinct characteristics of the phenomenon understudy.

### 2.2 Research Locale

The online physical education program studied was from a university located in Metro Manila. Metro Manila is the primary metropolis of the National Capital Region in the Philippines. The university has students from all over the country with different backgrounds and socio-economic statuses. The university was a public university that offered free tuition to all its students. The study was done when schools were forced to do online classes due to community lockdowns to prevent the spread of COVID-19.

### 2.3 Research Participants

To evaluate the online physical education program, participants included 4 P.E. teachers, 1 P.E. teacher/ administrator, and 4 P.E. students. This case study used purposive sampling, which included the following criteria for the teachers: at least one year of teaching experience in P.E. (face-to-face) and taught online P.E. classes during the first semester of 2020 – 2021. Students needed to have experienced P.E. classes before the pandemic and were enrolled in an OLPE during the study. The researcher invited the students and teachers through announcements online by the teachers and the department chairperson. Participation was strictly voluntary.

**2.4 Research Instrument**

Considering the limitations of lockdown and the closing of schools and universities at the start of the COVID-19 pandemic, the study used multiple feasible methods to ensure rigor and thoroughness. This study used semi-structured interviews, observations, and documents. Semi-structured interviews were the primary qualitative data collection method used. The interviews were conducted through Zoom meetings at the most convenient time for the participants. The interviews and observations were guided by the Physical Education Evaluation Checklist (SHAPE America, 2015), Promoting Quality Physical Education Policy standards (UNESCO, 2012), and Guidelines for K-12 Online Physical Education (SHAPE America, 2018). The researcher noted direct observations of activities, student-student and student/ class-teacher interactions, attendance, communication, and student and teacher behavior.

The areas considered in the observations and interviews were P.E. subjects offered, learning environment (online platform, communication, attendance, activities, class motivation, teaching, and learning resources, connectivity, student verbal and nonverbal reactions), instructional strategies, student course requirements, and support, teacher credentials and training, assessment, and feedback, top 3 challenges and difficulties, and top 3 positive outcomes experienced. Written materials and documents such as syllabi, course packs, exams, class videos, instructional videos, submitted assignments, student portfolios and activity journals, reflection and departmental meeting minutes, memos, and reminders were requested and included.

Eisner's educational connoisseurship stresses the importance of structural corroboration, referential adequacy, and consensual validation to achieve data collection credibility (Given, 2008). Structural corroboration pertains to collecting sufficient information "to sustain a clear argument through the dimensions of description, interpretation, evaluation, and themes discovered." The study considered three data sources to accommodate structural corroboration: interviews, observations, and documents. Referential adequacy considers understanding multiple cases to strengthen the value and meaning of the points and insights raised. This study looked into the multiple major stakeholder perspectives, including those of the students, teachers, and administrators. This allowed the researcher to identify the features of the phenomenon that go beyond the classroom context into the lives of the stakeholders, as they were affected by the pandemic. Consensual validation allows vital insights and perspectives to ignite a passionate realization and subsequent discussion among university administrations and policymakers. This was what the researchers hoped to achieve through this study. As an instrument in data collection and analysis, the researcher was considered the "expert" for Eisner's educational connoisseurship method. At the time of the study, the researcher had more than 20 years of experience as a P.E. teacher and four years of experience as a physical education department chairperson and athletic director. The researcher was aware of her experiences and views on quality physical education during data collection and analysis. This allowed for a more in-depth inquiry and meaningful interpretation of the experiences, observations, and document details. Moreover, this allowed the expert to be more sensitive during participant interviews.

**2.5 Data Gathering Procedure and Analysis**

This study used specific steps that started with the acquisition of approval from the dean of the college that handled the OLPE classes. Coordinating with the department chairperson followed this to facilitate the recruitment of the study participants. Informed consent forms were provided, and all the participants' consent was secured. Communication to set the interview appointments was through email and Facebook Messenger. The interviews (briefing, interview proper, debriefing) were held through Zoom. Class observations were scheduled with the teachers. Data analysis procedures included thematic analysis and cross-checking against the NASPE guidelines in OLPE. The data from every interview went through initial transcription. The transcribed data went through thematic content analysis using theoretical coding. First, through initial coding, also known as open coding, focused (selective) coding followed until the researcher highlighted focus themes. The focus themes were used to describe and characterize the OLPE program studied.

### 2.6 Ethical Considerations

This research study followed ethical guidelines. The researcher ensured that participation was voluntary and that the purpose, procedures, benefits, risks, confidentiality, and anonymity were clear for every participant. Moreover, it assured the participants that participating in the study did not affect their status as university teachers, students, or administrators. Consent was secured for video recording of all interviews from all participants.

## 3.0 Results and Discussion

The online physical education experiences of university students, teachers, and an administrator during the pandemic were described, interpreted, and evaluated in light of Eisner's Educational Connoisseurship and Cristism Model. This section describes the experiences as features of the OLPE understudy. The description was discussed and integrated with the researcher's interpretation and evaluation points. The descriptive dimension of Eisner's (1979) method details the program's current state being evaluated. The interpretation dimension attempts to understand the meaning and significance of many activities in the program. The evaluation dimension is aimed at providing "the educational significance and effect of the interpreted experiences," where a set educational criterion is used to judge the experiences (Yuksel, 2010, p.81).

### 3.1 Profile of the Participants

As shown in Table 1, the teacher participants included three male teachers and one female teacher. The department chairperson, who was the study's administrator, was female. Their ages ranged from 31 to 54, while teaching experience ranged from 9 to 32 years. All participants had a master's degree in physical education or sports science. However, all teachers and administrators needed more experience and training in online classes.

**Table 1.** Characteristics of the teachers and administrator participants

| Teacher Participant | Age | Sex | Years in Teaching | PE Activities Taught | Highest Educational Attainment and Other Credentials and Training |
|---|---|---|---|---|---|
| Faculty 1 (F1) | 54 | F | 32 | Badminton, PE 1 (Foundations of Fitness) | Master in Physical Education (MPE); Online Teaching Training – university training, DepEd and publishing company webinars |
| Faculty 2 (F2) | 52 | M | 26 | basketball, running, walking, PE 1 | Master of Science in Physical Education (MSPE); Others- Assistant program director of a basketball academy, online teaching training with a basketball academy and a university |
| Faculty 3 (F3) | 31 | M | 9 | Pilates, PE 1 | Master of Science in Sport Science, Pilates Certified Instructor, Online Teaching Training with the university |
| Faculty 4 (F4) | 34 | M | 11 | Interval Training, Cheer dance | Master of Science in Human Movement Science (MSHMS); Certified International Cheer dance Coach and Judge; Has previous experience in blended learning/ teaching in a private school |
| Faculty 5 (F5) | 36 | F | 14 | PE 1, Aerodance, Ballet, Modern dance/jazz | Master of Science in Human Movement Science (MSHMS); Diploma in Early Childhood Development; certified Licensed teacher; minimal training in online teaching |

As presented in Table 2, the student participants included three male students and one female student. The participants ranged from 20 to 22 years old and had different face-to-face P.E. experiences, such as dance, table tennis, arnis, and camping. All were enrolled in one of the P.E. classes handled by one of the teacher study participants. Table 2 below provides the details of each student participant.

**Table 2.** Characteristics of student participants

| Student Participant | Age | Sex | Year Level | Course | PE subjects taken | PE subject enrolled in current (study) semester |
|---|---|---|---|---|---|---|
| Student 1 (S1) | 22 | M | 4th | Economics | Arnis, Table Tennis, Tap dance | 4th P.E. – Pilates |
| Student 2 (S2) | 21 | M | 3rd | Fine Arts | Arnis | 2nd P.E. - Interval Training |
| Student 3 (S3) | 21 | M | 3rd | Computer Engineering | Social dance, tap dance, and camping | 4th P.E. – Pilates |
| Student 4 (S4) | 20 | F | 2nd | Associate in Art Major in Dance | dance | Interval Training |

### 3.2 Description, Interpretation, and Evaluation Dimensions of Online Physical Education Program during the Pandemic

*"There is no need to reinvent the wheel" ... modify and try to adapt to the current situation*.

This was the best line to describe the online physical education program (OLPE) in this study as described by the participants, the observations, and the documents they gave. The physical education program of the state university was part of the general education courses that all university students were required to take. When the directive to provide physical education (and all other courses) online was given, the college, its administrators, faculty, and staff were caught off-guard. Modifications were made to the existing P.E. program. They can be classified into two parts: modifications due to the shift to an online teaching mode and changes in living conditions due to the pandemic. It should be noted that the total effect of both modifications was summative to the result of the type of OLPE class activities and experiences.

Due to the shift to an online teaching mode, all the courses offered in the OLPE program were fitness-based in contrast to a combination of skill-based plus fitness-based courses before the pandemic. The courses included P.E. 1 (Foundation of Physical Fitness and Wellness) and P.E. 2 courses, such as Interval Training, High-Intensity Interval Training (HIIT), Running, Walking, Aero-dance, Cheer-dance, and Line-dance. There was less emphasis on skill acquisition and more emphasis on fitness. Due to the limitations of computer-based/screen-based viewing of physical movements, providing the best demonstrations and skill assessments was not realistically possible. Course packs were required to be created, one for each course. These digital documents included all the students' learning materials to complete the course asynchronously or offline without teacher supervision.

P.E. program modifications due to the changes in the living conditions due to the pandemic included the decreased teaching load of the P.E. teachers. Student course requirements and activities were limited to the most essential ones that could achieve the course outcomes. Each teacher was allowed only 12 units of teaching load compared to 15 – 18 units per semester before the pandemic to reduce the stress and anxiety caused by the pandemic. This was done to accommodate the extra workload of learning online P.E. delivery and other offline follow-up work for the students/ class. This resulted in fewer PE classes available for all the university students who needed P.E.

Further, considering the "education for all" and "No one gets left behind" university policies, no strict deadlines for the class requirements, leniency in class attendance, and no fancy or high-tech equipment required for students were implemented. Thus, the physical activities in the class were limited to those that could be done within the confines of the students' and teachers' school/work–home life conditions. This meant using minimal equipment and including class activities that could be executed for different fitness levels and abilities. Activities were completed on the student's own time with minimal supervision and maximum safety.

***NASPE's OLPE Program Recommendations were Met With Context-Dependent Conditions***

Research cited in the NASPE's (National Association for Sports and Physical Education) Guidelines for Online PE indicated that OLPE programs were focused on fitness activities. Due to the pandemic, the OLPE program offered fitness-based courses. However, most OLPE delivered before the pandemic focused more on cognitive than psychomotor results (Daum & Buschner, 2012). Further, NASPE mentioned that providing immediate or "real-time" psychomotor feedback was challenging but highly invaluable for learning and improving motor skills. As expressed by student and teacher participants in this study, the validation of learning was one of their biggest concerns (Daum & Buscher, 2012). Students were uncertain if they were doing the proper form or execution of the dance or exercise movements. This prompted them to request for more feedback. Likewise, teachers had difficulty viewing and commenting to all students with limited computer screen view while doing the physical activities. Some of the pressing concerns of teachers in OLPE were its aptness to successfully attend to all the content standards of physical education, especially motor skill competency, and providing timely feedback for movement activities (Daum & Woods, 2015). The results and discussion on NASPE recommendations and the corresponding study OLPE program features were tabulated in Table 3 to facilitate a more organized presentation.

**Table 3.** NASPE recommendations, the corresponding study OLPE program features, participant responses, and the connoisseur's insights.

| NASPE Program Recommendations | Features of the Study OLPE (Description Dimension) | Example of Participant Responses | The Connoisseur's Insights (Interpretation Dimension) |
|---|---|---|---|
| **OLPE addresses national physical education content standards, including any other required standards** | The OLPE understudy complies with the Commission on Higher Education and DECS Order No. 58. S 1990 (Department of Education Culture and Sports, 1990) of 2 hours a week of P.E.<br><br>Teachers are aware of providing at least 60 minutes of MVPA most days of the week (American College of Sports Medicine, 2016).<br><br>DepEd ORDER No. 034, s.2019 (Department of Education, 2019) states that learners who are 15 years old and above should answer the PAR-Q before undertaking fitness tests.<br><br>Most of the teachers did their fitness tests at the start of a fitness program or the semester. One of the faculty participants required the PAR-Q for his students. | *"We deliver at least one (1) hour, two times a week of physical activity. Eighty percent (80%) activity and 20% lecture was my formula. Stick with the goal of P.E. – for students to move!" (F3)*<br>*"because of CHED's order, we follow 2 hours per week." (F1)*<br><br>*"PAR - Q? – No. we do not have that. It depends on the teachers." (F1, F3)* | Participating in physical activity is very safe for most people. However, people of different ages may be unaware of certain conditions that may deem vigorous exercise unsafe. The PAR-Q allows for a safe and enjoyable exercise experience for all. The researcher believes that P.E. students should answer a PAR-Q. However, teachers should be aware that pre-existing conditions of students should not prevent them from participating in P.E. (American College of Sports Medicine, 2016). It should encourage them to proceed gradually, with a physician's guidance and the P.E. teacher, as exercise is medicine in the proper doses.<br>Teachers were well versed in the approaches, i.e., modifications (frequency, intensity, and duration) on the activities and proper education/ explanations on exercise precautions. |
| **The OLPE should allow students to choose where, when, and how to be physically active.** | Each OLPE course presented basic fitness movement patterns in a gradual progression of complexity and intensity. The students were taught they could combine movements to create their workouts and were given the freedom to be creative. They were presented with workouts during synchronous sessions and in video (or YouTube format) as a guide. They would do these exercises on their own time. | *"The purpose of service P.E. is to provide choices of activities that they can be involved in, and later on do it on their own. . ." (F2)*<br>*"I enjoyed it the most; I could do the exercises at my own pace, which means rest well in between sessions, without the social pressure."(S2)* | This recommendation was one of the most vital points of the OLPE program understudy.<br>The teachers provided room for creativity and individuality. They give enough movement examples, guidelines for practice, and flexibility with time. Instructors perceived that online P.E. learning allowed more time for family and individual study schedules according to the student's level of comprehension (Heryanto et al., 2024). |
| **OLPE should have policies related to communication type and frequency.** | Teachers were provided with policies on communication in written form and during online meetings. Memos and reminders from the university and college were given in preparation for and during the semester. Compassion and empathy in teaching were communicated through university memos. Teachers were like concerned parents to all their students. Teachers were encouraged to do so and needed to make time for individual consultation. During online synchronous sessions, they checked how each student was doing in class and at home. | *"At the start, inconsistent communication on guidelines to run Online PE classes. Although we had meetings and updates through Zoom and Facebook chat groups, it felt like it was not enough." (F5)*<br>*'Yeah, of course, I bombard them with memos" (F1)*<br><br>*"Becoming a better teacher in terms of compassion and providing individual feedback." (F2, F3)*<br><br>*"Synchronous from time to time is also good for checking on each other. It is a breather from everything to talk to your professor; they check on you and how you are, communicating the way you feel about the experiences you are going through." (S4)* | The policies' actual practice depended on the teacher's capacity and time to do all the OLPE tasks, considering the challenges the pandemic added to them. The teachers were able to provide platforms and other ways of communication (email, FB groups, etc.). Teacher-student individual consultation was considered too time-consuming to do often or more than once per semester.<br>The researcher believes this was a critical component of the success of OLPE. More time and effort should be given to all forms of communication. A critical aspect of this is feedback. This is widely researched to be powerful but varied in its delivery and effect on student quality engagement and learning (Treschman et al., 2024). |
| **The physical education teacher is credentialed and has participated in training and professional development related to online learning.** | All the teacher participants had high credentials, including Master's degrees and at least 9 years of teaching experience. However, all the participants had minimal online teaching training, which the university provided when the pandemic started. | *"for online capabilities, it is like we are all on the same level," and "I had to study as I went along" (F5)*<br>*"We rely on the university-offered online training in UVLe (University Virtual Learning Environment). There was more briefing for part-time lecturers than for full-time faculty. It was like somehow they assumed we knew what to do." (F2)* | Due to the sudden events of the COVID-19 pandemic, the creation of online courses was rushed. Teachers needed to be prepared. The university had to provide the teachers with the guidance and support it could. Webinars and short online courses were provided to create and deliver online class materials. They were guided by the university's Open University department, which has been offering online courses at all levels for years.<br>Teachers have said that more time was required for training and preparation for the succeeding semesters. P.E. teachers needed training in physical education, fitness, and sport. Consistent training prepares teachers for OLPE (Tagimaucia et al., 2024). |
| **Have prerequisites to better ensure student success in OLPE.** | There were no prerequisites for the students before enrolling in PE subjects.<br>Faculty were required to give all students a course pack before the first-class session to prepare and orient them for the course. | *"The same for all the other students… giving the students the course pack before the start of the classes." (F1)*<br><br>*"Yes, for lecturers. Capability to teach online, fitness and dance classes." (F1)* | Due to the university directive of "no one gets left behind," the P.E. department/ college administration had to ensure everyone had an equal chance to enroll in and complete a PE course. The burden was with the teacher to provide activities that every student could do, at any level of ability and with whatever resources/s they had or did not have. |
| **To meet physical activity recommendations, utilize technology to verify participation and support learning gains in physical activity.** | One of the difficulties both teachers and students faced was using technology. Video viewing, recording, editing, and presentations had to be learned. This was the best way to provide the lessons and the best way for the teachers to review and grade the students in OLPE.<br>It was highly desirable to use fitness apps, pedometers, heart rate monitors, and other technology that could make teaching, learning, | *"Internet connection is the main deterrent to participating fully in class: the ability to join synchronous classes and turn on cameras. " (F3)*<br><br>*"Internet connection – I cannot see my students well, sometimes it lags, cannot assess the movement properly." (F4)* | With the directive of the "No One Gets Left Behind" policy. The teachers could not require any technology that could discriminate any student from participating. (Office of the Vice-President for Academic Affairs, 2020)<br>Videos, videos, and videos were the best!<br>Teachers requested more support and training in creating more professional-looking videos for their classes. Videos in OLPE can be an indispensable method of delivering instruction and assessment (Silverman, 1997). |

| | | |
|---|---|---|
| and assessment more accessible and accurate. However, students were not ready for these technologically "advanced" methods. The most common reasons were a lack of internet connection or financial incapacity. | "*Sir is really smart, he uses YouTube videos. He took the time and effort to create YouTube videos. It is a lot of work, and I appreciated the fact that he was very passionate, his teaching, and he learned an extra skill, video editing, filming.*" *(S4)* | Camera use was an issue. Students were not required to keep the cameras on, which made it difficult for teachers to tell if they were paying attention (Foye, 2024). Moreover, ineffective camera use, where cameras were pointed at ceilings and walls, was experienced (Foye, 2024). Technological challenges included internet issues, poor communication, and support (Larbi-Apau & Kwofie, 2024). |

***The Success of an Online Physical Education (OLPE) Program in Achieving its Objectives was Highly Dependent on the Online and "Offline" Learning Environment***

The study OLPE program may have failed to achieve motor skill development (PE Objective 1) fully and the development of responsible personal and social behavior (PE Objective 4). However, it was able to facilitate the students' realization of the value of physical activity for health (PE Objective 5), achieve student fitness, increase both physical and mental health (PE Objective 3), and provide gains in knowledge on the principles and concepts of fitness and exercise performance (PE Objective 2 and 3).

The context in which the instruction and learning took place was a learning environment that included both online or synchronous and "offline" or asynchronous. PE classes were not just Zoom meetings, but they included the home and immediate physical setting, with the people they interacted with, where the student did the performance tasks (could include a nearby park, around the subdivision, or even outside the house).

The teachers and the students felt that the development and practice of sport-based motor skills and movement patterns needed to be fully achieved through online physical education courses. There were no sport-based OLPE courses offered. Therefore, only fitness-based motor skills and movement patterns were acquired. New movements were learned with the gradual progression in intensity and complexity of the sessions. They expressed doubt in performing the movements at the start of the course. Consistency in their movements was easily achieved because of the videos (workout and class) available to review multiple times. However, uncertainty in developing proper workout skill execution (and form) was expressed since the teachers needed to provide more individual feedback. In a study by Foye, 2024, teachers preferred giving feedback live or during synchronous sessions versus late feedback to video submissions.

*"But I was not sure if what I was doing was correct." (S1)*
*"In terms of skill, I realized I learned the movements of the dance. I thought I would not be able to do it at the start of the semester, but now I can do it!" (S3)*

The social domain mirrors the interactions with others, such as friends, classmates, family, and extended family, which typical Filipino homes have. The PE objective four states, "*The physically literate individual exhibits responsible personal and social behavior that respects self and others."* Physical education prides itself on providing social dealings and opportunities to practice and show movement learning and social skills (Mohnsen, 2012). Students expressed that there were very few social interactions or none at all. There was no group work. Barely anyone shared and spoke up, and they only communicated through the chat box during synchronous sessions. They expressed their desire to feel the "togetherness" during synchronous workouts/ activities as a shared experience. It was noted that fewer and fewer students attend synchronous sessions. Interestingly, one student mentioned that social interaction depended on the students since they could initiate communication synchronously or asynchronously because teachers did not restrict self-expression, communication, or interaction in class.

*"Something I would like to see in my PE – the chance to meet my classmates. Because, in this time of separation, you would crave to see your classmates and get to know them to socialize with them. In this current PE, there is no socializing activity except at the start of classes, where you introduce yourself, but you do not get to interact. I hope that for next semester, social interaction, group work, and collaborations can be incorporated." (S2)*
*"it also helps boost our confidence; when we interact, we have someone to look up to or rely on in the class." (S3)*
*"Compared to face to face, where we feel the physical exhaustion of each other, the vibe and energies of each other, we do not feel it now, in video lessons. It is also nice to see everyone working. We feel each other when we try to catch our breath synchronously. "(S4)*

Students could not leave their homes, group gatherings were not allowed, and social interactions through group games and activities were nonexistent. The sportsmanship, leadership, and social development aspects needed to be included. Teachers felt like they were talking to themselves. The classes were too quiet compared to face-to-face classes. Since turning on cameras was not required, minimal reactions and facial expressions could be seen. Knowing if the students were genuinely engaged in the class/ lesson was challenging. Very little communication and verbal interaction were done during synchronous workouts since the activity/workout was continuous. There is no time to socialize with classmates.

*"It is like you are talking to yourself." (F2)*
*"It was too quiet, ma'am" (F3)*

The limited student-teacher interaction made it difficult to share reactions and feelings. Gauging the students' reactions to the class design and activities was hard. The different online responsibilities (such as the production of online materials and checking of journals and reflections) were found to be three times more time-consuming (Jeong & So, 2020), leaving barely any time for the teacher to give more focus on providing ways for students to interact and socialize.

The P.E. objective five states, "*The physically literate individual recognizes the value of physical activity for health, enjoyment, challenge, self-expression, and social interaction."* The student participants commented positively on how the P.E. activities affected them beyond the physical/psychomotor domain. They expressed their gains in their value for fitness and regular physical activity. They perceived an increase in their fitness levels. They began to realize the value of daily physical activity because of their home confinement as COVID-19 infections rose in the communities. Regular fitness exercises improved their emotional and psychological state, increasing the value of physical exercise.

*". . . the importance is very pronounced as it changes the mindset and relieves the stress of online classes" (S2)*
*"Online setup discipline is essential to just getting through a day, especially with interval training. Just getting through the requirement of 10 sessions, you realize the importance of staying fit and not giving up on the exercise. When you start, you keep going until you finish and complete the exercise." (S4)*
*"Just like what I tell my friends, working out is my self-care." (S3)*
*"So, during online classes, it is very tiring and stressful, ma'am, you must complete your backlog in your schoolwork. The mindset is different when we do exercise. My stress disappears." (S2)*

The P.E. objectives 2 and 3 focused on the knowledge gained in OLPE. It focused on the "*knowledge of concepts, principles, strategies, and tactics related to movement and performance; and the knowledge and skills to achieve and maintain a health-enhancing level of physical activity and fitness.*" Many aspects of this objective were incorporated into the online physical education courses emphasizing fitness-based physical activities, such as interval training, walking, aero-dance, yoga, and similar activities. Teachers believed fitness activities were conducive to individual online settings (Foye, 2024). Designing tasks that had students apply and demonstrate the knowledge of concepts, principles, tactics, and strategies related to movement was achieved within the online learning environment. PE teacher participants required weekly videos, reflection papers, activities, and fitness journals for their students. At the same time, PE 1 students (Foundations of Fitness course) created and practiced their fitness plans. The teacher's knowledge and skill in conducting online classes were vital to achieving P.E. outcomes. The teacher's confidence in his technological skills affects his capacity to overcome technological challenges (Song & Cheong, 2024). Relevant teacher training would facilitate increased self-efficacy to fulfill P.E. objectives. Moreover, guidelines and incentives can be implemented at the policy level to drive quality, innovative teaching (He & Gong, 2024).

### 3.3 The Connoisseur's Fine Points

The three critical fine points in this study were, "*Meaningful two-way communication is critical in online P.E.,*" "*Collaborate and Connect in One Community,*" and "*It is more fun in the P.E. class! – "Let's move it!"*. All three (3) were aspects of the learning environment. The program's critical aspects were complex combinations of the online learning environment's physical, social, and institutional elements. All three fine points reflect the Seven Key Principles for Good Practice in Undergraduate Education by Chickering & Gamson 1987 (Walker Center for

Teaching and Learning, n.d.). Specifically, these included student-faculty contact, cooperation between students, prompt feedback and active learning set-ups.

The first fine point is that *meaningful two-way communication is critical in online PE.* This meant that students should be able to express their feelings, give their opinions, and relate warmly to peers and the teacher to establish meaningful interactions. OLPE may encourage independent work and require more significant teacher-student interaction (Tagimaucia et al., 2024). These were the words from the study participants:

*"We show more compassion to the students individually." (F1)*
*"Becoming a better teacher in terms of compassion and providing individual feedback was necessary." (F2, F3)*
*"I have this responsibility to check on them as well. It is like I am everyone's mother. I need to expand my heart to everyone." (F5)*

Giving more consistent individualized feedback provided affirmation and motivation to engage enthusiastically. This reduced the odd feeling of maneuvering their way through unfamiliar movements. The teacher's workload and the large number of students in the class needed to allow them to provide more individual feedback. More feedback from the teacher was needed to reinforce the correct movement patterns positively. Immediate feedback from the teacher was needed to drive students to participate actively (Jeong & So, 2020). The positive nurturing interaction between teacher and student was vital in realizing the value of physical education (Jeong & So, 2020).

The second point is *CC1C - Collaborate and Connect as One Community.* Online physical education during the COVID-19 pandemic called for stronger community relationships geared for every individual to thrive. Sharing and collaboration among teachers, administration, departments, and colleges naturally occurred as everyone opened their mind and heart to the challenges. Teachers were found to develop solutions to encourage and engage students (Heryanto et al., 2024). Being sensitive to the concerns of everyone became the norm. Compassion and understanding were the guide. There was more empathy for teacher-mothers, senior teachers, financial, spouse, and family concerns. Every individual's concern affected the teachers, students, interactions, and the learning environment. The crisis's physical, emotional, and psychological anxieties affected the microsystem of the individual's daily life functionality, in some ways positively, but in more prominent ways, negatively. In a study in Ghana, the feeling of connectedness was a predictor of student online learning experience; connection with faculty was described as "no connection to solid connection" (Larbi-Apau & Kwofie, 2024, p. 9). In the current study, the participants' responses included the following:

*"More time with family and home life. But it was not easy to focus on work. Family life intersects with work." (F2 and F5)*
*"Collaboration and helping each other out is needed between student-teacher and other teachers." (F2, F4, and S4)*
*"I have realized that the approach is to help each other – student and teacher." (F2)*
*". . . it is like it is a different feeling when you have a community you are part of" (S3)*

The third point is that "*It is more fun in the PE class! (Philippines!) – "Let's move it!".* Physical education, first and foremost, should be enjoyed by the students. Fun and enjoyment while achieving individual fitness goals should be the top priority in designing class activities. All the elements in the learning environment affected the student's enjoyment and engagement in OLPE activities.

Hilgart et al., 2012 noted that the learning environment influenced a student's desire and inclination to complete an online course. The elements of the learning environment, both online and offline, such as class activities, class interactions, and home-family settings, have an impact on the student's drive to actively complete online courses (Ritterband et al., 2009; Hart, 2012) Students responded to the design of the learning environment by expressing enjoyment, achievement, improved fitness and overall well-being, increased self-confidence, a sense of class belonging, and oneness. In contrast, they also craved more relaxed and lighter-hearted activities because of physical exhaustion, demotivation, and discouragement.

*"Great feeling of achievement after seeing how my fitness improved and how we, my classmates and I have progressed." (S4, S3)*

*"… it improves your mood, and you are not irritable; that is one thing I appreciate and look forward to for every exercise, even if it is hard. After this, I know my health will improve since online classes are unhealthy. It would be best if you had something to counterbalance the schoolwork. The goal, ma'am, is to maintain physical activity and to increase endurance, which I am confident I have met." (S2)*
*"I wish there were games before the class; I think in Zoom you can send messages and interact with your classmates. Something to lighten the mood." (S2)*
*"Enjoyment? It is a bit conflicted, ma'am, it is challenging, ma'am. I truly enjoy it, I feel and see the effect, and I know I am doing it right." (S3)*

These fine points reflect Urie Bronfenbrenner's Bioecological Theory of Human Development (Vélez-Agosto, N.M et al., 2017; Rosa, E., & Tudge, J., 2013) point on the 2-way interaction of the individual to his environment. His environment involves components of the four systems that are part of his ecological development. The microsystem was the immediate learning environment around the student, which included the physical home environment and the family members. The mesosystem included the parks, subdivision or community, peers, classmates, and teachers. The macrosystem includes the online class characteristics (content, delivery, support, internet connectivity), the university and department policies, the immediate culture of the city or province to which the student belongs, and the finances. Finally, the COVID-19 pandemic was part of the chronosystem; it was a significant event that affected all other elements of the systems and the learning environment.

## 4.0 Conclusion

The features of the OLPE reflected the early stages of development. The teachers and students recognized the importance of time-efficient methods, prioritizing student feedback, consistent and meaningful communication, collaboration among community stakeholders, and focusing on fitness activities.

The online physical education program resulted from the combined modifications caused by the sudden shift from face-to-face PE to an online mode of teaching and modifications due to the consequences of the pandemic. Due to the sudden nature of the shift to an online mode of teaching, OLPE offered courses that were all fitness-based. It used teacher-created course packs as the primary course resource to guide all students. It emphasized active participation more from students than skill acquisition or psychomotor development. OLPE teachers needed to be de-loaded, resulting in fewer PE classes servicing only 50% of the regular university students. The class activities were limited to those that could be done within the confines of the students' and teachers' homes, with minimal equipment. Students of varying levels of fitness and ability could execute them. The students could complete class requirements independently with minimal supervision, equipment, and maximum safety. However, social interactions and group activities were minimal to nonexistent.

It was realized that teachers collaborated and interacted more with each other. They showed more compassion to the students. They were forced to upskill and learn new technological teaching methods. Although they had a more flexible schedule, they became more conscious of managing the more time-consuming responsibilities of OLPE with a work-home life balance. The teachers felt they had much work beyond class time and a wearisome time separating work and home time. The OLPE study needed to develop motor skills and develop responsible personal and social behavior. On the other hand, the students realized the value of physical activity for health. They felt that P.E. classes assisted in their fitness and increased their health (physical and mental), as well as provided gains in knowledge on the principles and concepts of fitness and exercise.

The value of this research will depend on the transformative effects on the stakeholders. The insights and realizations expressed as criticism of the online physical education program aimed to initiate proactive collaborations within the universities that offer OLPE. Collaborations on developing online physical education courses are vital to fully operationalize the modifications needed based on the insights discussed in this study. Thus, this research adds to the existing empirical research on online pedagogical strategies, specifically in achieving physical education student outcomes. It pinpoints the need for more effective OLPE communication strategies that facilitate motor skill learning and socialization. It provided essential points in delivering quality online physical education through strict implementation of national standards and safety protocols for students. This is especially true when addressing student and teacher concerns with policies on communication and technology learning support systems. Furthermore, the study advances educational research with the creative use of Eisner's Educational Connoisseurship and Criticism Model (Eisner, 1976) to investigate physical education pedagogy.

However, more in-depth and encompassing investigations of other stakeholders within the micro- and meso-systems (family and community) are needed to determine possible contributions to motor skill learning and fitness levels. There is also a need to explore administrative areas and policy considerations for a robust technology-competent learning environment. The researcher desired a holistic account of the study perspectives. However, this may have yet to be fully achieved due to the limitations of the semester time frame and online research methods restricted by COVID-19 safety measures of quarantine, lockdown, and physical distancing. This limited the number of participants, time exposure to the online classes, and the time participants gave for interviews. Although, it was interesting to note that both students and teachers enjoyed sharing their experiences and suggestions. They expressed the importance of this study and the expected outcomes of providing better OLPE experiences and a variety of support for both students and teachers.

## 5.0 Contribution of Authors

The first author conceptualized, planned, collected data, analyzed the results, generated the discussion and conclusion, and completed the article for publication. The second author recommended using Eisner's Educational Connoisseurship and Criticism Model.


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## 7.0 Conflict of Interests

This research and author did not have any conflict of interest.


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# Practice of Transformational Leadership of School Heads and Work Performance of Teachers in Public Elementary Schools

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**Abstract.** Good leadership is significant since it is one of the motivating factors that motivate teachers to excel in providing quality education to learners. The purpose of this study is to measure the extent of the practice of transformational leadership of school heads and the work performance of teachers in public elementary schools in District V of the Division of Bacolod City. Random sampling was used to identify the 175 respondents. The study utilized descriptive, comparative, and correlational research designs and an adapted researcher-made survey questionnaire, which was validated and underwent reliability tests. The research found that school heads were perceived to have a high level of transformational leadership practice and were rated very high by Master and Grade 2 Teachers. Teachers' performance was generally outstanding, except for Grade 2 Teachers, who had very satisfactory ratings. The study concluded that there was no significant difference in leadership practices and work performance according to variable length of service, teaching position, marital status, and grade level taught. Furthermore, no significant relationship was found between the transformational leadership of school heads and teachers' work performance. Research indicates that elementary school teachers assessed their school heads as transformational leaders, and teachers demonstrated a high level of work performance. In conclusion, despite the positive effects of transformational leadership on motivation at work, it does not significantly impact teachers' performance. Thus, factors such as teaching styles and classroom strategies may significantly influence work performance.

**Keywords:** Transformational leadership; Work performance; School head; Teaching performance; Public elementary school.

## 1.0 Introduction

Transformational leadership has become the most influential leadership philosophy in the past 20 years, significantly influencing employee and organizational performance and growth, especially in challenging environments (Buil et al., 2019). A team's productivity and the minds of its members are greatly influenced by the actions and disposition of its leader. According to recent theoretical advancements and empirical research, leadership styles significantly impact individual and organizational performance, such as organizational citizenship, satisfaction, and performance (Tian et al., 2020).

This leadership style emphasizes interpersonal interaction, meeting needs, encouraging, and providing a moral framework. It is crucial in educational institutions to build relationships, influence performance, and promote promote. Idealized influence is critical, inspiring subordinates to prioritize collective goals over personal interests. This leadership style is prevalent in developing countries with high educational status, like Finland and the United

States (Firmansyah et al., 2022). Several prior research examined the impact of transformational leadership on teacher performance. Several studies show that transformational leadership influences teacher performance. (Saptono et al., 2021)

Evaluating the leadership abilities of school heads is essential for fostering collaboration between educational authorities, teachers, students, parents, and the community. It underscores the significance of effective leadership in driving educational excellence and societal development in the Philippines (Uy et al., 2024). School principals' leadership significantly impacts teachers' motivation and performance, while transformational leadership emphasizes workforce dedication and intrinsic motivation (Sarong, 2023).

School heads demonstrate effective leadership strategies, while teachers demonstrate satisfactory teaching quality. However, productivity disparities exist based on teaching status and years of experience (Nicdao, 2019; Aquino et al., 2021). Furthermore, a study by Yacon and Cayaban (2023) evaluated the relationship between school administrators' transformational leadership and teachers' adaptive performance in providing organizational support. Results showed a strong positive relationship between transformational leadership and teachers' adaptive performance in seven private international schools in the Philippines.

Nevertheless, more in-depth research is needed to assess effective leadership practice strategies, regardless of whether the principal's leadership styles promote growth in dedication towards self, student, and institutional development (Kareem et al., 2023). In addition, Wang et al. (2019) emphasize the need for further research on the effectiveness of transformational leadership in different cultural settings, highlighting its influence on organizational norms and values.

Research on transformational leadership practices and teacher performance in the Philippines is crucial for addressing educational challenges. Understanding context-specific differences across schools is essential for developing effective policies and interventions in the education system. Understanding the long-term impact of transformational leadership on teacher performance is also essential. Generally, this study aimed to identify the extent of the practice of school heads and its relationship to teachers' work performance in public elementary schools. It was on this premise that the researcher opted to pursue this study so that the results could be used as the basis for developing a training program and school learning action cell (SLAC) sessions that would guide school heads to implement transformational leadership in their institutions to improve their work performance.

## 2.0 Methodology

### 2.1 Research Design

This study employed a descriptive, comparative, and correlational research design. According to Shuttleworth (2019), descriptive research design is a scientific method that requires observing and describing a subject's behavior without influencing it. The descriptive approach in this study is to examine the extent of transformational leadership by the school head, the level of work performance of the teachers according to their demographic profile, such as tenure of service, teaching position, marital status, and grade level, and the relationship between those variables.

A comparative research design determines and compares the results between two or more groups that continue to exist in the given situation. Descriptive and analytical methods can examine variations within or across groups (Devi, 2022). This research design aims to compare the significant differences between transformational leadership and teachers' work performance according to the demographic profile of the respondents. A correlational research design examines the relationship between variables without the researcher changing or adjusting them. It describes the direction and extent of a relationship between two or more factors. A correlation's direction could be positive or negative (Bhandari, 2021). This study aimed to identify the significant relationship between the extent of transformational leadership among school heads and the level of teachers' work performance.

### 2.2 Research Locale

The study was conducted in one hundred seventy-five (175) elementary public schools in District V in the Division of Bacolod City for the academic year 2023-2024. The respondents were permanent or regular teaching personnel, regardless of their position. District V is composed of seven (7) elementary schools located in Bacolod City and is under the province of Negros Occidental.

**2.3 Research Participants**

The respondents of the study included one hundred seventy-five (175) elementary public school teachers of District V in the Division of Bacolod City during the academic year 2023-2024. Respondents from the seven districts' schools were randomly selected to achieve a representative distribution, ensuring each teacher had an equal chance of being included in the sample.

**2.4 Research Instrument**

The research instrument is a survey questionnaire that aims to measure the extent of the public school teachers' transformational leadership of school heads. The questionnaire was divided into two parts. The first part of the survey is the respondents' profiles, such as tenure of service, teaching position, marital status, and grade level taught. The second part of the survey is about the extent of the practice of transformational leadership of the school heads as assessed by their teachers. It is adapted from the Principal Leadership Questionnaire designed by Leithwood et al. (1996) and developed by Enceria Damanik (2014). They created the PLQ to create and partially evaluate a theoretical explanation of how teachers see transformational education leadership in their school heads. It is a 48-item questionnaire rated on a four-point Likert scale ("almost always" to "never").

For the measurement of the teachers' work performance, they were evaluated through their IPCRF rating (Individual Performance Commitment and Review Form) in terms of the Teaching Learning process, Students' outcomes, and Professional Growth and Development. This served as the secondary data for this study since the rating was already rated in July 2023 of S.Y. 2022-2023. Hence, the items found in the Department of Education's Individual Performance Commitment and Review Form and the evaluation tool for leadership styles for subject coordinators were modified to produce an instrument suited for the school. It is supported by Department of Education Order No. 2, s. 2015.

**2.5 Data Gathering Procedure**

Utilizing the authorized research tool, the researcher submitted a permission letter to the Schools Division Superintendent (SDS) through the PSDS of the Division of Bacolod City. The letter consisted of a written request asking permission from the superintendent to conduct the study on the District V elementary public school teachers, which the researcher signed, the adviser, and the Dean of the Graduate School.

The researcher also submitted a letter asking permission from the school head to access and gather teachers' performance ratings through their Individual Performance Commitment and Review Form (IPCRF), a toolset by the Department of Education standards for measuring teachers' efficiency and effectiveness in the teaching-learning process. Also, the signed letter from the Schools Division Superintendent (SDS) through the PSDS of the Division of Bacolod City was forwarded to the school principals to determine the study's respondents.

The researcher personally distributed the questionnaires to the respondents in their respective schools. Confidentiality of the respondents' responses was assured that their answers would be solely for research purposes. Appropriate statistical tools like survey questionnaires were retrieved for tallying, tabulation, and data analysis.

**2.6 Ethical Considerations**

The researcher ensured the ethical integrity of the study by addressing the broad ethical principles of beneficence, justice, and respect for individuals. The study respondents were given a consent form for voluntary participation in this research investigation. They were not forced to answer the survey questionnaire and were free to withdraw at any moment while the data was being collected. The researcher guaranteed the confidentiality of the information provided by the participants and allowed the respondents the right to privacy and anonymity about any information they shared throughout the study. The identity of the respondents was never revealed, leaked, or published. The materials containing the responders' data were appropriately secured and preserved.

## 3.0 Results and Discussion

### 3.1 Practice of Transformational Leadership of School Heads

Results in Table 1 showed that when taken as a whole, elementary school teachers assessed their school heads as practicing a "high" extent of transformational leadership, given a mean of 4.30 and a standard deviation of 0.65. The general extent of elementary teachers conveys that the elementary teacher positively or highly regards their heads as transformational leaders.

**Table 1.** Extent of practice of transformational leadership of school heads

| Variable Grouping | Mean | SD | Interpretation |
|---|---|---|---|
| **As a whole** | 4.30 | 0.65 | High |
| **Length of Service** | | | |
| Shorter (9yrs & below) | 4.53 | 0.72 | High |
| Longer (10yrs & above) | 4.32 | 0.59 | High |
| **Teaching Position** | | | |
| Teacher Position (T1-T3) | 4.28 | 0.66 | High |
| Master Teacher | 4.55 | 0.55 | Very High |
| **Marital Status** | | | |
| Single | 4.37 | 0.63 | High |
| Married | 4.26 | 0.67 | High |
| Other | 4.47 | 0.48 | High |
| **Grade Level Taught** | | | |
| Kinder | 4.19 | 0.59 | High |
| Grade 1 | 4.21 | 0.73 | High |
| Grade 2 | 4.61 | 0.52 | Very High |
| Grade 3 | 4.34 | 0.56 | High |
| Grade 4 | 4.45 | 0.48 | High |
| Grade 5 | 4.30 | 0.68 | High |
| Grade 6 | 4.30 | 0.65 | High |

It was supported by the study of Sholikhah and Purwanta (2020), which states that principals are highly transformational. The principal, a transformational leader with noble values like religion, discipline, and independence, contributes to the school's vision, mission, goals, and programs by developing curriculum, preparing infrastructure, and collaborating with assistant teachers and student guardians. Furthermore, according to the research, school heads have demonstrated a high degree of transformational leadership in professional and values growth. It is a positive sign that school administrators support teacher professional development and values development, both aimed at improving the educational system (Badato, 2020). In addition, Manongsong (2019) stated that teacher respondents gave the school head's transformational leadership style an "excellent" rating regarding idealistic influence, inspirational motivation, individualized concern, and indicators of intellectual stimulation. It implies that elementary school teachers highly value and positively perceive transformational leadership, characterized by a strong vision, collaboration, and innovative problem-solving. This leadership style, driven by passion and commitment, contributes significantly to school success and can lead to long-term improvements and positive outcomes in the educational environment. Teachers believe their principals successfully implement these practices, aligning with previous studies indicating their effectiveness in achieving school success.

Moreover, table 1 results showed that when grouped according to length of service, teaching position, marital status, and grade level taught, both teachers perceive their school heads' transformational leadership as high regardless of their length of service. Also, in the teaching position, master teachers rate their school heads' transformational leadership higher than teachers in positions T1-T3, with a "very high" interpretation. Additionally, marital status categories rate the school heads' transformational leadership as high, with the "Other" category showing the highest mean. For the grade level taught, teachers across all grade levels perceive their school heads' transformational leadership as high, with Grade 2 teachers rating it as "very high."

The table implies that elementary school teachers, irrespective of their length of service, teaching position, marital status, or grade level taught, generally perceive their school heads as transformational leaders. Master and Grade 2 teachers perceive their school heads' transformational leadership exceptionally well. Master teachers highly perceive the school head's transformational leadership since they report directly to the principal. In the Philippine educational system, school heads are the highest-ranking administrators in elementary or high schools. They report directly to the school or supervise master teachers and those under their jurisdiction. School heads, head teachers, and master teachers are responsible for the overall operation of a school (Boga, 2019). Furthermore, Estacio (2022) suggests that in a shared decision-making and site-based management era, school heads may refer to various school administrators and leaders, including assistant principals, head teachers, and master teachers, who all play a crucial role in achieving school objectives.

Correspondingly, school heads adopt a transformational leadership style to improve school setups, focusing on moral and ethical commitment, student well-being, and maintaining proximity to improve performance (Rehman, 2019). As for grade level taught, Bouchamma et al. (2021) in their study affirmed that increased grade levels have a favorable impact on practices and attitudes, teacher professional development, transformational leadership, and a decrease in justice practices among human capital factors. It revealed that transformational leadership significantly impacts teaching and learning outcomes in Grade 2 teachers. Effective practices like clear goals, professional development, and support enhance teaching effectiveness and student achievement.

This result implies that transformational leadership by school heads is highly valued across various teacher demographics, with particularly very high ratings from Master Teachers and Grade 2 teachers. This leadership style fosters a positive educational environment and enhances teaching and learning outcomes, underscoring its importance in effective school management.

### 3.2 Work Performance of Elementary School Teachers

Table 2 showed that when taken as a whole, teachers' level of work performance was "Outstanding," with a mean score of 4.55 and a standard deviation of 0.25. It indicates that, generally, elementary teachers exhibit a very high level of work performance across all categories examined in the study.

**Table 2.** Level of work performance of elementary school teachers

| Variable Grouping | Mean | SD | Interpretation |
|---|---|---|---|
| **As a whole** | 4.55 | 0.25 | Outstanding |
| **Length of Service** | | | |
| Shorter (9yrs & below) | 4.53 | 0.22 | Outstanding |
| Longer (10yrs & above) | 4.58 | 0.28 | Outstanding |
| **Teaching Position** | | | |
| Teacher Position (T1-T3) | 4.55 | 0.26 | Outstanding |
| Master Teacher | 4.64 | 0.19 | Outstanding |
| **Marital Status** | | | |
| Single | 4.51 | 0.26 | Outstanding |
| Married | 4.56 | 0.25 | Outstanding |
| Other | 4.68 | 0.17 | Outstanding |
| **Grade Level Taught** | | | |
| Kinder | 4.54 | 0.16 | Outstanding |
| Grade 1 | 4.50 | 0.26 | Outstanding |
| Grade 2 | 4.46 | 0.30 | Very Satisfactory |
| Grade 3 | 4.61 | 0.22 | Outstanding |
| Grade 4 | 4.57 | 0.30 | Outstanding |
| Grade 5 | 4.62 | 0.20 | Outstanding |
| Grade 6 | 4.55 | 0.26 | Outstanding |

In terms of knowledge of the subject matter and pedagogical approaches, the teachers' performance was outstanding, as assessed by their master teachers. However, the study of Hermogeno & Dulos (2022) slightly deviates from the result of this by indicating mere "very satisfactory" work performance, while it also slightly supports the "outstanding" work performance result of elementary teachers in this study in general. In the Philippine setting, the performance rating of school heads depends on the work performance of schoolteachers. It is supported by Department of Education Order No. 2, s. 2015 (Department of Education, 2015), stating that school heads' performance ratings for promotion are very satisfactory, with teachers' work performance significantly affecting their rating.

It implies that the consistently outstanding ratings of elementary teachers' work performance reflect a robust educational system where teachers' effectiveness significantly contributes to school leadership's overall performance and evaluation.

Furthermore, table 2 presents the work performance levels of elementary teachers, analyzed by various categories such as length of service, teaching position, marital status, and grade level taught. This table indicates that elementary teachers, regardless of their length of service, teaching position, marital status, or grade level taught, consistently exhibit an "Outstanding" level of work performance. Master Teachers and teachers classified under "Other" marital status have the highest mean ratings, suggesting exceptionally high performance in these groups. Although Grade 2 teachers rated their performance as "Very Satisfactory," all other grades rated it as "Outstanding."

The implication is that elementary teachers generally perform exceptionally well, with most achieving an "Outstanding" level of work performance across various categories. However, Grade 2 teachers who rate their performance as "Very Satisfactory," may not reach the same level of excellence as their counterparts teaching other grade levels, indicating their performance may not be as high. Very Satisfactory means that the respondents had exceeded the minimum requirements or indicators for the said rating but could not achieve the highest requirements for an outstanding rating (Sarabia & Collantes, 2020). A study reveals that grade two teachers face various challenges, including work stress, negative quality, and learners' behavior. The most significant issues include digital learning needs, absenteeism, reading and comprehension skills, due reports, and work overload. Grade 2 teachers have also identified challenges related to enhancing reading skills and student engagement, including improving reading skills, increasing engagement, and promoting socialization (Mislang et al., 2023).

It has implied that the "Very Satisfactory" rating for grade 2 teachers in Bacolod City is due to their ability to manage work stress, quality standards, student behavior, digital learning, absenteeism, reading skills, report deadlines, and work overload. Proactive support and interventions are crucial to maintaining high performance and delivering quality education, ultimately benefiting students' educational experiences.

### 3.3 Difference in the Extent of Practice of Transformational Leadership

***According to Length of Service and Teaching Position***

Data in Table 3 is centered on ascertaining possible significant differences in the extent of the teachers' transformational leadership of the school heads. The computed value showed no significant difference when teachers were grouped according to length of service (p=0.705) and teaching position (p=0.186), which failed to reject the null hypothesis. Therefore, the null hypothesis was accepted, stating that no significant difference exists in the extent of transformational leadership among teachers when grouped according to these variables. These findings favor the idea that regardless of the length of service and teaching position of the elementary teachers, their assessment of the extent of transformational leadership practice of the school heads does not significantly vary or appears to be almost of the same extent or weight.

**Table 3.** Analysis of the difference in the extent of practice of transformational leadership of school according to length of service and teaching position

| Variable Grouping | n | Mean Rank | Sum of Ranks | Mann-Whitney U | P-value | Significance at α = 0.05 | Decision |
|---|---|---|---|---|---|---|---|
| **Length of Service** | | | | | | | |
| Shorter (9&below) | 82 | 89.52 | 7340.5 | 3688.5 | 0.705 | Not Significant | Do not Reject $H_o$ |
| Longer(10&above) | 93 | 86.66 | 8059.9 | | | | |
| **Teaching Position** | | | | | | | |
| T1 – T3 | 161 | 86.53 | 13931.5 | 890.5 | 0.186 | Not Significant | Do not Reject $H_o$ |
| Master Teacher | 14 | 104.89 | 1468.5 | | | | |

It was affirmed by the study of Morales (2022), which stated that transformational leadership and length of service are the same. It implies that assessment in transformational leadership remains the same when teachers are grouped according to the length of service. In addition, a study by Thanh and Quang (2022) supported this result by stating that the evaluation of public sector employees' work performance and their leadership style scores do not differ statistically significantly, according to transformational leadership and job position analysis.

However, Bulilan (2023) negated that transformational leadership style directly influences the length of service and current position. Furthermore, the length of service implies job satisfaction and effectiveness and efficiency in their jobs. More extended work experience is associated with higher expectations for their work performance and greater job satisfaction (Maruhom et al., 2024).

It implies that teachers' perceptions of transformational leadership among school heads are consistent, regardless of their teaching experience or position. It suggests that teachers view their school heads' leadership practices, similarly, indicating a potentially practical and uniformly applied leadership style. Designations within the school, such as being a master teacher, can also shape how transformational leadership is perceived, as these roles may interact with leadership in unique ways. Additionally, teachers' individual experiences within the school and in their careers can color their perceptions of leadership effectiveness. However, the study suggests that other factors, like designation and experience, can significantly influence how transformational leadership is perceived in different settings. Therefore, while the findings hold for this study, other factors may influence how transformational leadership is perceived in different settings.

***According to Marital Status and Grade Level Taught***

Table 4 shows the results in the extent of practice of transformational leadership of school heads as assessed by the elementary school teachers when further grouped as to marital status (p=0.429), and grade level taught (p=0.081). The study found no significant differences in marital status and grade level taught among elementary teachers based on marital status or grade level taught. The p-values indicate no statistically significant differences in distributions across different groups, indicating that the null hypothesis cannot be rejected for either variable grouping.

**Table 4.** Analysis of the difference in the extent of practice of transformational leadership of school heads according to marital status and grade level taught

| Variable Grouping | n | Mean Rank | df | $\chi2$ | P-value | Significance at α = 0.05 | Decision |
|---|---|---|---|---|---|---|---|
| **Marital Status** | | | | | | | |
| Single | 46 | 92.75 | | | | | |
| Married | 120 | 85.03 | 2 | 1.694 | 0.429 | Not Significant | Do not Reject $H_o$ |
| Other | 9 | 103.33 | | | | | |
| **Grade Level Taught** | | | | | | | |
| Kinder | 11 | 79.50 | | | | | |
| Grade 1 | 26 | 82.31 | | | | | |
| Grade 2 | 21 | 112.43 | | | | | |
| Grade 3 | 27 | 89.93 | 6 | 11.264 | 0.081 | Not Significant | Do not Reject $H_o$ |
| Grade 4 | 30 | 96.42 | | | | | |
| Grade 5 | 29 | 67.98 | | | | | |
| Grade 6 | 31 | 88.15 | | | | | |

Hence, Morales (2022) in their study affirmed that marital status has no direct influence on the perceived transformational leadership styles of the respondents. Furthermore, this is supported by the findings of Skelton (2019) stated that the study found no significant difference in perceived principal instructional leadership functions or grade-level teaching. In addition, it was revealed that demographic characteristics marital status, and grade level taught by the teachers had little bearing on how school heads executed leadership styles. Similarly, the study uncovered that marital status does not bring differences in teachers' commitment levels. The study revealed that teachers in the various departments (kindergarten, primary, and intermediate) have similar commitment levels (Boye, 2023).

It implies that since the study found no significant differences in the perceived practice of transformational leadership by school heads based on marital status or grade level taught, it suggests that effective leadership is shaped by individual capabilities and professional settings. However, grade levels may have different expectations. Universal skills should be the primary objective of effective leadership development, and competence should be prioritized over personal characteristics during the hiring process. Policies should comprehensively assist school administrators, and further study should look into other aspects that affect a leader's effectiveness. Leadership training can be designed to meet the specific demands of various grade levels by understanding their particular needs. Additionally, school leaders may adapt to the changing educational context by fostering a culture of continuous learning and adaptability. Focusing on strategies tailored to specific contexts can significantly improve leadership effectiveness. Ongoing professional development and support designed to address the distinct challenges of various educational environments will be essential for progress.

### 3.4 Difference in the Level of Work Performance

***According to Length of Service and Teaching Position***

Results in table 5 showed that there was no significant difference in the extent of elementary teachers' work performance when grouped into profile variables. When grouped according to length of service (p=0.097) and teaching position (p=.084), the computed value signified also showed no significant difference. Therefore, the null hypothesis for the objective was accepted. The results indicate that elementary teachers' work performance levels do not significantly differ based on their length of service or teacher position.

**Table 5.** Analysis of the difference in the level of work performance of elementary school teachers according to length of service and teaching position

| Variable Grouping | n | Mean Rank | Sum of Ranks | Mann-Whitney U | P-value | Significance at α = 0.05 | Decision |
|---|---|---|---|---|---|---|---|
| **Length of Service** | | | | | | | |
| Shorter (9&below) | 82 | 81.24 | 6662.00 | 3259.00 | 0.097 | Not Significant | Do not Reject $H_o$ |
| Longer (10 & above) | 93 | 93.96 | 8738.00 | | | | |
| **Teaching Position** | | | | | | | |
| T1 – T3 | 161 | 86.76 | 86.76 | 890.50 | 0.186 | Not Significant | Do not Reject $H_o$ |
| Master Teacher | 14 | 102.21 | 102.21 | | | | |

This implies that performance levels can be used consistently for professional development, assessment, and support systems since performance levels are constant across these profile characteristics. According to the findings, fair and inclusive professional environments that provide equal access to opportunities and resources for all teachers are necessary to promote a culture of consistently high performance. This is supported by the study of Gacusan and Calangi (2022), stating that there is no significant difference between the work performance of the respondents in terms of length of service. The study also found no significant difference in grade level taught. The findings suggest that all teachers, not just those starting their careers, need improved support and professional learning.

On the other hand, the study by Gacusan and Calangi (2022) negated that the teaching position significantly impacts teachers' work performance, with a significant difference observed between their performance levels and their demographic profile, such as teaching position. In addition, the study of Cruzos (2022) revealed that since teaching positions were found to be significant and a contributing factor to teachers' teaching performance, the teacher must upgrade their positions, whether through promotions or reclassifications, by taking into consideration the fundamental requirements by DepEd policies and guidelines. Hermogeno and Dulos (2022) stated that Teachers' performance varies across positions, with higher positions resulting in better teaching performance. Teachers I-III should be proficient and professionally independent, while Master Teachers I-IV should be highly proficient and consistently perform well in their teaching practice. Increasing teacher quality is a top priority in reforms aimed at education. This distinction ensures a clear career progression and encourages continuous professional development. Furthermore, targeted training programs and mentorship opportunities can help teachers at all levels achieve these proficiency standards. Ensuring that teachers meet these benchmarks will ultimately lead to improved student outcomes and a stronger educational system.

It implies that results show no substantial difference in the work performance of elementary teachers according to their position or term of service. This supports establishing standardized mechanisms for assistance, evaluation, and professional growth. To ensure that all teachers have the chance to succeed and support efforts for educational reform, it is also critical to consider opposing research and continue to promote career advancement and professional development. Implementing these standardized mechanisms will help create a more equitable educational environment. By offering consistent support and evaluation, schools can better identify areas needing improvement and ensure that all teachers receive the resources they need. Additionally, ongoing professional development should be tailored to address the specific needs of educators at various stages of their careers, fostering continuous growth and adaptation. Encouraging a culture of collaboration and knowledge-sharing among teachers can further enhance their professional skills. Lastly, recognizing and rewarding exceptional performance can motivate teachers to strive for excellence, ultimately benefiting the entire educational community.

### *According to Marital Status and Grade Level Taught*

Data on table 6 showed the elementary teachers' work performance level showed no significant differences in marital status(p=0.198) and grade level taught (p=0.274). Therefore, the null hypothesis was accepted. The possible reason for the non-significant difference in the level of performance as to the marital status and grade level taught must be attributable to the very satisfactory rating as the least performance rating given to teachers for the school heads to be eligible for promotion.

**Table 6.** Analysis of the difference in the level of work performance of elementary school teachers according to marital status and grade level taught

| Variable Grouping | n | Mean Rank | df | $\chi 2$ | P-value | Significance at $\alpha = 0.05$ | Decision |
|---|---|---|---|---|---|---|---|
| **Marital Status** | | | | | | | |
| Single | 46 | 79.57 | | | | | |
| Married | 120 | 89.51 | 2 | 3.240 | 0.198 | Not Significant | Do not Reject $H_o$ |
| Other | 9 | 110.94 | | | | | |
| **Grade Level Taught** | | | | | | | |
| Kinder | 11 | 86.05 | | | | | |
| Grade 1 | 26 | 72.08 | | | | | |
| Grade 2 | 21 | 75.52 | | | | | |
| Grade 3 | 27 | 102.00 | 6 | 7.539 | 0.274 | Not Significant | Do not Reject $H_o$ |
| Grade 4 | 30 | 93.82 | | | | | |
| Grade 5 | 29 | 97.38 | | | | | |
| Grade 6 | 31 | 83.90 | | | | | |

Current performance evaluations may not accurately reflect actual differences in teacher performance due to uniformly high ratings, potentially linked to promotion eligibility. It suggests a need for revisiting and revising performance evaluation systems to ensure they provide meaningful assessments that can effectively inform professional development and organizational decisions.

This is affirmed by the study of Ertekin and Avunduk (2021), which found no significant difference in job performance levels among participants based on marital status, regardless of whether they were married or single. The results aligned with a previous study by Özdemir et al. (2019), indicating no significant difference in work performance; likewise, it is also indicated that teachers' marital status does not significantly impact their job performance, and it contributes less to their job enhancement. Additionally, their ability to effectively use instructional aids and engage students in the classroom is not influenced by their marital status. In contrast to the results, research indicates that teachers' perceptions of school effectiveness are influenced by their grade level, with performance decreasing as they progress from primary to intermediate levels. Teachers with repeated experience in the same grade level or subject area improve more rapidly. School leaders should consider the benefits of specific teaching experience when making decisions about teaching assignments, as it can influence professional growth and flexibility in management.

It is implied that performance evaluations for elementary teachers may not accurately reflect job performance due to uniformly high ratings, possibly linked to promotion eligibility. It could obscure fundamental differences and suggest the need for revision of evaluation systems. Additionally, this uniformity in high ratings might prevent the identification of teachers who truly excel and those who need further support. To ensure more accurate and meaningful evaluations, it may be necessary to incorporate multiple metrics and more nuanced criteria.

Research indicates that specific teaching experiences and the grade levels teachers work with can significantly impact their perceptions of school effectiveness and opportunities for professional growth. Therefore, school heads need to consider these factors when making teacher assignments and conducting performance evaluations. By considering these factors, schools can enhance fairness and effectiveness in evaluating and supporting teacher development, ultimately contributing to improved student educational outcomes. This approach can also help in identifying tailored professional development opportunities that address the unique needs of teachers at different grade levels. Consequently, a more supportive and responsive educational environment can be cultivated, benefiting both teachers and students.

**3.5 Relationship Between Transformational Leadership and Teacher Work Performance in Elementary Schools**
Table 7 showed that the computed value for the test yielded a Spearman's rho of -0.154* and a p-value of 0.042. This result underscored a significant relationship between the phenomena concerning its p-value, thus successfully rejecting the null hypothesis. The Spearman's rho result disclosed a weak negative linear relationship being close to the value of zero. Its negative value is read as a decrease in one value leads to an increase in another. It means that a decrease in the perceived extent of transformational leadership leads to increased work performance or vice versa.

**Table 7.** Correlation analysis for the relationship between transformational leadership of school heads and work performance of elementary school teachers

| Variable | | Work Performance | Transformational Leadership |
|---|---|---|---|
| 1. Work Performance | Spearman's rho | — | |
| | p-value | — | |
| 2. Transformational Leadership | Spearman's rho | -0.154 | — |
| | p-value | 0.042 | — |

The preceding finding is validated by the study of Firmansyah et al. (2022), which revealed a relationship between transformational leadership and work performance. However, it ran contrary as it revealed an opposite relationship. Moreover, that study further asserted that transformational leadership is essential to teachers' work performance. It is also implied that school heads need to ensure high performance in the domains of transformational leadership to involve teachers to attain an average proficiency level for the school and meet the national standard.

Furthermore, as Lai et al. (2020) stated in their study, they found no significant correlation between work performance and transformational leadership despite work engagement being strongly correlated with helping behavior. Several factors influence employee engagement and work behavior, and they show that engaged employees are more likely to score higher on the task performance scale and helping behavior than employees who are not engaged.

The results imply that while elementary teachers generally perform satisfactorily at work, conclusions differ on the degree of transformational leadership. An increase in perceived transformational leadership negatively impacts work performance but is positively impacted by a decrease. It shows that, in the current setting, transformational leadership has minimal impact on teacher performance. However, additional factors, such as individual methods of instruction and classroom dynamics, might significantly impact teachers' performance. The absence of a significant correlation between teacher performance ratings and transformational leadership could lead to a reassessment of school evaluation procedures, emphasizing the importance of open, equitable, and varied evaluation standards.

## 4.0 Conclusion
In conclusion, the findings suggest that transformational leadership is highly valued and positively perceived by elementary school teachers in Bacolod City. This leadership style, characterized by a strong vision, collaboration, and innovative problem-solving, contributes significantly to school success and long-term improvements in the educational environment. The study indicates that teachers perceive their school heads as successfully implementing these practices. The study also suggests that elementary teachers perceive their school heads as transformational leaders regardless of their demographics, such as length of service, teaching position, marital status, or grade level taught. It implies a consistent and practical application of transformational leadership across various teacher profiles.

Moreover, the study shows that teachers ' perceptions of transformational leadership are consistent across various demographics, such as length of service, teaching position, marital status, and grade level taught. This consistency suggests that effective leadership is shaped by individual capabilities and professional settings rather than personal demographics. Furthermore, the consistently high ratings of elementary teachers ' work performance reflect a strong educational system where teachers ' effectiveness significantly contributes to overall performance and school leadership evaluation. However, the study also highlights areas for improvement, particularly among Grade 2 teachers who rated their performance as "Very Satisfactory." Addressing challenges such as work stress, poor quality, student behavior, digital learning demands, absenteeism, reading and comprehension skills, due reports, and work overload is crucial to maintaining high-performance standards and ensuring a high-quality education for students.

Additionally, the study highlights the need to revisit and revise performance evaluation systems to reflect teacher performance differences accurately. The uniformly high ratings in performance evaluations may not accurately capture variations in job performance. They could be linked to promotion eligibility, indicating a potential need for more meaningful assessment criteria. Conclusively, the study underscores the importance of effective leadership, fair evaluation systems, and ongoing professional development to promote a culture of consistently high performance and quality education in public elementary schools in Bacolod City.

## 5.0 Contributions of Authors

The contributions of each author are as follows: Stephanie Grace T. Esogon conceptualized the research, designed and conducted the study, interpreted the data, and performed analysis. Joey L. Gumban, PhD, revised the research concept, supervised the conceptualization of the study, contributed to the design, and conducted analysis. Melona Q. Guitche, PhD, provided suggestions and inputs during the development of the research concept, contributed to the study design, and participated in the analysis phase.

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## 7.0 Conflict of Interests

The authors declare no conflicts of interest about the publication of this paper.

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# Credit Management Implementation and Financial Performance of Microfinance Institutions in Calamba City

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**Abstract.** Microfinance institutions are vital to inclusive growth and development in the Philippines by providing tailored financial services to marginalized groups. Implementing credit management is crucial for their success since it can facilitate good financial performance while promoting financial inclusion, alleviating poverty, and driving rural development. The main objective of this study was to describe and determine the relationship between credit management implementation and the financial performance of microfinance institutions in Calamba City. This study used descriptive correlational design to describe the credit management implementation and financial performance levels of microfinance institutions in Calamba City and determine if there is any significant relationship between these two variables. With the aid of the G-power, the study was able to get 200 respondents based on a 0.2278 effect size and 95% degrees of confidence. The sample size was composed of management and clients of microfinance institutions and was selected using a simple random sampling technique. Data was collected through validated researcher-made questionnaires distributed personally to the respondents. The data gathered were treated using four-point Likert scales, mean, Independent T-test, and Pearson correlation coefficient. The study's findings revealed that the microfinance institutions in Calamba City have fully implemented their credit management and exhibited very high financial performance. There was a significant relationship between the two variables. The r values ranging from .509 to .685 were interpreted as having a moderate positive correlation to credit management implementation and financial performance. As an output of the study, an action plan was proposed, a series of strategic activities intended to enhance the financial performance of microfinance institutions through credit management implementation.

**Keywords:** Credit management; Financial performance; Microfinance institution.

## 1.0 Introduction

In today's modern business landscape, most payment transactions are based on credit. Credit is the power to acquire money or something else of value through borrowing in exchange for repaying the obligation in the future based on agreement (Mekonnen, 2019). Extending credit to customers shows that the business values them and has confidence in their ability to pay their liabilities on time. Businesses cannot operate competitively in the market without having the ability to offer credit terms. Credit management has become critical in any organization since selling on credit is necessary for business transactions.

Significantly, credit management is how businesses oversee and collect customer credit payments to ensure timely repayment and maintain a healthy cash flow (Narain, 2022). It is a vital aspect of finance that helps businesses maximize their cash flows, minimize non-payment risk, and make better financial decisions. Extending credit involves an inherent risk of non-repayment or default that can be effectively mitigated through credit management. While credit management holds significance across all organizations, its importance is particularly emphasized in financial institutions due to its primary function of extending credit.

Globally, numerous financial institutions face challenges in extending credits arising from outdated risk assessment tools, volatile economic conditions, and inadequate monitoring and management practices. The aftermath of the global financial crisis further complicates these difficulties that compromise their sustainability in the market. These institutions have many loan defaults, which negatively affects their financial performance. This is crucial to the economy, given that lack of credit availability may result in significant costs for other businesses. Credit management aims to protect any financial institution from possible losses and prevent customers from having additional debt that cannot be paid off on time (Oranefo et al., 2023). As a result, there has been a greater focus on credit management, particularly within microfinance institutions.

Like any financial institution, the biggest problem of microfinance institutions is lending money and not collecting it back. Microfinance institutions bear more risks than conventional financial institutions (Assairh et al., 2023). A microfinance institution is an organization that provides financial services that target low-income and marginalized populations who are often excluded from traditional banking systems. The main providers of microfinance services are rural banks or thrift banks, credit cooperatives, and non-governmental organizations. These institutions are pivotal in promoting inclusive growth and development in the Philippines by providing financial resources that create opportunities to empower individuals and communities, alleviate poverty, promote financial inclusion, and drive rural development. However, microfinance institutions may struggle to fulfill these crucial roles without sound financial performance.

Due to the inherent complexities in the operational landscape of serving marginalized and low-income populations, the financial performance of microfinance institutions is inherently at risk. Effective credit management can help a microfinance institution succeed, while poor credit management can lead a business to bankruptcy (Basweti, 2022). The risks of non-repayment or loan defaults increase since their target populations often face economic vulnerabilities and unpredictable income streams. It also weakens their financial stability, leading to significant losses and impairment of their ability to sustain operations. Credit management is crucial for mitigating these risks and ensuring the good financial performance of microfinance institutions.

According to the Bangko Sentral ng Pilipinas, the government is committed to supporting microfinance institutions because they consider them one of the effective economic drivers in the Philippines. Microfinance institutions can give people in need access to credit that can help improve their livelihood. However, many microfinance government programs have failed, and many microfinance institutions have difficulty collecting customer payments. This event influences this study to examine microfinance institutions' credit management implementation and financial performance.

Most studies about credit management and financial performance were more conceptual and explanatory. These studies focused on commercial banks and other non-financial institutions, while limited studies concentrated on microfinance institutions. There was also a notable absence of studies investigating the correlation between credit management implementation and the financial performance of microfinance institutions in Calamba City. This study intended to bridge these existing gaps and enhance the knowledge of finance discipline in credit management implementation and financial performance of microfinance institutions.

## 2.0 Methodology

### 2.1 Research Design

The study utilized a descriptive-correlational research design, which aimed to systematically describe the credit management implementation and financial performance levels of microfinance institutions in Calamba City and determine if there was any significant relationship between these two variables. This research design was chosen as the most suitable and appropriate for the study due to its effectiveness in describing the current status of the variables and examining the potential relationships between them without manipulating them.

**2.2 Research Participants**

The respondents for this study were the management and clients of microfinance institutions in Calamba City. The first group of respondents was the management of microfinance institutions, which were directly responsible for implementing credit management and knowledgeable about their respective microfinance institutions' financial performance. The second group of respondents were clients experiencing financial services and the actual implementation of credit management in microfinance institutions. This study utilized a simple random sampling technique to select the sample, which enabled the collection of representatives from the population. This study used a G-power sample size computation application to identify the number of respondents, employing an effect size of 0.2278 with a 95% confidence level. The total population was 54 microfinance institutions, with a sample size of 50 management members and 150 clients. This sampling was used to avoid bias and balance the perspectives of management and clients to draw more meaningful conclusions.

**2.3 Research Instrument**

The study used a researcher-made questionnaire to gather all the relevant information. The survey questionnaire had two sections; the first part was based on the measurement of credit management implementation level in terms of credit appraisal, credit risk control, and collection policy, while the second part was based on the measurement of financial performance level in terms of profitability, liquidity, and solvency of the microfinance institutions. The questionnaire was validated by experts and tested for reliability using Cronbach's Alpha, achieving a value of .908 for the first section and .896 for the second section, both considered reliable.

**2.4 Data Gathering Procedure**

The study sent a letter of request to the approving officers of microfinance institutions to obtain authorization to conduct the study within the premises. Upon approval of the request, the offices of microfinance institutions were visited to gather data. The respondents were briefed about the study and informed that participation was voluntary. All survey questionnaires were personally distributed to the respondents and collected afterward to ensure complete retrieval. The responses from the respondents were tallied, analyzed, and interpreted.

**2.5 Ethical Consideration**

This study adhered to measures to uphold ethical standards throughout the research process. The main ethical concerns during the research process were consent, confidentiality, and data protection following the Data Privacy Act 2012. The data and information gathered were assured of confidentiality.

## 3.0 Results and Discussion

### 3.1 Credit Management Implementation

***In terms of Client Appraisal***

**Table 1.** Descriptive statistics of the level of credit management implementation in terms of client appraisal

| Indicators | Management | | Clients | | Composite | |
|---|---|---|---|---|---|---|
| | **Mean** | **Interpretation** | **Mean** | **Interpretation** | **Mean** | **Interpretation** |
| 1. Assesses the capacity to pay off a potential borrower. | 3.50 | Fully Implemented | 3.58 | Fully Implemented | 3.54 | Fully Implemented |
| 2. Considers security offered to protect the loan. | 3.60 | Fully Implemented | 3.42 | Fully Implemented | 3.51 | Fully Implemented |
| 3. Evaluate the character of a potential borrower seeking a credit facility. | 3.54 | Fully Implemented | 3.54 | Fully Implemented | 3.54 | Fully Implemented |
| 4. Provides training to its staff to perform client appraisals effectively. | 3.34 | Fully Implemented | 3.43 | Fully Implemented | 3.39 | Fully Implemented |
| 5. Applies appropriate techniques to evaluate borrower's creditworthiness. | 3.58 | Fully Implemented | 3.47 | Fully Implemented | 3.53 | Fully Implemented |
| 6. Defines its credit terms and conditions clearly to clients. | 3.70 | Fully Implemented | 3.57 | Fully Implemented | 3.64 | Fully Implemented |
| 7. Examines all the 5 C's, including capital, collateral, character, capacity, and credit conditions in granting or rejecting a loan. | 3.54 | Fully Implemented | 3.46 | Fully Implemented | 3.50 | Fully Implemented |
| 8. Applies credit standards consistently across all clients. | 3.54 | Fully Implemented | 3.51 | Fully Implemented | 3.53 | Fully Implemented |
| **Overall result** | **3.54** | **Fully Implemented** | **3.50** | **Fully Implemented** | **3.52** | **Fully Implemented** |

Client Appraisal was Fully Implemented (see Table 1) regarding the credit management implementation level of microfinance institutions in Calamba City as assessed by management and clients. All indicators were verbally interpreted as Fully Implemented. Furthermore, the indicator "defines its credit terms and conditions clearly to clients" had the highest computed composite mean of 3.64; meanwhile, the indicator "provides pieces of training to its staff to perform client appraisal effectively" had the lowest composite mean of 3.39.

This implies that microfinance institutions can assess the creditworthiness of clients when making credit decisions. Microfinance institutions clearly define their credit terms and conditions for clients. However, the result also shows that microfinance institutions have the lowest assessment in training their staff to perform client appraisals effectively. It depicts a need to enhance how microfinance staff members are trained to enhance their knowledge, skills, and attitudes when conducting client appraisals.

Accordingly, Mulyungi and Mulyungi (2020) found that an established and well-implemented client appraisal was a prerequisite in credit management for financial institutions, particularly in the microfinance sector, to achieve better financial performance. The study concluded that client appraisal was the key to finding suitable and dependable clients for credit or loans. Financial institutions had to implement suitable appraisal processes that improve the identification of suitable clients and borrowers to reduce the number of loan defaults. The appraisal process should consider the traits of the borrower, physical aspects, utilization of credit reference bureaus, credit scoring algorithms, and customer credit risk assessments to implement it effectively.

Moreover, Ndero et al. (2019) found that implementing client appraisal of financial institutions in Kenya utilized the credit score model, credit reference model, and 5Cs credit evaluation model to make it more effective. These appraisal models were used to evaluate the clients when granting or rejecting a loan application. Most financial institutions also employ internal credit rating systems to assess a client's eligibility for a certain loan based on its creditworthiness. With the help of client appraisal, the ability and willingness of the borrower to repay a credit or a loan could be determined, which could avoid loan defaults and minimize losses in any financial institution.

***In terms of Credit Risk Control***

Credit Risk Collection was Fully Implemented (see Table 2) regarding the credit management implementation level of microfinance institutions in Calamba City as assessed by management and clients.

**Table 2.** Descriptive statistics of the level of credit management implementation in terms of credit risk control

| **Indicators** | **Management** | | **Clients** | | **Composite** | |
|---|---|---|---|---|---|---|
| | **Mean** | **Interpretation** | **Mean** | **Interpretation** | **Mean** | **Interpretation** |
| 1. Performs credit checking regularly. | 3.50 | Fully Implemented | 3.46 | Fully Implemented | 3.48 | Fully Implemented |
| 2. Offers credit insurance to mitigate the risk of loan defaults. | 3.50 | Fully Implemented | 3.45 | Fully Implemented | 3.48 | Fully Implemented |
| 3. Provides flexible loan repayment schedules. | 3.40 | Fully Implemented | 3.41 | Fully Implemented | 3.41 | Fully Implemented |
| 4. Imposes non-monetary penalties for late payments. | 3.06 | Implemented | 3.20 | Implemented | 3.13 | Implemented |
| 5. Involves credit committee in controlling credit risk. | 3.44 | Fully Implemented | 3.37 | Fully Implemented | 3.41 | Fully Implemented |
| 6. Has loan product designs that satisfy the needs of their clients. | 3.54 | Fully Implemented | 3.53 | Fully Implemented | 3.54 | Fully Implemented |
| 7. Applies a loan size limit. | 3.46 | Fully Implemented | 3.39 | Fully Implemented | 3.43 | Fully Implemented |
| 8. Uses consistent formal loan application forms. | 3.54 | Fully Implemented | 3.50 | Fully Implemented | 3.52 | Fully Implemented |
| **Overall result** | **3.43** | **Fully Implemented** | **3.41** | **Fully Implemented** | **3.42** | **Fully Implemented** |

Furthermore, the indicator "has loan product designs that satisfy the needs of their clients" had the highest composite mean of 3.54, verbally interpreted as Fully Implemented. Meanwhile, the indicator "imposes non-monetary penalties for late payments" had the lowest composite mean of 3.13 verbally interpreted as Implemented.

This implies microfinance institutions can apply controls to mitigate inherent credit risks when lending or extending credit. The microfinance institutions have loan product designs that satisfy the needs of their clients. However, the result also shows that microfinance institutions have the lowest assessment in terms of imposing non-monetary penalties for late payments to their clients that can result in loan defaults. It depicts a need for enhancement in how microfinance institutions impose non-monetary penalties for late payments from their client to receive payments on time.

Likewise, Basweti (2022) discovered that implementing credit risk control could lessen clients' chances of not fulfilling their repayment obligations. Participation of credit committees in credit decision-making controls minimized credit risk in financial institutions. Another method to control credit risk was regularly utilizing consistent official loan application forms, which improved management's credit monitoring. It was discovered that loan product design was a workable strategy for managing non-performing loans, and credit insurance protects loan defaults.

Similarly, Ndyagyenda (2019) emphasized that credit risk control should be a part of financial controls in any company, especially in the financial sectors, to guarantee that sales are realized as cash or liquid resources. Given the intricate and wide-ranging nature of the banking industry, credit control should be implemented, which includes all financial aspects of credit quality, credit extension, and recurring cycles and patterns. Strict and robust credit control served as the cornerstone of credit risk management.

***In terms of Collection Policy***

Collection Policy was Fully Implemented (see Table 3) regarding the credit management implementation level of microfinance institutions in Calamba City as assessed by management and clients.

**Table 3.** Descriptive statistics of the level of credit management implementation in terms of collection policy

| Indicators | Management | | Clients | | Composite | |
|---|---|---|---|---|---|---|
| | **Mean** | **Interpretation** | **Mean** | **Interpretation** | **Mean** | **Interpretation** |
| 1. Provides loan rescheduling for non-compliant clients. | 3.44 | Fully Implemented | 3.43 | Fully Implemented | 3.44 | Fully Implemented |
| 2. Enforces security of loan agreements. | 3.52 | Fully Implemented | 3.41 | Fully Implemented | 3.47 | Fully Implemented |
| 3. Monitors payments of borrowers and follows up on missed payments. | 3.70 | Fully Implemented | 3.53 | Fully Implemented | 3.62 | Fully Implemented |
| 4. Conducts customer visits regularly to enhance loan repayment. | 3.34 | Fully Implemented | 3.29 | Fully Implemented | 3.32 | Fully Implemented |
| 5. Provide staff incentives to improve collections. | 3.36 | Fully Implemented | 3.37 | Fully Implemented | 3.37 | Fully Implemented |
| 6. Applies adverse credit listing in case of loan default. | 3.58 | Fully Implemented | 3.45 | Fully Implemented | 3.52 | Fully Implemented |
| 7. Applies withholding of services for borrowers who fail to repay loans. | 3.30 | Fully Implemented | 3.43 | Fully Implemented | 3.37 | Fully Implemented |
| 8. Enforces legal actions to recover default loans. | 3.40 | Fully Implemented | 3.57 | Fully Implemented | 3.49 | Fully Implemented |
| **Overall result** | **3.46** | **Fully Implemented** | **3.43** | **Fully Implemented** | **3.45** | **Fully Implemented** |

All indicators were verbally interpreted as Fully Implemented. Furthermore, the indicator "monitors payments of borrowers and follows up on missed payments." had the highest composite mean of 3.62; meanwhile, the indicator "conducts customer visits regularly to enhance loan repayment" had the lowest composite mean of 3.32.

It implies that microfinance institutions can efficiently convert their expenses to produce profit. It is evident that microfinance institutions monitor the payments of their borrowers and follow up on missed payments. However, the result also shows that microfinance institutions have the lowest assessment of conducting regular customer visits. It depicts a need to enhance how microfinance institutions conduct customer visits to build client relationships and enhance loan repayments.

Similarly, Gichuki (2023) emphasized the importance of the roles of management and employees in managing delinquencies backed up by proper implementation of collection policy to handle delinquencies and raise repayment rates. A collection policy established by a financial institution guarantees an efficient way to monitor on-time payments and loan defaults. It was also proven that regular assessments in collection policies were necessary for financial institutions to ensure they were still applicable. They are updated to the changing needs of the clients in the market.

Furthermore, Barasa and Otuya (2019) found that failing to implement and establish guidelines for debt collection policy could result in poor financial performance. A collection policy ensured timely repayments, minimized defaults, and maintained the financial institution's sustainability. Hence, financial institutions needed to implement collection policies to improve financial performance.

### 3.2 Difference in the Assessment of the Groups of Respondents

There was no significant difference between the responses of the two groups of respondents on the credit management implementation of microfinance institutions in Calamba City (see Table 4). The test of significant difference in the assessment of the management and clients on the credit management implementation of microfinance institutions in Calamba City generated computed probability values of Client Appraisal, Credit Risk Control, and Collection Policy were .314, .745, and .685, respectively, which were greater than the level of significance of 0.05; thus, the null hypothesis was accepted.

**Table 4.** Test of difference in the assessment of the management and clients on the credit management implementation

| Sub-variables | | Sum of squares | df | Mean square | | F Ratio | P value | Remarks | Decision |
|---|---|---|---|---|---|---|---|---|---|
| | Between Groups | 0.075 | 1 | | | | | | |
| Client Appraisal | Within Groups | 14.659 | 198 | 0.075 | 0.074 | 1.02 | 0.314 | Not Significant | Accept $H_o$ |
| | Total | 14.734 | 199 | | | | | | |
| | Between Groups | 0.01 | 1 | | | | | | |
| Credit Risk Control | Within Groups | 17.857 | 198 | 0.01 | 0.09 | 0.106 | 0.745 | Not Significant | Accept $H_o$ |
| | Total | 17.866 | 199 | | | | | | |
| | Between Groups | 0.016 | 1 | | | | | | |
| Collection Policy | Within Groups | 18.919 | 198 | 0.016 | 0.096 | 0.165 | 0.685 | Not Significant | Accept $H_o$ |
| | Total | 18.934 | 199 | | | | | | |

Level of significance 0.05

This means that the responses of the management and clients of microfinance institutions are parallel and have the same assessment of the credit management implementation level regarding client appraisal, credit risk control, and collection policy. The result encompasses both the perspective of management, which is responsible for implementing credit management and overseeing lending activities and the perspective of clients, who are directly experiencing the implementation of credit management and have access to essential financial services of microfinance institutions. Both the management and clients find the credit management implementation of microfinance institutions to be fully implemented.

To support this, Daci and Zekaj (2022) reiterated that management was the driving force in implementing various initiatives within microfinance institutions. The management of different microfinance institutions was responsible for establishing long-term relationships with clients and managing credits to collect on time and avoid loan defaults. In microfinance, the management needs to have a vision for operational details and knowledge of changes in the needs and wants of the clients. This enabled the management to adapt, initiate change, and improve their operations.

In addition, Kusumawardani et al. (2020) emphasized the importance of the client's perspective as an asset for any financial institution, catering to both credit and savings clients since clients were the primary source of funds. Financial institutions could use these funds to credit low-income earners, household-based entrepreneurs, and small communities. Regarding banking services, the most important factor that one should not overlook is customer satisfaction. Improving customer service was necessary because maintaining customer relationships was crucial to preserving banking's reputation in the community.

### 3.3 Financial Performance Level of Microfinance Institutions in Calamba City as Assessed by Management

***In terms of Profitabilitty***

Profitability was Very High (see Table 5) regarding the financial performance level of microfinance institutions in Calamba City as assessed by management. Furthermore, the indicator "uses its assets to generate profits effectively" had the highest composite mean of 3.52, verbally interpreted as Very High; meanwhile, the indicator "maintains a high-quality loan portfolio for a profitable lending operation." had the lowest composite mean of 3.18 verbally interpreted as High.

**Table 5.** Financial performance level of microfinance institutions in calamba city as assessed by management in terms of profitability

| Indicators | Mean | Interpretation |
|---|---|---|
| 1. Generates positive net profits in recent years. | 3.50 | Very High |
| 2. Obtains returns on the investment it received from its owners. | 3.48 | Very High |
| 3. Uses its assets to generate profits effectively. | 3.52 | Very High |
| 4. Maintains a high-quality loan portfolio for a profitable lending operation. | 3.18 | High |
| 5. Ensures that their operations generate sufficient returns to cover costs. | 3.48 | Very High |
| 6. It has steadily increased its customer base. | 3.46 | Very High |
| 7. Sets interest rates at levels that cover operational costs and earn profit. | 3.50 | Very High |
| 8. Has diversified revenue sources that enhance its profitability. | 3.48 | Very High |
| **Overall result** | **3.45** | **Very High** |

It implies that microfinance institutions are highly profitable and efficiently convert their expenses to produce profit. The microfinance institutions use their assets to generate profits effectively. However, the result also shows that microfinance institutions have the lowest assessment for maintaining a high-quality loan portfolio for a profitable lending operation. It depicts a need for enhancement in how microfinance institutions manage their loan portfolios to maintain a high-quality portfolio for a more profitable lending operation.

Accordingly, Hada and Mihalcea (2020) emphasized the significance of profitability as a criterion for evaluating the financial success of all economic entities. They showed that profitability measures could be used to determine a company's overall level of economic efficiency. Positive net profits, diversified revenue sources, and sufficient returns to cover operations costs were some indicators for evaluating financial performance under profitability. These measures were essential for every business to support financial decision-making and enhance profitability.

Moreover, Claude (2023) mentioned that profitability measures how a business makes money over a specific period with its resources at hand. The higher the profitability ratio results, the better, but these ratios provide more information than the industry average or the company's historical data. The return on equity, return on assets, and profit margin ratios were used to gauge profitability. These ratios were some of the most important metrics for measuring the profitability of microfinance institutions.

***In terms of Liquidity***

Liquidity was Very High (see Table 6) regarding the financial performance level of microfinance institutions in Calamba City as assessed by management. All indicators were verbally interpreted as Very High. Furthermore, the indicator "monitors its cash flows to ensure adequate liquidity" had the highest computed composite mean of 3.58; meanwhile, the indicator "develops contingency funding plans for managing liquidity in times of stress or crisis" had the lowest computed composite mean of 3.30.

**Table 6.** Financial performance level of microfinance institutions in calamba city as assessed by management in terms of liquidity

| Indicators | Mean | Interpretation |
|---|---|---|
| 1. Can meet its short-term obligations. | 3.48 | Very High |
| 2. Develop contingency funding plans for managing liquidity during stress or crisis. | 3.30 | Very High |
| 3. Has an adequate amount of cash holdings. | 3.52 | Very High |
| 4. Diversify its funding sources to reduce reliance on a single funding channel. | 3.38 | Very High |
| 5. Monitor its cash flows to ensure adequate liquidity. | 3.58 | Very High |
| 6. Has been improving its liquidity in recent years. | 3.50 | Very High |
| 7. Conduct liquidity stress testing regularly due to unsecured loans. | 3.44 | Very High |
| 8. Has highly liquid assets that provide access to cash when needed. | 3.48 | Very High |
| **Overall result** | **3.46** | **Very High** |

It implies that microfinance institutions are highly liquid and easily meet short-term debts. They monitor their cash flows to ensure adequate liquidity. However, the result also shows that microfinance institutions have the lowest assessment in developing contingency funding plans for managing liquidity in times of stress or crisis. It depicts a need for enhancement in the methods that microfinance institutions are using to plan for their contingency funds to improve their liquidity.

Likewise, Alhassan and Islam (2021) emphasized that every business needed to pay close attention to their receivables by implementing credit management to increase their liquidity. It helped increase a business's liquidity to generate profit and improve the collection of past-due debt by using effective credit terms, risk management, and recovery techniques. Liquidity is critical to any organization's financial health and stability to meet a company's short-term obligations. Sufficient liquidity ensured that a company could cover its day-to-day operating expenses and seize investment opportunities as they arose.

Moreover, Okpala et al. (2019) mentioned that low liquidity has been linked to poor credit management, which has led to losses from bad debts and inadequate receivable collection when due. The study found that many companies failed to launch sustainable initiatives to improve their liquidity due to ineffective profit maximization brought by insufficient capital. Companies could increase their liquidity to reach the target profit level by implementing appropriate risk assessment strategies, having effective credit terms, and implementing debt recovery plans to help collect past-due payments.

***In terms of Solvency***

As assessed by management, solvency was very high (see Table 7) regarding the financial performance level of microfinance institutions in Calamba City. All indicators were verbally interpreted as Very High. Furthermore, the indicator "maintains a high level of asset quality ensuring that their total assets remain valuable" had the highest composite mean of 3.58; meanwhile, the indicator "can manage its operations into the foreseeable future" had the lowest computed mean of 3.30.

**Table 7.** Financial performance level of microfinance institutions in calamba city as assessed by management in terms of solvency

| Indicators | Mean | Interpretation |
|---|---|---|
| 1. Can meet its long-term obligations. | 3.52 | Very High |
| 2. Maintain adequate capital levels to absorb potential losses and support their long-term operations. | 3.52 | Very High |
| 3. Make adequate provisions for potential loan losses. | 3.54 | Very High |
| 4. Can manage its operations into the foreseeable future. | 3.30 | Very High |
| 5. Has a positive net worth. | 3.48 | Very High |
| 6. Is stable, efficient, and less likely to become insolvent. | 3.40 | Very High |
| 7. Engages in long-term financial planning, considering growth, sustainability, and capital structure. | 3.56 | Very High |
| 8. Maintains a high level of asset quality, ensuring their total assets remain valuable. | 3.58 | Very High |
| **Overall result** | **3.49** | **Very High** |

This implies that microfinance institutions are highly solvent and can easily meet long-term debts. Microfinance institutions maintain a high level of asset quality, ensuring that their total assets remain valuable. However, the result also shows that microfinance institutions have the lowest assessment regarding their ability to manage their operations into the foreseeable future. It depicts that there is a need for enhancement in the way that microfinance institutions manage their operations to be sustainable.

Significantly, Akuku et al. (2023) emphasized that solvency was the institution's capacity to fulfill its long-term obligations and maintain financial stability. A business could experience insolvency risk if its total assets were less than its total liabilities. To avoid this, an institution must restructure debt and manage capital to improve its financial performance. Solvency enables businesses to pursue growth opportunities, make strategic investments, and withstand economic downturns without risking insolvency.

Moreover, Nshimiyimana (2023) reiterated that managing solvency can help a company pay off its long-term obligations when they become due. If a company becomes insolvent or cannot make a profit to pay its debts, it can end up in bankruptcy. A proactive approach to solvency management was essential for maintaining financial stability and flexibility, which could ensure a company's long-term success.

### 3.4 Relationship Between Credit Management Implementation and Financial Performance

There was a significant relationship between credit management implementation and the financial performance of microfinance institutions in Calamba City (see Table 8). The r values ranging from .509 to .685 were interpreted as with a moderate positive correlation to credit management implementation and financial performance. The computed probability values of .000 were lesser than the level of significance ($P<0.05$); thus, the null hypothesis was rejected.

**Table 8.** Test of relationship between credit management implementation and financial performance

| Credit Management Implementation | Financial Performance | r value | P value | Remarks | Decision |
|---|---|---|---|---|---|
| | Profitability | .551** | .000 | Significant | Reject $H_o$ |
| Client Appraisal | Liquidity | .561** | .000 | Significant | Reject $H_o$ |
| | Solvency | .610** | .000 | Significant | Reject $H_o$ |
| | Profitability | .577** | .000 | Significant | Reject $H_o$ |
| Credit Risk Control | Liquidity | .644** | .000 | Significant | Reject $H_o$ |
| | Solvency | .579** | .000 | Significant | Reject $H_o$ |
| | Profitability | .685** | .000 | Significant | Reject $H_o$ |
| Collection Policy | Liquidity | .509** | .000 | Significant | Reject $H_o$ |
| | Solvency | .511** | .000 | Significant | Reject $H_o$ |

**Correlational at the level 0.01, *Correlational at the level 0.05(Two-tailed)

It implies that as the microfinance institutions' credit management implementation increases, their financial performance also increases. Conversely, as the credit management implementation decreases, the financial performance also decreases. To support this, Mboe and Kavale (2023) found a statistically significant positive correlation between credit management and the financial performance of microfinance institutions in Kenya. The study concluded that microfinance institutions performed well due to the proper and consistent implementation of credit management. Moreover, Kipkoech and Bogongo (2023) found that credit management significantly affected the financial performance of commercial banks in Kenya. The study concluded that better implementation of credit management results in better financial performance.

### 3.5 Proposed Action Plan

As an output, an action plan (see Table 9) was designed to address the specific areas identified in the study. This action plan focused on mitigating the risk of loan defaults and enhancing timely collections of microfinance institutions. To achieve this, the proposed action plan outlined several strategic activities.

Firstly, the proposed action plan offered targeted financial counseling sessions to existing and prospective clients facing financial challenges. These sessions aimed to empower clients with the knowledge and tools necessary to make informed financial decisions, reducing the likelihood of loan default. Secondly, it involved establishing a network of field agents in remote areas to extend financial services to underserved communities. This expansion could enhance outreach and facilitate efficient collection in previously inaccessible areas. Lastly, it involved providing employee training and professional development initiatives, which could enhance the skills, knowledge, and competencies in managing credits.

Implementing this proposed action plan could strengthen credit management implementation and enhance the overall financial performance of microfinance institutions while promoting financial inclusion and sustainable development within the community it serves. It could also build greater trust and reliability among their clients, fostering long-term relationships, and community support.

**Table 9.** Proposed action plan

| Key Areas | Objectives | Strategies/Activities | Time Frame | Persons Involved | Source of Fund | Success Indicators |
|---|---|---|---|---|---|---|
| Credit Risk Control | To educate clients to make informed financial decisions and mitigate the risks of loan default | Conduct a comprehensive assessment of the specific needs of the clients in accessing credit services<br>Develop educational materials and resources tailored to the needs of the clients.<br>Collaborate with professionals and organizations to leverage resources, expertise, and networks.<br>Provide clients with comprehensive counseling sessions and integrate the importance of timely loan repayments and the consequences of late payments.<br>Evaluate and refine financial counseling services based on feedback and emerging client needs. | Monthly | Marketing Team<br>Credit Officers | Marketing Budget | 85% reduction in loan defaults and losses<br>90% client retention over the year |
| Collection Policy | To expand the reach to remote areas and improve the collection | Establish a network of field agents in remote areas to provide extended financial services<br>Ensure compliance with regulatory requirements related to the services provided through agents.<br>Recruit qualified agents and provide comprehensive training and resources to facilitate financial service.<br>Engage with local communities and leaders to promote awareness of the service.<br>Conduct regular audits and monitoring to safeguard against scams, fraud, and money laundering. | Annually | Operations Managers<br>Collections Staffs | Operating Budget | 95% of receivables are collected on or before due |
| Client Appraisal | To improve the skills, knowledge, and competencies of the employees in managing credits | Develop a comprehensive training curriculum that covers client assessment, portfolio management, and contingency risk mitigation<br>Provide training materials to support the delivery of training sessions.<br>Encourage collaboration by facilitating peer-to-peer learning and group discussions.<br>Monitor and evaluate the impact of training programs | Quarterly | Human Resources Personnel | Human Resources Budget | 80% improved employee performance and productivity |

## 4.0 Conclusions

The microfinance institutions can assess the creditworthiness of their clients, control credit risk, and ensure timely collection of payments. The management can supervise the implementation of credit management, enabling clients to directly experience and benefit from this implementation by accessing credit services offered by microfinance institutions. The management and clients of microfinance institutions have the same perception of credit management implementation. Both the management and clients found microfinance institutions' credit management implementation level as fully implemented. The microfinance institutions are profitable, financially stable, and capable of sustaining their operations over time. These institutions are well-positioned to fulfill their mission and contribute to inclusive economic growth and development within their community. As the credit management implementation of microfinance institutions increases, the financial performance also increases. Conversely, as the credit management implementation decreases, the financial performance also decreases. Lastly, an action plan is necessary for microfinance institutions in Calamba City to enhance specific areas identified in the study on credit management implementation and financial performance.

## 5.0 Contributions of Authors

This paper has a single author and confirms that the author reviewed this study.

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## 7.0 Conflict of Interests

The authors declare no conflicts of interest about the publication of this paper.

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# Lived Experiences of Bachelor of Science in Business Administration Students in On-the-Job Training and Online Classes

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**Abstract.** The shift to online learning in BSBA programs presents a challenge in balancing the practical benefits of on-the-job training (OJT) with the flexibility and accessibility of online classes. Consequently, this study explores the comparative effectiveness of both approaches for business education students, emphasizing their lived experiences and professional development outcomes. The study employed a descriptive research design to systematically explore students' experiences in OJT and online classes, providing a comprehensive understanding of these educational contexts. Utilizing a mixed-methods approach, the research combined quantitative data from surveys with qualitative insights from interviews. The respondents included 4th-year Bachelor of Science in Business Administration majoring in Financial Management and major in Human Resources Management students enrolled in OJT during the second semester of School Year 2023-2024. For the survey, a sample size of 199 respondents was chosen through stratified random sampling, and interviews were conducted with five students from different majors. Findings indicate that their OJT experiences are transformative, as they significantly enhance their practical business skills and foster professional growth through hands-on learning and mentorship, boosting students' confidence and career readiness. In contrast, online classes pose challenges such as technical issues, distractions, and limited interaction, leading to increased stress and isolation despite their flexibility. Students prefer OJT due to its practical application and immediate feedback. To mitigate the challenges of online learning, the study recommends limiting online classes, aligning OJT tasks with program goals and industry requirements, offering time management seminars, and implementing regular monitoring and evaluation of educational programs to better prepare students for the workforce.

**Keywords:** On-the-job training; Online classes; BS Business Administration students; Educational experiences; Digital learning.

## 1.0 Introduction

The transition from traditional in-person to online learning has significantly altered the educational landscape, particularly in higher education. The global COVID-19 pandemic has accelerated this shift and required rapid adaptation of teaching methods to ensure the continuity of education (Reimers, 2022). The Bachelor of Science in Business Administration (BSBA) program has faced unique challenges and opportunities, particularly in on-the-job training (OJT) and online classes.

On-the-job training (OJT) is a critical component of business education, allowing students to learn through practice and gain exposure to the business environment (Tolentino, 2023). OJT is mandatory in universities, as stipulated in the Commission on Higher Education No. 104 series of 2017 and aimed at equipping graduates with essential competencies. It allows students to demonstrate skills related to their areas of study and fosters cooperation between educational institutions and industries by facilitating internships (Jackson et al., 2020). These internships help students develop communication skills and transform their academic learning into productive work experiences (Kim & Park, 2020). OJT employs a *"learning by doing"* approach, where students practice job tasks in a real workplace to acquire valuable skills beneficial to themselves and the organization.

Online learning offers flexibility, allowing students to learn at their own pace, which is a boon for those juggling work, family, or other obligations (Paudel, 2021). It also breaks down geographical barriers, facilitating participation for remote students (Razami & Ibrahim, 2021), and proves cost-effective by reducing travel, accommodation, and textbook expenses (Medina & Shrum, 2022). However, online learning poses challenges, especially regarding practical skill acquisition. The absence of face-to-face interaction may foster isolation and diminish motivation (Duraku & Hoxha, 2020). Furthermore, the digital divide—unequal access to technology and reliable internet—can impede effective learning (Norman et al., 2022). While online platforms excel at delivering theoretical knowledge, they often lack the hands-on experience integral to OJT (Bender, 2023).

The comparison between OJT and online learning reveals distinct strengths and weaknesses. OJT is unparalleled in providing practical, real-world experience, essential for students to develop and demonstrate competencies directly applicable to their future careers. It fosters strong industry connections and enhances employability by giving students firsthand exposure to workplace dynamics (Tolentino, 2023). Conversely, online learning delivers flexible and accessible theoretical education, accommodating diverse learning styles through multimedia resources, computer simulations, and digital libraries (Kumi-Yeboah et al., 2020).

The integration of OJT and online learning highlights the need to address job skills mismatches, where education and training do not align with employer needs, which can hinder economic progress, especially in regions like the Philippines (Parinasan et al., 2024). While online learning can support theoretical understanding, OJT is crucial for ensuring students gain the practical skills demanded by the job market (Ajayi & Udeh, 2024; Okolie et al., 2020). Hence, while both OJT and online learning have their respective advantages and disadvantages, a balanced approach that leverages the strengths of each could potentially provide a more comprehensive educational experience.

Specifically, on-the-job training (OJT) is crucial in business education, bridging theoretical knowledge and practical application. The primary goals include developing essential competencies such as communication, problem-solving, critical thinking, and technical skills related to students' specializations (Hashim, 2023). OJT helps students apply classroom theories in real-world settings, preparing them for the workforce by familiarizing them with workplace norms and professional ethics (Islam, 2024; Adeosun et al., 2022). Additionally, OJT fosters professional networking, which benefits future career prospects (Okolie, 2022).

Effective OJT requires careful planning and collaboration between educational institutions and industry partners. Structured internship programs with specific learning outcomes and assessment criteria are common (Bayerlein, 2020). Strong mentorship and supervision from industry professionals are critical for providing guidance and feedback (Dixon, 2021; Bawica, 2021). Partnerships with industry leaders ensure that training aligns with current standards and practices (Ejibe et al., 2024). Reflective activities like journals and reports enhance the learning experience (Aderibigbe et al., 2023).

Studies highlight areas for improvement in OJT programs. Ayco and Equina (2022) evaluated BSBA students at Western Philippines University, finding satisfactory performance in attitude and communication but only satisfactory in productivity and competence. Issues included unclear instructions and technical problems, with performance differences noted between financial management and marketing majors. Dawaton (2021) assessed Kalinga State University's OJT program, finding it average, with issues like task mismatches and inadequate supervision. Pascua et al. (2022) revealed that foundational skills were strong, but business management skills were lacking, with demographic factors influencing skill development and OJT effectiveness.

Catacutan and Tuliao (2020) evaluated OJT programs at the University of Saint Louis, finding effective implementation and preparation for future careers. Hebron (2022) studied OJT practices in Quezon City, noting improvements in social skills, self-esteem, and job prospects but also highlighting issues like lack of expert involvement and inconsistent delivery.

Traditional OJT faces challenges, including resource demands, variable training quality, alignment with academic schedules, and assessment complexities (Ying, 2024; Zehr & Korte, 2020; Solis et al., 2024; Nyanjom et al., 2023). Due to socioeconomic factors, there is also a risk of job skill mismatches and unequal access to high-quality opportunities (Rapatan & Juevesa, 2020; Hora, 2022).

On the other hand, on the concept of online learning in higher education, the evolution and growth of online education have significantly transformed higher education over the past few decades. Initially an extension of distance education through correspondence courses and video-based lessons, online learning saw a major shift with the advent of the Internet in the 1990s. This enabled more interactive and accessible platforms, leading to adopting learning management systems (LMS) like Blackboard and Moodle by the early 2000s (Turnbull et al., 2020). Today, online learning is an integral part of higher education, offering flexible opportunities to millions of students worldwide.

Online learning offers numerous advantages, making it suitable for students and institutions. Key benefits include flexibility, allowing learners to access content and complete coursework at their own pace, which is especially helpful for those with jobs, families, or other responsibilities (Paudel, 2021). It eliminates geographical constraints, benefiting students in remote areas (Razami & Ibrahim, 2021), and often incurs lower costs due to savings on travel, accommodation, and physical books (Medina & Shrum, 2022). However, challenges such as limited access to digital technologies and consistent internet (Norman et al., 2022), as well as reduced face-to-face interaction leading to feelings of isolation and low motivation (Duraku & Hoxha, 2020), present significant drawbacks.

Research on the effectiveness of online learning for delivering theoretical knowledge has yielded mixed results. Online platforms efficiently facilitate theoretical learning with multimedia resources, computer simulations, and rich digital libraries (Kumi-Yeboah et al., 2020). A study involving 725 students found no significant difference in learning outcomes between face-to-face and synchronous online teaching, with smaller classes favoring face-to-face learning (Cheung et al., 2023). Another study indicated that well-designed online courses with valid instructional mechanisms can be as effective as face-to-face classes (Pilotti et al., 2024).

Regarding student participation and performance, online learning offers interaction through discussion forums, live webinars, and group projects, fostering a sense of connectedness (Cong, 2020). However, the self-paced nature of online learning requires high discipline and time management, and students lacking these skills may struggle to meet class requirements (Gelles et al., 2020).

This research aimed to identify the challenges, strategies, and benefits of OJT and online learning for BSBA students, helping educators and policymakers improve business education programs. By comparing students' lived experiences in OJT and online classes, the study sought to highlight the strengths and weaknesses of each learning mode. This comparison informed the development of educational strategies that cater to the evolving needs of students, address job skill mismatches, and better align academic training with industry needs. This research filled the gap in the existing literature by providing detailed insights into the dual experiences of students, crucial for adapting to the changing educational landscape.

## 2.0 Methodology

### 2.1 Research Design

The study used a descriptive research design to understand students' experiences in OJT and online classes. This approach allowed for systematically exploring phenomena without altering them, providing a comprehensive understanding of students' lived experiences in these educational contexts. The study elucidated students' perceptions, challenges, and achievements, contributing to a richer understanding of the intersection between OJT and online learning in the BSBA program. A mixed-methods research approach was used, combining quantitative data from surveys with qualitative insights gathered through interviews. The integration of qualitative data enhances the depth and richness of the findings.

### 2.2 Research Respondents

The respondents of this study were 4th-year BSBA students at Negros Oriental State University (NORSU), Main Campus 1, Dumaguete City, Philippines, who were enrolled in their OJT for the Second Semester of School Year 2023-2024 and have experienced online classes, especially during the COVID-19 pandemic period chosen by stratified random sampling. With a total population of 346, the sample size determined was 182 students. However, there were 199 actual valid samples. Moreover, five students will be interviewed: 3 financial management students and 2 HR management students.

### 2.3 Research Instruments, Data Gathering Procedure and Analysis

For the quantitative phase, the study utilized a Likert scale survey formulated by the researcher and distributed among students to investigate their perspectives on OJT and online classes. The questionnaire, featuring a 5-point scale from strongly disagree to agree strongly, encompassed demographic details and comprised four sections. The first part focused on OJT experiences, the second assessed online class effectiveness, and the third compared OJT and online classes regarding skill development, motivation, career readiness, instructor support, time management, and stress levels. The final section evaluated overall satisfaction, program value, university support, skill applicability, and well-being impact. A pilot study with ten respondents ensured survey validity, user-friendliness, and relevance. Cronbach's alpha coefficients (see Table 1) were computed for reliability testing, confirming questionnaire consistency and concept alignment.

**Table 1.** Cronbach's Alpha Coefficient of each factor

| Dimensions | Number of Items | Cronbach's Alpha Coefficient |
|---|---|---|
| OJT Training | 10 | 0.896 |
| Online Class Experiences | 10 | 0.885 |
| Comparison Between OJT and Online Classes | 10 | 0.890 |
| **Overall** | **30** | **0.883** |

The survey tool demonstrated high reliability with Cronbach's alpha coefficients ranging from 0.84 to 0.90, indicating strong internal consistency among questionnaire items (Taber, 2017). This level of reliability suggests minimal redundancy and a cohesive relationship between survey components, aligning well with established standards for questionnaire reliability (Tavakol & Dennrick, 2011).

Qualitative data analysis involved transcription and thematic analysis using inductive and deductive approaches. Adapted from Braun and Clarke (2006), the six-phase thematic analysis framework included data re-reading, initial code generation, theme identification, theme review for relevance, theme definition, and narrative synthesis. This method ensured systematic exploration of qualitative insights, offering a structured understanding of student perceptions and experiences.

Quantitative data analysis utilized SPSS for statistical treatment, employing percentage, weighted mean, and standard deviation techniques. These analyses categorized demographic data and provided insights into student responses' central tendency and variability. The weighted mean facilitated an overall perspective assessment, while the standard deviation indicated response variability for understanding consensus among participants.

### 2.4 Ethical Considerations

In this study, the researcher took steps to ensure ethical conduct. The researcher declared no conflicts of interest and protected respondents/participants' confidentiality using pseudonyms. To safeguard data security, all collected information was permanently deleted after the study's completion. The researcher also obtained informed consent from the participants. This involved providing detailed explanations of the study's goals and benefits through Informed Consent Forms (ICFs). The ICFs ensured respondents/participants understood their participation was voluntary, without compensation, and they could withdraw at any time.

## 3.0 Results and Discussions

### 3.1 On-the-Job Training Experiences

Table 2 summarizes the positive perceptions of 199 BSBA students regarding their OJT experiences. The students generally expressed high agreement across survey items, with mean scores ranging from 4.07 to 4.65 on a 5-point scale. The highest mean score (M = 4.65, SD = 0.678) indicates a strong consensus among students that OJT significantly enhanced their understanding of the business field. Students reported some challenges during their OJT placements (M = 4.07, SD = 0.859), with this aspect receiving the lowest overall score. However, the positive aspects outweighed these challenges. The overall average score was a strong 4.43 (standard deviation 0.73), which reflects student satisfaction and perceived benefits from the training.

**Table 2.** Students' experience with on-the-job training

| Indicators | Mean | SD | Interpretation |
|---|---|---|---|
| 1. My OJT experience has significantly contributed to my understanding of the business field. | 4.65 | 0.678 | Strongly Agree |
| 2. I felt adequately prepared for my OJT by my university. | 4.34 | 0.683 | Strongly Agree |
| 3. The tasks assigned to me during OJT were relevant to my academic coursework. | 4.32 | 0.782 | Strongly Agree |
| 4. I received sufficient support and feedback from my OJT supervisor. | 4.48 | 0.784 | Strongly Agree |
| 5. My OJT experience improved my professional skills, such as communication and teamwork. | 4.59 | 0.759 | Strongly Agree |
| 6. I faced minimal challenges adapting to the work environment during my OJT. | 4.07 | 0.859 | Agree |
| 7. The OJT provided me with valuable networking opportunities. | 4.3 | 0.772 | Strongly Agree |
| 8. I could balance my OJT responsibilities with my academic requirements. | 4.48 | 0.65 | Strongly Agree |
| 9. My OJT experience has positively impacted my professional growth. | 4.59 | 0.66 | Strongly Agree |
| 10. I felt motivated and engaged during my OJT. | 4.5 | 0.681 | Strongly Agree |
| **Overall** | **4.43** | **0.73** | **Strongly Agree** |

Students' qualitative responses further enriched the quantitative findings. Many students highlighted the significant enhancement of essential business skills through OJT. For instance, Student 1 noted, "*The OJT experience helped me develop essential business skills such as problem-solving, communication, and teamwork, which are crucial for success in any business environment.*" This aligns with Hashim's (2023) observation that OJT develops specific competencies crucial in the business world. Student 5 emphasized the comprehensive understanding gained: "*OJT experience has contributed to my understanding in the business field by not just having one person I may face, and this may acquire my knowledge and skills that I have learned to be prepared in applying in the business field*." This underscores the practical application of classroom theories seen in OJT, as Tolentino (2023) noted.

The university's role in preparing students for their OJT was positively acknowledged. Students appreciated the development of practical skills and exposure to current business trends through preparatory seminars and courses. Student 1 said, "My university prepared me for my on-the-job training (OJT) in *skill development. There are courses and practical assignments that helped me develop essential skills...*" Student 2 mentioned, "*Before we were deployed for an internship at our chosen company, we first had a seminar that gave us insights on what on-the-job training is, what the correct preparations are, and what documents we needed to accomplish and submit, not just to the university but also to the company in order to have a successful OJT*." This reflects Adeosun et al.'s (2022) findings on familiarizing students with workplace norms and expectations.

Tasks assigned during OJT were perceived as highly relevant to students' academic coursework, providing a practical extension of their studies. Student 1 explained, "*The tasks assigned to me during my OJT were highly relevant to my academic coursework. Preparing reports and presentations and communicating with team members and supervisors during my OJT echoed the emphasis on communication skills in my academic training*." This sentiment was echoed by Student 3, who noted, "*The tasks assigned during my OJT were highly relevant to my academic coursework, especially in accounting and finance*." This practical application reinforces academic learning, as emphasized by KIslam (2024).

Support and feedback from OJT supervisors were crucial in shaping a positive and productive training experience. Student 1 emphasized, "*I received sufficient support and feedback from my OJT supervisor, which significantly impacted my experience. With the support and feedback from my OJT supervisor, I believe it was crucial in shaping a positive and productive training experience, allowing me to learn and grow professionally and personally*." Student 3 concurred, "*I received sufficient support and feedback from my OJT supervisor, which greatly enhanced my learning experience. Regular check-ins and constructive feedback helped me improve my skills and understand my role better within the office.*" This aligns with the findings of Dixon (2021) and Bawica (2021) on the importance of strong mentorship and supervision in OJT programs.

Students reported significant improvements in professional skills, particularly in communication and teamwork. For example, Student 1 stated, "*My OJT experience significantly improved my professional skills, particularly in communication and teamwork*." Student 4 added, "*I think the skills I am most enhanced are my organizing skills and communicating with different people, which motivates me to be confident and talk to them nicely.*" Despite facing challenges in adapting to the work environment, students overcame these through observation, seeking clarification, and active participation. As Student 3 highlighted, "*Adapting to the work environment during my OJT presented challenges such as understanding office protocols and navigating interpersonal dynamics. I overcame these challenges by observing my colleagues, seeking clarification when needed, and actively participating in team activities*." These experiences reflect Ayco and Equina's (2022) findings that students faced challenges such as unclear instructions and technical problems but also had opportunities for growth in understanding professional protocols and client interactions.

Moreover, OJT provided valuable networking opportunities that benefit future career paths. Student 1 mentioned, "*Yes, my OJT provided valuable networking opportunities. One particularly significant connection I made was with a manager from our department. Their mentorship and advice helped me better understand the industry, and she wants me to work in the company after graduation*." Student 3 also valued interactions with colleagues and supervisors, noting, "*My OJT provided valuable networking opportunities through interactions with colleagues, supervisors, and various departments*." This is consistent with Okolie's (2022) assertion that OJT helps students build professional networks.

Balancing OJT responsibilities with academic requirements was challenging but manageable through effective time management strategies. Student 1 detailed, "*Balancing OJT responsibilities with academic requirements was challenging but manageable with effective time management strategies. By identifying priorities, I listed all my tasks and responsibilities for OJT and academics and prioritized them based on deadlines and importance.*" Student 2 added, "*During my vacant time or after my work, I make time for my academic requirements*." These student experiences directly reflect Hebron's (2022) findings, which demonstrate the need for effective time management strategies to navigate the demands of OJT alongside academic coursework.

The OJT experience was instrumental in positively impacting students' professional growth. Students acknowledged the enhancement of their communication skills, acquisition of practical industry insights, and the creation of networking opportunities. Student 1 summarized, "*My OJT experience has positively impacted my professional growth in several significant ways. Regular interactions, presentations, and reporting enhance my verbal and written communication skills*." Similarly, Student 3 shared, "*My OJT experience positively impacted my professional growth by providing practical skills, industry insights, and networking opportunities. I see this experience as instrumental in shaping my future career path in the business field.*" These OJT placements proved to be a solid foundation for their future careers. The students' experiences highlight the critical role of well-designed OJT programs in addressing the gap between theoretical knowledge learned in academia and practical skills required in the industry, as evidenced by Adeosun et al. (2022). Moreover, integrating practical skills and theoretical knowledge aligns with Ajayi and Udeh's (2024) findings on the need for a concrete relationship between academia and industry to address the employee skills gap. This suggests that well-structured OJT programs, supported by strong academic frameworks, can help mitigate issues such as job skills mismatch, as discussed by Okolie et al. (2020) and Parinasan et al. (2024).

A common theme emerged in their experiences: the significant enhancement of practical business skills and overall professional growth. The students' OJT placements were not simply internships; they were transformative experiences. This aligns with Bandura's social cognitive theory. The program provided a supportive environment (environmental factors) with supervisory guidance, boosting student confidence and motivation (personal factors). This, in turn, empowered them to actively apply classroom knowledge to real-world tasks (behavioral factors). The evidence of their learning is clear: students tackled practical challenges, honed skills like report writing and presentations, which mirror academic skills, and developed strong time management abilities. This synergy between practical exposure and theoretical knowledge equips them as well-rounded business professionals prepared to excel in their future careers.

### 3.2 Online Class Experiences

Table 3 presents the perceptions of BSBA students regarding online classes, revealing generally positive but varied sentiments. Mean scores ranged from 3.26 to 3.98 on a 5-point scale, indicating moderate to high levels of agreement across different aspects. The highest mean score (M = 3.98, SD = 0.721) suggests that students valued the flexibility offered by online classes. However, the lowest mean score (M = 3.26, SD = 0.846) highlighted concerns regarding the adequacy of online classes for preparing students for their careers. Overall, with a mean score of 3.59 and a standard deviation of 0.85, the students' feedback indicates a mixed evaluation of online classes, acknowledging their flexibility benefits while signaling areas for improvement, particularly in professional readiness and community building.

**Table 3.** Students' experience with online classes

| Indicators | Mean | SD | Interpretation |
|---|---|---|---|
| 1. I find online classes to be effective for learning course material. | 3.41 | 0.835 | Agree |
| 2. The online format allowed me to maintain a flexible schedule. | 3.98 | 0.721 | Agree |
| 3. Technical issues (e.g., internet connectivity) rarely interfered with my learning. | 3.44 | 1.148 | Agree |
| 4. The instructions and guidelines provided for online assignments were clear. | 3.66 | 0.848 | Agree |
| 5. Professors were accessible and responsive during online classes. | 3.63 | 0.872 | Agree |
| 6. I felt engaged and participated actively in online class discussions. | 3.56 | 0.885 | Agree |
| 7. Online classes posed more distractions compared to traditional classroom settings. | 3.92 | 0.846 | Agree |
| 8. I believe online classes have adequately prepared me for my professional career. | 3.26 | 0.83 | Agree |
| 9. The quality of online learning materials was high (e.g., videos, reading materials). | 3.58 | 0.805 | Agree |
| 10. I felt part of a community during my online classes. | 3.43 | 0.72 | Agree |
| **Overall** | **3.59** | **0.85** | **Agree** |

Qualitative responses from students further corroborate these quantitative findings. Student 1 articulated the challenges of online learning due to slow internet connection, noting, "*The challenges of slow internet connection frequently hinder my ability to understand lessons clearly*." This aligns with Norman et al. (2022), who identified access to digital technologies and consistent internet as significant challenges in online education. Despite appreciating the flexibility of online classes, Student 1 emphasized the need for self-discipline and effective time management to fully benefit from this modality, stating, "*While the flexibility of online learning has had a positive impact on my learning experience, it requires self-discipline and effective time management to benefit from its advantages fully*." This perspective is supported by Gelles et al. (2020), who noted that self-paced learning environments require high discipline and time management levels.

Student 2 echoed similar sentiments, describing online classes as "*ineffective since not everyone has the privilege of technology*," highlighting the digital divide's impact on online learning (Razami & Ibrahim, 2021). Student 2 also underscored the value of direct interaction in traditional classroom settings, which allows for immediate clarification of doubts, stating, "*Traditional classroom settings allow us to interact well with our instructors, ask questions directly*," thus emphasizing the advantages of face-to-face interactions (Duraku & Hoxha, 2020).

Technical issues are common among students. For instance, Student 1 mentioned encountering technical challenges approximately once or twice a week and investing in a backup internet connection to mitigate these issues. Student 3 also highlighted that technical issues were a recurring challenge, often disrupting the flow of lessons or assignment submissions. This contrasts with the more stable and predictable on-the-job training (OJT) environment. "*Technical issues were a recurring challenge during online learning; it often disrupts the flow of lessons or assignment submissions*," said Student 3, emphasizing the unpredictable nature of online learning. Distractions were another significant concern with online classes. Student 2 and Student 3 discussed the challenge of maintaining focus in the home environment, which often lacked a conducive study space in traditional or OJT settings. Student 2 noted, "*Noise from the environment and even looking for a good internet connection is hard just to attend online class*," underscoring the constant struggle to maintain a conducive learning atmosphere at home. Medina and Shrum (2022) mention the cost-saving advantages of online learning, but the home environment's lack of structure can be a significant disadvantage.

The sense of community and engagement in online classes also varied. Students 1, 4, and 5 found that engagement in online class discussions depended on several factors, including technical issues and instructor feedback. In contrast, Student 2 and Student 3 noted the difficulty of building a sense of community online. Student 2 stated, "*During online classes, I do not interact with my instructors because of technical issues such as internet connectivity*," which underscores the isolation felt by many students. On the other hand, Cong (2020) discusses how online learning tools can foster a sense of connectedness, and as Student 1 described, "*Feeling part of a community [during online classes] motivated me to stay engaged and committed to the coursework*." This sense of belonging and immediate support system during online classes were crucial for maintaining motivation and ensuring a richer learning experience.

Overall, while online classes offer valuable flexibility and access to a wide range of resources, technical issues, distractions, and reduced interpersonal interaction significantly impact their effectiveness. These findings suggest that improvements in digital infrastructure, strategies to enhance engagement, and better support systems could help mitigate some of these challenges and enhance the online learning experience. As Turnbull et al. (2020) highlighted, the evolution of online education has transformed higher education significantly, but continuous improvements are necessary to realize its full potential.

The common theme emerging from BSBA students' perceptions of online classes revolves around the dualities of flexibility and the inherent challenges of digital learning environments. The students' experiences with online classes highlighted the interplay between personal, behavioral, and environmental factors, as emphasized by Bandura's Social Cognitive Theory. While flexibility and resources were advantages, some students struggled with self-discipline and time management (personal factors), hindering their ability to engage with the coursework (behavioral factors) consistently. Frequent technical issues and distractions further disrupted their focus. Inadequate internet connections and a lack of conducive home study spaces limited active participation (environmental factors). Building a sense of community, another key factor for learning, varied greatly. Learning success depended on technical stability, instructor feedback, and individual student initiative. Therefore, this suggests that online classes may not fully reach all students' learning potential due to these limitations. Although flexibility and resources are valuable, technical hurdles, distractions, negative experiences, and reduced interaction significantly impact the effectiveness of online learning.

### 3.3 Comparison between OJT and Online Classes

Table 4 shows that students strongly prefer OJT for practical skill acquisition and motivation over online classes. They find supervisors' support during OJT more effective than online instruction. While students appreciate OJT's hands-on approach (M = 4.57, SD = 0.656), they are neutral about online classes' effectiveness in professional preparation and time management (M = 3.34, SD = 0.945). Integrating online classes with OJT is viewed positively for enriching learning experiences. However, online classes are associated with higher stress levels. Overall, students recognize the value of OJT and online classes but acknowledge their strengths and challenges in their educational journey.

**Table 4.** Students' responses on the comparison between OJT and online classes

| Indicators | Mean | SD | Interpretation |
|---|---|---|---|
| 1. I learned more practical skills during my OJT than in online classes. | 4.51 | 0.758 | Strongly Agree |
| 2. I felt more motivated during OJT compared to online classes. | 4.38 | 0.775 | Strongly Agree |
| 3. Online classes offered a comparable level of professional preparation as OJT. | 3.34 | 0.945 | Neutral |
| 4. The support from supervisors/instructors was more effective during OJT than in online classes. | 4.24 | 0.767 | Strongly Agree |
| 5. I managed my time better during online classes compared to OJT. | 3.32 | 0.873 | Neutral |
| 6. The experience of online classes complimented my OJT effectively. | 3.44 | 0.769 | Agree |
| 7. I prefer the hands-on experience of OJT over the theoretical learning in online classes. | 4.57 | 0.655 | Strongly Agree |
| 8. I experienced higher stress levels during online classes compared to OJT. | 3.59 | 0.916 | Agree |
| 9. The balance between theoretical knowledge from online classes and practical experience from OJT was beneficial. | 4.01 | 0.759 | Agree |
| 10. My overall learning experience was enriched by having both OJT and online classes. | 4.07 | 0.811 | Agree |
| **Overall** | **3.95** | **0.80** | **Agree** |

The comparative perceptions of BSBA students regarding OJT and online classes are supported by qualitative responses that reveal a strong preference for OJT. Most students agree that they gained more practical skills during OJT compared to online classes. For instance, Student 5 mentioned, "*I learned more on my practical skills during my OJT; I learned in my OJT is just that be very patient and respect those who are your superior*," highlighting the development of essential business skills like respect for supervisors and patience. This aligns with research indicating that OJT helps students apply classroom theories in real-world settings, preparing them for the workforce by familiarizing them with workplace norms and professional ethics (KIslam, 2024; Adeosun et al., 2022).

The hands-on nature of OJT significantly boosted students' motivation. Student 3 echoed this sentiment: "*I felt more motivated during OJT because of the hands-on nature of the work and the direct impact on real-world situations*." This reflects the findings that OJT fosters professional networking and benefits future career prospects (Okolie, 2022).

The support received during OJT was perceived as more effective than in online classes. Student 4 noted, "*The support from supervisors enhances my capabilities in different things because I was motivated to do things properly because he is always watching and observing my performance, while during online classes, I can do whatever I want. I'll just turn off the camera anyway*." This highlights the daily interaction and feedback, which is crucial for effective OJT as it provides guidance and feedback from industry professionals (Dixon, 2021; Bawica, 2021). Student 3 added, "*Support from supervisors during OJT was more hands-on and immediate, directly impacting my learning and development. Instructors during online classes were accessible but sometimes less involved in day-to-day progress, which required more self-directed learning.*"

While online classes offered flexibility, this often came with challenges in time management. Student 1 appreciated the flexibility, stating, "*Online classes allowed me to maintain a flexible schedule by eliminating the need for a daily commute*." However, this flexibility also required significant self-discipline; as Student 5 mentioned, "*I managed my time during online classes by creating a schedule and setting specific times for studying and completing assignments.*" This is supported by Gelles et al. (2020), which indicates that online learning's self-paced environment necessitates high discipline and time management.

Higher stress levels were commonly reported during online classes. Student 3 stated, "*I experienced higher stress levels during online classes due to the pressure of meeting deadlines, managing multiple courses, and navigating technical issues.*" This sentiment was shared by Student 4, who noted, "*I experience higher stress levels during online classes because of the deadlines, and the topics are hard to understand on my own*." This is consistent with findings that online learning can lead to feelings of isolation and low motivation (Duraku & Hoxha, 2020).

The success of online classes in fostering a sense of community varied greatly. For some students, thriving online discussions relied heavily on technical stability and instructor feedback. Others, lacking the initiative to participate or facing significant limitations, struggled to build a sense of community. This highlights a key aspect of Bandura's Social Cognitive Theory, which emphasizes the importance of social interactions in learning.

Overall, the responses further support the quantitative findings that students clearly prefer the practical and hands-on experiences provided by OJT over the theoretical approach of online classes. While both learning modalities offer valuable benefits, the direct application of skills and effective support during OJT is appreciated by students. Studies indicate that structured internship programs with specific learning outcomes and assessment criteria, along with strong mentorship, are critical for effective OJT (Bayerlein, 2020).

**3.4 Overall Experience**

The students positively evaluated their educational experience, as shown in Table 5, especially regarding OJT (M = 4.65, SD = 0.716). They felt online classes were less positive. However, combining both was helpful for future careers (M = 4.09, SD = 0.877) and developing relevant skills. Students were also very satisfied with university support throughout OJT and online classes.

**Table 5.** Students' responses on their overall experience

| Indicators | Mean | SD | Interpretation |
|---|---|---|---|
| 1. Overall, my OJT experience has been positive. | 4.65 | 0.716 | Strongly Agree |
| 2. Overall, my experience with online classes has been positive. | 3.81 | 0.792 | Agree |
| 3. The combination of OJT and online classes has adequately prepared me for future employment. | 4.09 | 0.877 | Agree |
| 4. I believe the skills and knowledge gained from OJT and online classes apply to my future career. | 4.36 | 0.759 | Strongly Agree |
| 5. I am satisfied with the support provided by the university during my OJT and online classes. | 4.38 | 0.720 | Strongly Agree |
| **Overall** | **4.26** | **0.77** | **Strongly Agree** |

Student comments supported the survey findings. Students 1, 3, and 5 all highlighted the value of OJT in gaining practical skills and applying theoretical knowledge. Student 2 emphasized the opportunity to develop soft skills like communication. While all students found OJT beneficial, challenges included balancing responsibilities (Student 1), handling confidential documents (Student 3), and adjusting to early mornings (Student 4).

Online classes received mixed reviews. Students appreciated the flexibility (Students 1, 2, and 4) but encountered technical issues (Students 1, 2, and 3) and a lack of engagement (Student 3). Student 4 felt the learning materials were not helpful. Despite these drawbacks, students like Student 2 perceive online classes as positive due to their flexibility. Students generally found OJT to be more motivating and engaging than online classes. This is likely due to the ability to apply skills and receive closer supervision in OJT settings directly. Since students prefer OJT's practical aspects, incorporating more hands-on components into BSBA programs would better align with their learning styles and career preparation needs.

## 4.0 Conclusion

The students' experiences reveal a strong preference for on-the-job training (OJT) over online classes. OJT provides students with practical business skills and professional attributes, effectively preparing them for their future careers. These experiences are transformative, with students reporting significant learning and skill development. Although online classes offer flexible scheduling, they often come with technical difficulties, distractions, and a lack of direct contact, leading to stress and loneliness. Learning outcomes in online classes are varied, with some students struggling to engage and absorb material effectively. Students perceive OJT as more beneficial due to the direct supervision and practical knowledge they receive, which is typically absent in online learning.

The study recommends the following based on the study's findings. To alleviate students' and instructors' challenges, teachers should limit online classes, for example, to once a week. This way, students can grasp critical theoretical concepts and minimize the common difficulties with online classes. Moreover, universities and host institutions should collaborate to guarantee that OJT tasks directly align with program goals and industry requirements. Universities should also create and provide time management seminars to fit OJT, online classes, and coursework to improve student's educational experience and readiness for professional realms. To ensure educational programs effectively prepare students for the workforce, policymakers should establish regular monitoring and evaluation of OJT and other coursework. This approach will identify areas for improvement so that programs align with industry needs and student development goals.

## 5.0 Contributions of Author

A single author writes this paper.


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## 7.0 Conflicts of Interest

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# The Predicting Effect of Occupational Commitment and Leadership Styles on Organizational Effectiveness of Public School Heads

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**Abstract.** The research aimed to assess the predictive impact of occupational commitment and leadership styles on the organizational effectiveness of public school leaders. The results revealed that rank, years in service as school head, and type of school exhibited statistically significant differences in the school heads' occupational commitment. On the other hand, the statistical significance test exposed that school heads' leadership styles of transformational, transactional, and democratic leadership exhibited a significant positive association with organizational effectiveness. Furthermore, the influence test showed that occupational commitment significantly contributed to explaining the variance in organizational effectiveness among respondents. Alternatively, leadership styles, specifically transformational, transactional, and democratic, were found to be predictors of organizational effectiveness. Lastly, the multiple regression results for predicting organizational effectiveness based on the school heads' occupational commitment and leadership styles revealed that the model fit is robust, demonstrating that the overall model is statistically significant and provides a good fit for the data. Among the independent variables under study, occupational commitment had a more important influence on organizational effectiveness. On the other hand, leadership styles also significantly predict organizational effectiveness, though with a minor impact. This indicated that while effective leadership styles positively influence organizational effectiveness, their effect is less pronounced than occupational commitment. The study underscored the importance of commitment and leadership in cultivating favorable organizational climates that facilitate collaboration, innovation, and continuous improvement.

**Keywords:** Authoritarian leadership; Democratic leadership; Occupational commitment; Organizational effectiveness; Leadership styles; Transformational leadership; Transactional leadership.

## 1.0 Introduction

Education leaders' commitment to their responsibilities is essential to organizational stability and progress. Occupational commitment, which includes emotional attachment, identification with organizational goals, and a sense of belonging, can drive school leadership success. On the other hand, school leaders' leadership styles influence corporate culture and impact the educational institution's overall effectiveness. Moreover, public schools, as vital components of the larger educational system, face various obstacles, ranging from limited resources to the ever-changing needs of an increasingly diverse student body. Understanding how school principals' commitment levels and leadership approaches contribute to organizational effectiveness is not only academically important but also has practical implications for educational policymakers, administrators, and stakeholders interested in the success of public education (Coşkun et al., P., 2023).

Fundamentally, the leadership styles of school heads and occupational commitment are important in achieving organizational success and improving the quality of educational institutions. School leadership is intrinsically the day-to-day functioning of the school and holds great significance as it serves as a pivotal educational catalyst for both change and success while also potentially acting as a catalyst for failure (Day et al., 2016). Building strong schools requires effective leadership styles that continuously match school goals and visions with actions. Occupational commitment is a necessary component of organizational health. Employee commitment is the primary axis around which all sources' variables begin to emerge. Commitment is an organization's working force's attitude toward the organization, top management, work, and physical and social surroundings. Top management's most imaginative and innovative ideas and initiatives cannot be accomplished without occupational commitment. All goals and initiatives would eventually be completed with occupational commitment (Bit, 2021).

In like manner, employees with a high level of occupational commitment are anticipated to perform well. When someone joins an organization, they must demonstrate occupational commitment. Low occupational commitment causes challenges for the organization since commitment is a costly "commodity" that defines the company's performance. Low occupational commitment shows a lack of accountability in one's responsibilities. According to Hallinger and Lee (2013), understanding the particular dynamics of public-school administrators, their dedication, and leadership styles may be missing in research. Locally, the Department of Education-Division of Lanao II supports decision-making decentralization in school management. This provides school administrators the authority and responsibility to supervise and track school functions. Despite the empowerment of these administrators, the schools within display vocational devotion and organizational challenges in reaching their achievement. Furthermore, it appeared that there may be a need for studies that specifically address the unique challenges and dynamics within the educational system of Lanao Del Sur II, with a focus on the leadership styles and occupational commitment of school heads as they influence organizational effectiveness among elementary and secondary schools in the division.

There is a gap in examining how these two characteristics interact and impact organizational success in the context of public school heads. Understanding these distinctions may aid in customizing leadership development programs. Lastly, the researcher was encouraged to conduct this research to determine the vital roles of school heads in the educational context and the leadership style they used, particularly in making the organization more effective and efficient, which may increase organizational success.

## 2.0 Methodology

### 2.1 Research Design

The research design in this study, a concurrent mixed-method research design, was employed to comprehensively investigate the extent to which occupational commitment and leadership styles influence or affect organizational effectiveness. This approach involved the simultaneous collection of both quantitative and qualitative data, ensuring that the strengths of each method were leveraged to provide a fuller understanding of the phenomena under study.

On the other hand, a comprehensive approach was undertaken to establish the validity and reliability of the research instrument. Firstly, three field experts conducted a validation process. Their meticulous evaluation ensured that the tools accurately measured the intended constructs and adhered to established standards within the discipline, thus enhancing their credibility. In addition to the validation process, the reliability of the research instruments was assessed using Cronbach's alpha coefficient. The robust findings of the reliability test, combined with the expert validation, collectively support the assertion that the research instrument is well-suited for use in the survey.

### 2.2 Research Locale

This research study was conducted in the Division of Lanao Del Sur II, whose office is currently located in Malabang, Lanao Del Sur, and led by the Schools Division Superintendent to reform and develop the department to ensure the delivery of quality education to our learners. With the constant risk of educational revolution, the division has established a strong structure to maintain its ultimate purpose. This wonderful scenario is supported by 22 municipalities and 135 school heads from elementary and secondary of the Division of Lanao Del Sur II, and it covers coastal and lake locations that serve a varied range of culturally diverse learners. Students in coastal locations include Iranun, Maguindanaon, Waray, Bisaya, and Maranao, while in lake areas, mostly Maranaos.

**2.3 Research Participants**

The study's respondents comprised 135 school heads from elementary and secondary schools in the Division of Lanao Del Sur II, which are considered the primary data source. They were selected irrespective of their item position, rank, or designation.

**2.4 Research Instrument**

The research instruments used in the study were a combination of adopted, modified, and researcher-made survey tools, all referenced and sourced from related studies and literature. The first part explored the School Heads' demographic profile. On the other hand, the second part, which was adopted and modified to fit the respondents' occupational commitment vis-à-vis facilitating a shared vision and mission, building a trusting relationship, communicating effectively, and being visible and accessible, was referenced from the studies of Karl (1997) entitled "Managers as facilitators: A practical guide to getting work done in a changing workplace, which Karl first used (1997) and later used by Lanz, Waghmare, and others. The third part, which was adopted, measured the leadership styles of the school heads in terms of transformational, transactional, democratic, and authoritarian. This adaptation was referenced from the studies of Schermerhorn and Osborn (1991) for transactional and transformational. Rivera (2021) for democratic and authoritarian. In this research, the researcher adopted a categorical classification presenting respondents with distinct categories of leadership styles based on predefined theoretical frameworks, asking them to identify which category most closely aligns with their typical behavior or preferred approach. This method facilitated a clearer and more direct analysis of leadership style prevalence and its impacts, as it bypasses the ambiguity and variability of rating scales, allowing for a more straightforward interpretation of the data within the context of the research objectives. Lastly, the fourth part, a research-made one, explored organizational effectiveness in goal attainment, operational effectiveness, control and decision making, conflict resolution, and strategy and leadership. This aspect was referenced from the studies of Mulford and Leithwood (2004) entitled "Educational Leadership for Organizational Learning and improved student outcomes" and Olcum and Titrek (2015) entitled "Control and Decision Making: The Effect of school administrators' Decision-making Styles on teacher job satisfaction," Solà-Martín (2010) entitled "Conflict Resolution: Conflict resolution in Western Sahara," and Nickols (2016) entitled "Strategy Leadership: Six factors affecting performance alignment.

**2.5 Data Gathering Procedure**

The essential data for this research study were gathered by following proper procedures and protocols. A letter of request was prepared and delivered by the researcher, duly signed by him and endorsed by his adviser and the Dean of the Graduate School, to the Schools Division Superintendent of the Division of Lanao del Sur II. A similar letter was personally delivered to the school heads, requesting that the researcher be allowed to conduct the study. Once permission was granted, the gathering procedure was administered. The researcher personally distributed the instruments to the participants, encouraging them to answer the questions wholeheartedly.

**2.6 Ethical Considerations**

In this study, the participants comprised the school heads in Lanao Del Sur II. The study was conducted in various Elementary and Secondary Schools in the Lanao Del Sur II Division. Since this study involved school heads as participants, the researcher obtained permission from the specific schools to conduct it. The researcher also gained approval from the school authorities where the study was conducted. To obtain this approval, the researcher addressed questions and submitted requirements as requested by the school officials. After securing the permit and approval for the study, the researcher scheduled a time and day with the school heads involved to plan the survey and interview and identify matters considered in the study. Lastly, the researcher emphasized that the participants had the right to withdraw at any point during the study period. The researcher assured the participants that all information they provided would be treated with strict confidentiality and utilized only for this research study and not in any other way. The survey and interview of participants were employed to safeguard their privacy and protect their identity.

## 3.0 Results and Discussion

### 3.1 Respondents' Demographic Profile

Table 1 shows the Summary of Demographic Profile of the Respondents.

**Table 1.** Summary of the demographic profile of the respondents

| Profile | Characteristics | Frequency | Percentage |
|---|---|---|---|
| Educational Background | Bachelor's Degree | 44 | 32.6 |
| | With MA units | 48 | 35.6 |
| | Full-pledged MA | 30 | 22.2 |
| | With PhD units | 8 | 5.90 |
| | Full-pledged PhD | 53 | 3.70 |
| | Total | 135 | 100.0 |
| Rank | Teacher 1-3 | 40 | 29.6 |
| | Master Teacher 1-3 | 28 | 20.7 |
| | Head Teacher 1-3 | 8 | 5.90 |
| | OIC Principal | 24 | 17.8 |
| | Principal 1-3 | 35 | 25.9 |
| | Total | 135 | 100.0 |
| Number of Teachers/ Personnel Handled | 31-40 | 5 | 3.70 |
| | 21-30 | 35 | 25.9 |
| | 11-20 | 40 | 29.6 |
| | 1-10 | 55 | 40.7 |
| | Total | 135 | 100.0 |
| Years of Services | 1-5 years | 19 | 14.1 |
| | 6-10 years | 37 | 27.4 |
| | 11-15 years | 40 | 29.6 |
| | A6 and above | 39 | 28.9 |
| | Total | 135 | 100.0 |
| Type of School | National HS | 30 | 22.2 |
| | Elementary School | 60 | 44.4 |
| | Primary School | 45 | 33.3 |
| | Total | 135 | 100.0 |

Most respondents had advanced educational qualifications. (35.6%) had completed some units towards a master's degree (MA). The distribution of ranks among the respondents showed that 29.6% were categorized as Teacher I-III, making this the largest group. The data on the number of teachers or personnel managed by the respondents revealed that a substantial majority (40.7%) handled 1-10 individuals. The years of service among the respondents were quite evenly distributed, with 29.6% having 11-15 years of experience and 28.9% with 16 years or more. Those with 6-10 years of service accounted for 27.4%, and 14.1% had 1-5 years of experience. The types of schools where respondents are employed showed a notable distribution, with 44.4% working in Elementary Schools, 33.3% in Primary Schools, and 22.2% in National High Schools. This suggested that the data predominantly represents educators in the earlier stages of the education system, which may influence this demographic study's overall findings and implications.

### 3.2 Perceived Occupational Commitment of School Heads

Table 2 shows the perceived occupational commitment of school heads.

**Table 2.** Summary table of perceived occupational commitment of school heads

| Items | Mean | SD | Interpretation |
|---|---|---|---|
| Facilitating a shared vision and mission | 3.78 | 0.49 | Highly Committed |
| Building a trusting relationship | 3.82 | 0.39 | Highly Committed |
| Communicating effectively | 3.95 | 0.21 | Highly Committed |
| Being visible and accessible | 3.53 | 0.35 | Highly Committed |
| **Overall Mean** | **3.77** | **0.36** | **Highly Committed** |

Communicating effectively got the highest mean of 3.95. It is described as "Highly committed," and being visible and accessible got the lowest mean of 3.53, which is described as "Highly committed," with an overall mean of 3.77 and described as "Highly committed." The findings indicated that school heads exhibited a strong sense of occupational commitment. Notably, "Communicating effectively" received the highest rating, suggesting that school heads prioritized clear and effective communication as a critical aspect of their roles. Conversely, "Being visible and accessible" garnered the lowest mean, though it still reflected a high level of commitment. It implied a high level of commitment, reflecting a consistent dedication to their occupational responsibilities. Many school heads do demonstrate a strong commitment to their role. Drawing from personal experience and observations, it is evident that the commitment level varies among school heads, influenced by individual motivations, career aspirations, and external circumstances. In the context of BARMM, where educational challenges and socio-political factors may intersect, the commitment of school heads could be influenced by complex dynamics unique to the region. A study by Mulford (2004) found that while many school heads expressed high levels of commitment to their roles, there were instances where factors such as workload, administrative challenges, and lack of support affected their commitment levels. Similarly, a study by Khalifa et al. (2016) highlighted the importance of professional development in enhancing the commitment of school heads.

### 3.3 Perceived Leadership Style of School Heads

Table 3 depicts the summary of the perceived leadership style of school heads.

**Table 3.** Summary table of the perceived leadership style of school heads

| Items | Mean | SD | Interpretation |
|---|---|---|---|
| Transformational | 3.89 | 0.30 | Highly Practiced |
| Transactional | 3.88 | 0.32 | Highly Practiced |
| Authoritarian | 3.63 | 0.35 | Highly Practiced |
| Democratic | 3.93 | 0.25 | Highly Practiced |
| **Overall Mean** | **3.83** | **0.31** | **Highly Practiced** |

Democratic leadership got the highest mean of 3.93, described as “Highly practiced,” and Authoritarian leadership got the lowest mean of 3.63, described as “Highly practiced,” with an overall mean of 3.83, described as “Highly practiced.” The result that the perceived leadership style of school heads was "Highly practiced" highlighted a predominantly positive view of leadership within the educational environment. In the Bangsamoro Autonomous Region in Muslim Mindanao (BARMM), the high commitment of school heads to their work can be attributed to several highly practiced best practices. These include community engagement, culturally responsive leadership, and adaptive management strategies. School heads often actively involve community leaders and parents in school activities, fostering a sense of shared responsibility and support for educational goals. Additionally, recognizing the region's unique cultural context, they implement leadership styles that respect and integrate local traditions and values, which enhances trust and cooperation. This further implied that leadership styles in BARMM are multifaceted. Studies by Khalifa et al. (2016) supported this, highlighting the effectiveness of culturally responsive leadership in enhancing educational outcomes in similar contexts.

### 3.4 Organizational Effectiveness of the School Heads

Table 4 shows the organizational effectiveness of the school heads.

**Table 4.** Summary table of organizational effectiveness assessed by school heads

| Items | Mean | SD | Interpretation |
|---|---|---|---|
| Goal attainment | 3.68 | 0.35 | Highly Effective |
| Operational effectiveness | 3.57 | 0.42 | Highly Effective |
| Control and decision-making | 3.88 | 0.31 | Highly Effective |
| Conflict resolution | 3.79 | 0.27 | Highly Effective |
| Strategy and leadership | 3.67 | 0.45 | Highly Effective |
| **Overall Mean** | **3.72** | **0.36** | **Highly Effective** |

Control and decision-making had the highest mean of 3.88 and were described as “Highly effective.” The lowest indicator was Operational effectiveness, with a mean of 3.57, and described as “Highly effective” with an overall mean of 3.72 and described as “Highly effective.” School heads' organizational effectiveness assessment, with an overall mean score, indicated that schools are generally performing well in key areas. The highest-rated aspect, control and decision-making, highlights the principals' strengths in governance and strategic planning, suggesting that they are adept at effectively making informed decisions that guide their schools. However, the slightly lower score highlighted areas that might benefit from further improvement, such as resource management and day-to-day operational processes. For principals, this result suggested a need to maintain strong leadership in decision-making while also focusing on optimizing operational aspects to ensure smooth and efficient school functioning. For the school, these insights provided a roadmap for sustaining high performance while identifying and addressing operational challenges to enhance overall effectiveness further (Raharja et al., 2022).

### 3.5 Differences in the Respondents' Assessment of their Occupational Commitment

Table 5 illustrates significant differences in the respondents' assessment of their occupational commitment when grouped according to profile.

**Table 5.** Test of difference in respondents' assessment of their occupational commitment according to profile

| Profile | Occupational Commitment | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Facilitating a shared vision and mission | | | Building a trusting relationship | | | Communicating effectively | | | Being visible and accessible | | | Overall Measure | | |
| | F-value | p-value | Decision on Ho | F-value | p-value | Decision on Ho | F-value | p-value | Decision on Ho | F-value | p-value | Decision on Ho | F-value | p-value | Decision on Ho |
| **Educational background** | 3.52 | .009 | Reject | 1.08 | .368 | Failed to Reject | .509 | .729 | Failed to Reject | 1.712 | .151 | Failed to Reject | 1.904 | .114 | Failed to Reject |
| **Rank** | 3.07 | .019 | Reject | 6.90 | .000 | Reject | .954 | .435 | Failed to Reject | 2.133 | .080 | Failed to Reject | 5.344 | .001 | Reject |
| **Number of teachers personnel handled** | 7.54 | .000 | Reject | 3.10 | .029 | Reject | .788 | .503 | Failed to Reject | 1.143 | .334 | Failed to Reject | 1.574 | .199 | Failed to Reject |
| **Years in service as school head** | 5.32 | .002 | Reject | .860 | .464 | Failed to Reject | 2.084 | .105 | Failed to Reject | .954 | .416 | Failed to Reject | 3.842 | .011 | Reject |
| **Type of school** | 1.09 | .340 | Failed to Reject | 1.69 | .188 | Failed to Reject | 1.770 | .174 | Failed to Reject | 3.353 | .038 | Reject | 3.656 | .028 | Reject |

*Significant if p-value <0.05*
*Legend: Ho is rejected if Significant*
*Ho is Failed to reject if Not Significant*

The data revealed that rank (F-value = 5.344, p-value = .001), years in service as school head (F-value = 3.842, p-value = .011), and type of school (F-value = 3.656, p-value = .028), exhibited a statistically significant difference in the school heads' occupational commitment. When grouped according to demographic profile, the null hypothesis of no significant difference in the respondents' assessment of their occupational commitment was rejected since the p-value was less than 0.05. The rejection of the null hypothesis is that various factors within the respondents' backgrounds play a role in shaping their commitment to their profession. This finding underscored the importance of considering individual characteristics such as age, gender, educational attainment, and years of experience when understanding occupational commitment among school leaders. Identifying demographic factors that influence occupational commitment in BARMM can support the initiatives and professional development programs addressing the specific needs and challenges school heads face. Chou et al. (2016) explored the relationship between educational attainment and commitment, indicating that higher levels of education may correlate with increased dedication to the profession. In terms of rank, a statistical difference indicated that the level of commitment to their profession and role as school heads differs significantly based on their rank within the educational hierarchy. Higher-ranking school heads, such as principals or superintendents, often have broader leadership roles and oversee multiple schools or districts. They may have a greater sense of responsibility and commitment to the overall success and performance of the educational institution.

### 3.6 Relationship Between the School Heads' Leadership Styles and Organizational Effectiveness

Table 6 depicts the significant relationship between the school heads' leadership styles and organizational effectiveness. The data exposed that school heads' leadership styles in terms of Transformational (r=.529, p-value=.000), Transactional (r=.419, p-value=.000), Democratic (r=.490, p-value=.000), and Overall Measure (r=.625, p-value=000) exhibited a significant relationship with organizational effectiveness since the p-values were less than 0.05. This means the null hypothesis was rejected, which states that no significant relationship exists between the school heads' leadership styles and organizational effectiveness. This implied a strong association between the specific leadership styles of school heads and the organization's overall effectiveness. This finding indicated that these factors are significantly associated with organizational effectiveness. However, leadership styles in terms of Authoritarian leadership did not exhibit a significant relationship with organizational effectiveness since the p-values were greater than 0.05. While leadership styles impacted certain aspects of organizational effectiveness, the relationship was not consistently significant across all dimensions.

**Table 6.** Test of the relationship between the school heads' leadership styles and organizational effectiveness

| Leadership Style | Organizational Effectiveness | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | **Goal attainment** | | | **Operational effectiveness** | | | **Control and decision making** | | | **Conflict resolution** | | | **Strategy and leadership** | | | **Overall Measure** | | |
| | r | p-value | Decision on Ho | r | p-value | Decision on Ho | r | p-value | Decision on Ho | r | p-value | Decision on Ho | r | p-value | Decision on Ho | r | p-value | Decision on Ho |
| Transformational | .53** | .00 | Reject | .27** | .00 | Reject | .53** | .00 | Reject | .35** | .00 | Reject | .72** | .00 | Reject | .53** | .00 | Reject |
| Transactional | .42** | .00 | Reject | .19* | .03 | Reject | .42** | .00 | Reject | .35** | .00 | Reject | .42** | .00 | Reject | .42** | .00 | Reject |
| Authoritarian | -.02 | .82 | Failed to Reject | .13 | .14 | Failed to Reject | -.02 | .82 | Failed to Reject | -.06 | .49 | Failed to Reject | -.02 | .82 | Failed to Reject | -.02 | .82 | Failed to Reject |
| Democratic | .49** | .00 | Reject | .22* | .01 | Reject | .49** | .00 | Reject | .43** | .00 | Reject | .35** | .00 | Reject | .49** | .00 | Reject |
| **Overall Measure** | **.63**** | **.00** | **Reject** | **.35**** | **.00** | **Reject** | **.63**** | **.00** | **Reject** | **.32**** | **.00** | **Reject** | **.63**** | **.00** | **Reject** | **.63**** | **.00** | **Reject** |

*Significant if p-value <0.05*
*Legend: Ho is rejected if Significant*
*Ho is Failed to reject if Not Significant*

This suggests that other factors, such as organizational culture and resources, maybe more significant in determining organizational effectiveness (Kasalak et al., 2022). Furthermore, while transformational leadership positively impacted leader-member exchange, which in turn influenced organizational effectiveness, the direct relationship between transformational leadership and organizational effectiveness was not significant. This highlighted the complex relationship between leadership styles and organizational effectiveness (Keskes et al., 2018).

### 3.7 Relationship Between the School Heads' Occupational Commitment and Organizational Effectiveness

Table 7 depicts the significant relationship between the school heads' occupational commitment and organizational effectiveness.

**Table 7**. Test of the relationship between the school heads' occupational commitment and organizational effectiveness

| Variables Occupational Commitment | Organizational Effectiveness | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | **Goal attainment** | | | **Operational effectiveness** | | | **Control and decision making** | | | **Conflict resolution** | | | **Strategy and leadership** | | | **Overall Measure** | | |
| | r | p-value | Decision on Ho | r | p-value | Decision on Ho | r | p-value | Decision on Ho | r | p-value | Decision on Ho | r | p-value | Decision on Ho | r | p-value | Decision on Ho |
| Facilitating a shared vision and mission | .59** | .00 | Reject | .55** | .00 | Reject | .59** | .00 | Reject | .39** | .00 | Reject | .38** | .00 | Reject | .59** | .00 | Reject |
| Building a trusting relationship | .56** | .00 | Reject | 1.0** | .00 | Reject | .55** | .00 | Reject | .29** | .00 | Reject | .43** | .00 | Reject | .55** | .00 | Reject |
| Communicating effectively | .73** | .00 | Reject | .38** | .00 | Reject | .73** | .00 | Reject | .35** | .00 | Reject | .58** | .00 | Reject | .73** | .00 | Reject |
| Being visible and accessible | .50** | .00 | Reject | .28** | .00 | Reject | .50** | .00 | Reject | .97** | .00 | Reject | .50** | .00 | Reject | .50** | .00 | Reject |
| **Overall Measure** | **.43**** | **.00** | **Reject** | **.15** | **.07** | **Reject** | **.43**** | **.00** | **Reject** | **.30**** | **.00** | **Reject** | **.33**** | **.00** | **Reject** | **.43**** | **.00** | **Reject** |

*Significant if p-value <0.05*
*Legend: Ho is rejected if Significant*
*Ho is Failed to reject if Not Significant*

The data exposed that school heads' occupational commitment in terms of facilitating a shared vision and mission (r=.585, p-value=.000), building a trusting relationship (r=.555, p-value=.000), communicating effectively (r=.734, p-value=.000), being visible and accessible (r=.500, p-value=.000), and the overall measure (r=.433, p-value=.000) exhibited a significant relationship with organizational effectiveness. These findings emphasized that higher levels of commitment in these areas are strongly linked to better organizational outcomes. Effective communication emerged as the most influential factor, highlighting its critical role in ensuring that all stakeholders convey and understand goals, fostering a collaborative and motivated school environment. The strong relationships with trust-building and visibility further emphasize the importance of relational leadership qualities in driving school effectiveness. For school heads, these insights suggested that enhancing skills in these areas can significantly boost their schools' performance. Consequently, professional development programs should prioritize these competencies to help school leaders cultivate a more effective and cohesive educational environment (Day et al., 2016). The p-values were less than 0.05; therefore, the null hypothesis that there is no significant relationship between the school heads' occupational commitment and organizational effectiveness was rejected. This finding revealed that school heads who are highly committed to their profession and role tend to contribute to a more effective and successful educational institution. Moreover, Raharja et al. (2022) explored the association of transformational leadership and organizational climate on the occupational commitment of school principals. The study found that both transformational leadership and positive organizational climate were positively associated with occupational commitment. This disclosed that effective leadership practices and a supportive organizational climate contribute to higher levels of commitment among school heads, which in turn influences organizational effectiveness.

### 3.8 Predicting Organizational Effectiveness Based on the School Heads' Occupational Commitment

Table 8 presents the linear regression analysis used to predict organizational effectiveness based on the school heads' occupational commitment.

**Table 8**. Linear regression analysis of predicting organizational effectiveness by school head's occupational commitment

**Model 1**

| Predictors | Unstandardized Coefficients | | Standardized Coefficients, | t-value (p-value) | Interpretation |
|---|---|---|---|---|---|
| | B | S.E. | β | | |
| (Constant) | 0.853 | 0.210 | | 4.068(0.000) | Significant |
| $X_1$: Facilitating a shared vision and mission | 0.195 | 0.063 | 0.195 | 3.081(0.003) | Significant |
| $X_2$: Building a trusting relationship | 0.127 | 0.036 | 0.212 | 3.494(0.001) | Significant |
| $X_3$: Communicating effectively | 0.384 | 0.044 | 0.508 | 8.709(0.000) | Significant |
| $X_4$: Being visible and accessible | 0.085 | 0.031 | 0.153 | 2.716(0.008) | Significant |

Note: Adjusted $R^2$=.671 ANOVA for Regression: F=69.323, p=.000.
Significant (p<.05), Not significant (p>.05)

**Fitted Regression Model:** Organizational Effectiveness $= 0.853 + 0.195$ (facilitating a shared vision and mission) $+ 0.127$ (building a trusting relationship) $+ 0.384$ (communicating effectively) $+ 0.085$ (being visible and accessible)

**Model 2**

| Predictors | Unstandardized Coefficients | | Standardized Coefficients, | t-value (p-value) | Interpretation |
|---|---|---|---|---|---|
| | B | S.E. | β | | |
| (Constant) | 3.130 | 0.151 | | 20.718(0.000) | Significant |
| $X_1$: Occupational Commitment | 0.217 | 0.039 | 0.433 | 5.536(0.000) | Significant |

Note: Adjusted $R^2$=.181 ANOVA for Regression: F=30.650, p=.000.
Significant (p<.05), Not significant (p>.05)

**Fitted Regression Model:** Organizational Effectiveness $= 3.130 + 0.217$ (Occupational Commitment)

The results in Model 1 indicated a statistically significant model (ANOVA F=69.323, p=.000), suggesting that independent variables of occupational commitment significantly contribute to explaining the variance in organizational effectiveness among respondents. The adjusted $R^2$ value of .671 or 67.1% indicated a provision for the descriptive influence of the model. Furthermore, with a per-unit increase in Facilitating a shared vision and mission, there is a 0.195 increase in organizational effectiveness; with a per-unit increase in Building a trusting relationship, there is a 0.127 increase in organizational effectiveness; per-unit increase in Communicating effectively, there is a 0.384 increase in organizational effectiveness and per-unit increase in Being visible and accessible, there is a 0.085 increase in organizational effectiveness. This means that school heads' occupational commitment to Communicating effectively is the highest predictor of organizational effectiveness in the context of this study. On the other hand, the results in Model 2 revealed a statistically significant overall model (ANOVA F=30.650, p=.000), indicating that the overall measure of occupational commitment does predict the variance in organizational effectiveness among respondents. The adjusted $R^2$ value of .181 or 18.1% supports the model's explanatory power. Therefore, the null statement stating that occupational commitment does not significantly predict organizational effectiveness was rejected since the p-value is less than 0.001. This implied that the level of commitment displayed by the school head directly impacts how effective the organization is perceived. Olaso and Baja (2019) further supported this finding. They found that school heads who exhibit high levels of commitment are more likely to engage in continuous professional development, actively seek feedback from staff and stakeholders, and promote a culture of accountability and excellence. These behaviors positively impact the organization's ability to achieve its goals and objectives.

### 3.9 Predicting Organizational Effectiveness Based on the School Heads' Transformational Leadership Styles

Table 9 presents the linear regression analysis used to predict organizational effectiveness based on the school heads' transformational leadership styles.

**Table 9.** Linear regression analysis of predicting organizational effectiveness by school heads' transformational leadership styles

| Predictors | Unstandardized Coefficients | | Standardized Coefficients, β | t-value (p-value) | Interpretation |
|---|---|---|---|---|---|
| | B | S.E. | | | |
| (Constant) | 2.047 | 0.267 | | 7.660(.000) | |
| $X_1$: Transformational | 0.484 | 0.067 | 0.529 | 7.183(.000) | Significant |

*Note: Adjusted $R^2$=-.274 ANOVA for Regression: F=51.598, p=.000.*
*Significant (p<.05), Not significant (p>.05)*

**Fitted Regression Model:** $\text{Organizational Effectiveness} = 2.047 + 0.484$ (transformational)

The results above indicated a significant model (ANOVA *F=51.598, p=.000*), suggesting that transformational leadership styles significantly explain the variance in organizational effectiveness among respondents. Moreover, the adjusted $R^2$ value of .274 or 27.4% indicated a provision for the descriptive influence of the model. Furthermore, with a per-unit increase in transformational leadership styles, there was a 0.484 increase in Organizational Effectiveness. Therefore, the null statement, which states that the school head's transformational leadership style does not significantly predict organizational effectiveness, was rejected since the p-value was less than the level 0.05.

### 3.10 Predicting Organizational Effectiveness Based on the School Heads' Transactional Leadership Styles

Table 10 presents the linear regression analysis used to predict organizational effectiveness based on the school heads' transactional leadership styles.

**Table 10.** Linear regression analysis of predicting organizational effectiveness by school heads' transactional leadership styles

| Predictors | Unstandardized Coefficients | | Standardized Coefficients, β | t-value (p-value) | Interpretation |
|---|---|---|---|---|---|
| | B | S.E. | | | |
| (Constant) | 2.714 | 0.235 | | 11.556(0.000) | |
| $X_1$: Transactional | 0.317 | 0.060 | 0.419 | 5.327(0.000) | Significant |

*Note: Adjusted $R^2$=-.170 ANOVA for Regression: F=28.373, p=.000.*
*Significant (p<.05), Not significant (p>.05)*

**Fitted Regression Model:** $\text{Organizational Effectiveness} = 2.714 + 0.317$ (Transactional)

The results revealed a significant model (ANOVA *F=28.373, p=.000*), suggesting that transactional leadership styles significantly explain the variance in organizational effectiveness among respondents. Moreover, the adjusted $R^2$ value of .170 or 17.0% indicated a provision for the descriptive influence of the model. Furthermore, with a per-unit increase in transformational leadership styles, there was a 0.317 increase in Organizational Effectiveness. Therefore, the null statement, which states that the school head's transactional leadership style does not significantly predict organizational effectiveness, was rejected since the p-value was less than the level 0.05.

### 3.11 Predicting Organizational Effectiveness Based on the School Heads' Authoritarian Leadership Styles

Table 11 presents the linear regression analysis to predict organizational effectiveness based on the school heads' authoritarian leadership styles.

**Table 11.** Linear regression analysis of predicting organizational effectiveness by school heads' authoritarian leadership styles

| Predictors | Unstandardized Coefficients | | Standardized Coefficients, β | t-value (p-value) | Interpretation |
|---|---|---|---|---|---|
| | B | S.E. | | | |
| (Constant) | 3.996 | 0.144 | | 27.752(0.000) | |
| $X_{1:}$ Authoritarian | -0.009 | 0.038 | -0.020 | -0.234(0.815) | Not Significant |

*Note: Adjusted $R^2$=-0.007 ANOVA for Regression: F=0.055, p=.000.*
*Significant (p<.05), Not significant (p>.05)*

**Fitted Regression Model:** None

The results indicated a non-significant model (ANOVA *F=.055, p=.815*), suggesting that authoritarian leadership styles do not contribute to explaining the variance in organizational effectiveness among respondents. Moreover, the adjusted $R^2$ value of -.007 or -0.7% indicated a weak influence of the model. Thus, the null statement, which states that the school head's authoritarian leadership style does not significantly predict organizational effectiveness, was rejected since the p-value was greater than the level of 0.05.

### 3.12 Predicting Organizational Effectiveness Based on the School Heads' Democratic Leadership Styles

Table 12 presents the linear regression analysis used to predict organizational effectiveness based on the school heads' democratic leadership styles.

**Table 12.** Linear regression analysis of predicting organizational effectiveness by school heads' democratic leadership styles

| Predictors | Unstandardized Coefficients | | Standardized Coefficients, β | t-value (p-value) | Interpretation |
|---|---|---|---|---|---|
| | B | S.E. | | | |
| (Constant) | 2.691 | 0.197 | | 13.681(0.000) | |
| $X_{1:}$ Democratic | -0.325 | 0.050 | 0.490 | 6.483(0.000) | Significant |

*Note: Adjusted $R^2$=-.234 ANOVA for Regression: F=42.035, p=.000.*
*Significant (p<.05), Not significant (p>.05)*

**Fitted Regression Model:** $\text{Organizational Effectiveness} = 2.691 + 0.325$ (Democratic)

The results indicated a significant model (ANOVA *F=42.035, p=.000*), suggesting that democratic leadership styles significantly explain respondents' variance in organizational effectiveness. Moreover, the adjusted $R^2$ value of .234 or 23.4% indicated a provision for the descriptive influence of the model. Furthermore, with a per-unit increase in democratic leadership styles, there was a 0.325 increase in Organizational Effectiveness. Therefore, the null statement, which states that the school head's democratic leadership style does not significantly predict organizational effectiveness, was rejected since the p-value was less than the level 0.05.

### 3.13 Predicting Organizational Effectiveness Based on the School Heads' Occupational Commitment and Leadership Styles

Table 13 presents the multiple regression analysis that predicts organizational effectiveness based on the school heads' occupational commitment and leadership styles with the results of unstandardized and standardized coefficients.

***Unstandardized Coefficients (B)***

These coefficients represent the change in the dependent variable for a one-unit change in the unstandardized predictor variable, holding all other predictors constant. Facilitating a shared vision and mission: B=0.169; Building trusting relationships: B=0.100; Communicating effectively: B=0.504. For example, a coefficient of 0.504 for "Communicating effectively" means that for each one-unit increase in this variable, the dependent variable increases by 0.504 units.

**Table 13.** Linear regression analysis of predicting organizational effectiveness by school heads' occupational commitment and leadership styles

**Model 1**

| **Predictors** | **Unstandardized Coefficients** B | S.E. | **Standardized Coefficients** β | **t-value (p-value)** | **Interpretation** |
|---|---|---|---|---|---|
| (Constant) | 0.712 | 0.227 | | 3.139(.002) | Significant |
| $X_1$: Facilitating a shared vision and mission | 0.169 | 0.056 | 0.169 | 3.032(.003) | Significant |
| $X_2$: Building a trusting relationship | 0.100 | 0.033 | 0.166 | 3.042(.003) | Significant |
| $X_3$: Communicating effectively | 0.504 | 0.057 | 0.666 | 8.799(.000) | Significant |
| $X_4$: Being visible and accessible | 0.057 | 0.030 | 0.102 | 1.870(.006) | Significant |
| $X_5$: Transformational | 0.135 | 0.050 | 0.147 | 2.688(.008) | Significant |
| $X_6$: Transactional | 0.249 | 0.054 | 0.329 | 4.609(.000) | Significant |
| $X_7$: Authoritarian | -0.014 | 0.020 | -0.032 | -0.702(.484) | Not Significant |
| $X_8$: Democratic | 0.125 | 0.034 | 0.188 | 3.712(.000) | Significant |

*Note: Adjusted $R^2$=.749 ANOVA for Regression: F=50.868, p=.000.*
*Significant (p<.05), Not significant (p>.05)*

**Fitted Regression Model:** Organizational Effectiveness = 0.712 + 0.169 (Facilitating a shared vision and mission) + 0.100 (Building a trusting relationship) + 0.504 (Communicating effectively) + 0.057 (Being visible and accessible) + 0.135 (Transformational) + 0.249 (Transactional) + 0.125 (Democratic)

***Standardized Coefficients (Beta, β)***

These coefficients are the unstandardized coefficients adjusted by the standard deviations of the variables. They allow comparison of the relative importance of each predictor variable. Facilitating a shared vision and mission: β=0.169. Building trusting relationships: β=0.166. Communicating effectively: β=0.666. The standardized coefficient of 0.666 for "Communicating effectively" indicates that it has a stronger relationship with the dependent variable compared to the other predictors, which have lower standardized coefficients. The p-values indicated the statistical significance of each predictor in the model. Facilitating a shared vision and mission: p=0.002. Building trusting relationships: p=0.003 Communicating effectively: p=0.000. Since all p-values were below 0.05, each predictor is statistically significant. This means that there is strong evidence to suggest that these variables have a meaningful impact on the dependent variable. Given the significance of all the predictors, the study interpreted the results more confidently: Facilitating a shared vision and mission: Unstandardized coefficient (0.169) suggested a modest positive impact on the dependent variable. The standardized coefficient (0.169) indicated relatively low importance compared to "Communicating effectively." Building trusting relationships: The unstandardized coefficient (0.100) suggests a smaller positive impact. The standardized coefficient (0.166) also indicates relatively low importance but slightly higher than "Facilitating a shared vision and mission." The unstandardized coefficient (0.504) suggested a substantial positive impact on the dependent variable. The standardized coefficient (0.666) indicated that this variable had the highest relative importance among the predictors. Thus, given the statistical significance of all variables, Communicating effectively stands out as the most influential predictor with a high unstandardized and standardized coefficient, indicating a strong and significant impact on the dependent variable. The results in Model 1 indicated a statistically significant model (ANOVA F=50.868, p=.000), suggesting that independent variables of occupational commitment significantly contribute to explaining the variance in leadership styles among respondents. The adjusted $R^2$ value of .749 or 74.9% indicated a provision for the descriptive influence of the model.

Table 14 presents the results of the regression model, which includes five predictors: occupational commitment, transformational leadership, transactional leadership, authoritarian leadership, and democratic leadership.

**Table 14**. Multiple regression analysis of predicting organizational effectiveness by school heads' occupational commitment and leadership styles

Model fit 2

| **Predictors** | **Unstandardized Coefficients** B | S.E. | **Standardized Coefficients** *β* | **t-value (p-value)** | **Interpretation** |
|---|---|---|---|---|---|
| (Constant) | 0.716 | 0.219 | | 3.140(.001) | Significant |
| $X_1$: Occupational Commitment | 0.215 | 0.030 | 0.421 | 5.517(.000) | Significant |
| $X_2$: Transformational | 0.131 | 0.045 | 0.141 | 2.512(.004) | Significant |
| $X_3$: Transactional | 0.300 | 0.061 | 0.341 | 4.700(.000) | Significant |
| $X_4$: Authoritarian | -0.015 | 0.016 | -0.030 | -0.700(.481) | Not Significant |
| $X_5$: Democratic | 0.130 | 0.037 | 0.190 | 3.756(.000) | Significant |

*Note: Adjusted $R^2$=.767 ANOVA for Regression: F=53.899, p=.000.*
*Significant (p<.05) Not significant (p>.05)*

The model fit, designated as Model 2, provides insights into these predictors' relative importance and significance. Unstandardized Coefficients (B) these coefficients represent the amount of change in the dependent variable for a one-unit change in the predictor variable, holding all other predictors constant. For instance, an unstandardized coefficient of 0.300 for "Transactional" leadership means that for each one-unit increase in this variable, the dependent variable increases by 0.300 units. Standardized Coefficients (Beta, β) are the unstandardized coefficients adjusted by the variables' standard deviations, allowing for comparing each predictor variable's relative importance. The standardized coefficient of 0.421 for "Occupational commitment" indicated that it has the strongest relationship with the dependent variable compared to the other predictors. The p-values indicated the statistical significance of each predictor in the model. A p-value less than 0.05 is typically considered statistically significant, suggesting strong evidence against the null hypothesis, posing that the coefficient is zero (no effect). Since all p-values were below 0.05, each predictor was statistically significant. The significance of all the predictors with interpreted results: Unstandardized coefficient (0.215) suggested a positive impact on the dependent variable. The standardized coefficient (0.421) indicated the highest relative importance among the predictors. Transformational: Unstandardized coefficient (0.131) suggests a positive impact. The standardized coefficient (0.141) was relatively less important than other predictors. Transactional: The unstandardized coefficient (0.300) suggested a substantial positive impact on the dependent variable. The standardized coefficient (0.341) indicated a high relative importance, second to occupational commitment. Authoritarian: The unstandardized coefficient (0.015) suggested a minimal positive impact. The standardized coefficient (0.030) indicated the lowest relative importance among the predictors but is still statistically significant. Democratic: Unstandardized coefficient (0.130) suggested a positive impact. The standardized coefficient (0.190) indicates a moderate relative importance. Furthermore, per-unit increase in Occupational Commitment in terms of Facilitating a shared vision and mission, there is a 0.169 increase in Organizational Effectiveness, per-unit increase in Occupational Commitment in terms of Building a trusting relationship, there is a 0.100 increase in Organizational Effectiveness, per-unit increase in Occupational Commitment in terms of Communicating effectively, there is a 0.504 increase in Organizational Effectiveness, per-unit increase in Occupational Commitment in terms of Being visible and accessible, there is a 0.057 increase in Organizational Effectiveness, per-unit increase in Leadership styles in terms of Transformational style, there is a 0.135 increase in Organizational Effectiveness, per-unit increase in Leadership styles in terms of Transactional style, there is a 0.249 increase in Organizational Effectiveness, and per-unit increase in Leadership styles in terms of Democratic style, there is a 0.125 increase in Organizational Effectiveness. Therefore, the null hypothesis that Occupational Commitment and Leadership Style do not significantly predict Organizational Effectiveness was rejected since the p-value was less than 0.005.

**Table 15**. Regression analysis of predicting organizational effectiveness by school head's occupational commitment and leadership styles Model fit 3

| Predictors | Unstandardized Coefficients | | Standardized Coefficients | t-value (p-value) | Interpretation |
|---|---|---|---|---|---|
| | B | S.E. | *β* | | |
| (Constant) | .819 | .310 | | 4.132(.000) | Significant |
| $X_1$:Occupational Commitment | .215 | .030 | .421 | 5.517(.000) | Significant |
| $X_2$: Leadership Styles | .178 | .020 | .189 | 2.982(.001) | Significant |

*Note:* *Adjusted $R^2$=.83* *ANOVA for Regression: F=60.119, p=.000.*
*Significant (p<.05), Not significant (p>.05)*

$\hat{Y} = .819 + 0.215 X_1 + 0.178 X_2$
where:
$\hat{Y}$ = Organizational Effectiveness
$X_1$ = Occupational Commitment
$X_2$ = Leadership Styles

The regression analysis results for predicting organizational effectiveness based on the school heads' occupational commitment and leadership styles revealed several important insights. The model fit is robust, with an adjusted $R^2$ of .83, indicating that 83% of the variance in organizational effectiveness is explained by the predictors included in the model. The ANOVA for the regression shows an F-value of 60.119 with a p-value of .000, demonstrating that the overall model is statistically significant and provides a good fit for the data. Occupational commitment (X1) emerges as a significant predictor with an unstandardized coefficient (B) of .215 and a standardized coefficient (β) of .421. The t-value is 5.517 with a p-value of .000, underscoring a strong positive relationship between occupational commitment and organizational effectiveness. This implied that higher levels of occupational commitment among school heads lead to greater organizational effectiveness. On the other hand, leadership styles (X2) also significantly predict organizational effectiveness, though with a smaller impact. The unstandardized coefficient (B) is .178, and the standardized coefficient (β) is .189, with a t-value of 2.982 and a p-value of .001. This indicated that while effective leadership styles positively influence organizational effectiveness, their impact is less pronounced than occupational commitment.

## 4.0 Conclusion

This study delved into the intricate dynamics of organizational effectiveness, occupational commitment, and leadership styles within educational settings, focusing on school principals' perspectives. The study disclosed the school heads' strong commitment to their roles and their adoption of multifaceted leadership practices such as transformational, transactional, and democratic styles. These committed and diverse leadership approaches were found to influence the overall effectiveness of educational institutions significantly. The study drew upon theoretical frameworks like the Three-Component Model to elucidate the interplay between commitment dynamics and organizational effectiveness. At the same time, the Management by Objective System underscored the predictive role of leadership styles in achieving organizational goals. These insights underscored the pivotal role of leadership in fostering positive organizational climates that foster collaboration, innovation, and continuous improvement.

Given the findings, educational institutions may prioritize leadership training programs for school heads, enhancing skills in vision-building, communication, conflict resolution, and strategic decision-making tailored to address specific needs and challenges. Educational stakeholders may encourage school heads to adopt collaborative leadership practices, involving stakeholders in decision-making and fostering trust, transparency, and shared ownership through training programs and support mechanisms. Regular feedback and evaluation of leadership practices and organizational effectiveness are crucial for educational policymakers and administrators to foster a culture of learning and adaptability.

## 5.0 Contributions of Authors

The authors distributed and did the editing, writing, supervising, data analysis, and encoding tasks and collectively reviewed and approved the final manuscript. Both authors conceived and designed the study, formulated the research questions, and designed the study protocol. Author 1 collected and encoded the data. Author 2 helped with the analysis and interpretation of the data. Author 1 wrote the initial draft, while Author 2 contributed to the subsequent revisions. Both Authors provided final approval for publication.

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## 7.0 Conflict of Interests

The authors declare that there are no conflicts of interest regarding the publication of this paper.

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# The Mediating Effect of Self-Efficacy Between Secondary Traumatic Stress and Emotional Self-Regulation Among Forensic Examiners

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**Abstract.** This study was conducted to determine if there was a mediating effect of self-efficacy between secondary traumatic stress and emotional self-regulation among forensic examiners. It was conducted at the Regional Forensic Unit- National Capital Region and National Headquarters of PNP Forensic Group. Data were collected using simple random sampling from 173 designated forensic examiners with indirect trauma experiences. Mediation analysis was used to evaluate the data, using regression analysis and the Sobel Test. It was revealed that forensic examiners had little/no secondary traumatic stress, a high level of emotional self-regulation, and a high level of self-efficacy. It was also revealed that self-efficacy ($\beta$=-0.334, $p<.001$) was negatively related to emotional self-regulation with 11% of the variance, secondary traumatic stress ($\beta$=0.460, $p<.001$) was positively related to emotional self-regulation with 21% of the variance, and secondary traumatic stress ($\beta$=-0.195, $p$=.010) was negatively related to self-efficacy with 3.8% of the variance. The self-efficacy partially mediates the relationship between secondary traumatic stress and emotional self-regulation by 10.7%, which indicates that while self-efficacy plays a significant impact, there is still a direct influence of secondary traumatic stress on emotional self-regulation. As an output of the study, the Forensic Mental Health: Psychoeducation and Trauma-Focused Intervention Program was proposed for forensic examiners to serve as a guide to develop and improve their self-efficacy and emotional self-regulation strategy in coping with the impact of secondary traumatic stress.

**Keywords:** Self-efficacy; Secondary traumatic stress; Emotional self-regulation; Mediation; Forensics.

## 1.0 Introduction

Secondary traumatic stress is recognized as a form of post-traumatic stress disorder (PTSD) that occurs as a result of repeated exposure to disturbing information about traumatic events (Jacob & Lambert, 2021). This behavior is prevalent among human service professionals who encountered significant demands in their roles, such as forensic examiners who had experienced secondary traumatic stress as a response to their regular exposure to clients' traumatic experiences. Forensic examiners encounter many stressors in their line of work. Factors contributing to stress in this field include the volume of cases, controversy, backlogs, dealing with violent crime scenes, strict adherence to perfection, and faced with rigorous court examinations. Professionals who worked in the field of law enforcement were at risk from indirect traumatic experiences as well as explicit information, especially when dealing with criminals who had traumatized themselves (Ko & Memon, 2023).

Scene of Crime Operations (SOCO), Disaster Victim Identifications (DVI), and Crime Scene Investigations (CSI) expose PNP forensic examiners to the various aspects of crime scenes, mass casualty incidents, and distressful traumatic material. At the same time, they collect and preserve evidence, conduct extensive laboratory testing of physical and biological evidence, and testify as expert witnesses in court. The PNP Forensic Group is established as mandated by the RA 6975 Sec.35 NAPOLCOM Resolution 96-058 to strengthen the operational efficiency and efficacy of law enforcement by conducting laboratory examination, evaluation, and identification of physical evidence associated with criminal activities, with an emphasis on its chemical, biological, physical, and medical nature.

According to Plombon et al. (2023), the effectiveness of their work and their level of personal satisfaction as police investigators were affected by stress and trauma. Crime Scene Investigators were crucial to law enforcement and had a significant role in the investigation process. Additionally, Busey et al. (2022) stated that stressors of various forms were common in forensic laboratories and hurt individuals, the laboratory systems, and case evaluation findings. Almazrouei et al. (2020) also determined a lack of awareness regarding stressful circumstances at work and criticism even though forensic examiners performed their duties in a stressful environment. Forensic science decisions were affected by human factors and organizational stressors. Forensic examiners claimed that their high-stress levels were caused more by work-related issues such as management and supervision, backlogs, and the need to complete many cases than by their issues.

There have been relatively few local studies conducted in the Philippines among forensic examiners on how their work affects their mental health. Most of the research conducted on uniformed personnel exclusively focused on police officers. Goldstein and Alesbury (2021) revealed that considerably fewer studies had explored how professionals in forensics were affected. Forensic experts reported high levels of burnout and insufficient support for wellbeing at work. As a result, individuals have limited knowledge and lack awareness of how their work impacts their psychological well-being. The concerns regarding secondary trauma are not being addressed, and there is a need for an investigation into their capacity to be in control of their environment, to master the challenging demands of their field, and to control their emotional experience and expressions.

The study aimed to determine the overall levels of self-efficacy, secondary traumatic stress, and emotional self-regulation among forensic examiners who had experienced indirect exposure to traumatic events while performing their assigned duties, including forensic examinations, fieldwork, scene of crime operations, training, and research.

## 2.0 Methodology

### 2.1 Research Design

The study utilized the quantitative research approach. According to Brooke (2023), quantitative research was a systematic and objective strategy to gather and analyze numerical data. It provided a systematic and logical framework to obtain results. Mediation analysis was used to find out how self-efficacy impacted the relationship between secondary traumatic stress and emotional self-regulation in forensic experts who worked for the PNP Forensic Group in the National Capital Region and had experienced indirect trauma. According to Sidhu et al. (2021), mediation analysis examines the relationship between the independent and dependent variables when a mediator or intervening variables are present.

### 2.2 Research Locale

The study was conducted at the PNP Forensic Group, Camp BGen Rafael T Crame, Quezon City, and Regional Forensic Unit – National Capital Region. The selection of this unit/office in the National Capital Region as the research locale was based on the following: (1) the office/unit provided a scientific investigation, laboratory examinations, forensic services, and other technical support, (2) the PNP personnel were graduates of specialized training and designated as forensic examiners in their office, and (3) the forensic examiners were exposed to secondary traumatic stress in laboratory and fieldwork such as conducting scene of crime operations, disaster victim identification, and performing laboratory examinations on evidence that has been filed or gathered and is to be presented in court as an expert witness. Additionally, these offices/units were chosen since the researcher was affiliated with them as training staff with access to gather the respondents.

## 2.3 Research Participants

The study respondents were PNP uniformed and non-uniformed personnel designated as forensic examiners. Specifically, this includes individuals with expertise in Fingerprint Examination, Firearms Examination, Forensic Chemistry, Forensic DNA Analysis, Forensic Photography, Medico-Legal Examination, Physical Identification Examination, and Polygraph Examination. A fishbowl technique was used to choose the respondents. To obtain a sample of 173 forensic examiners, the G*Power Application was utilized to compute the sample size needed for the study. Based on post hoc analysis, the achieved power was .9955 in this mediation study based on a 0.37741 effect size ($\alpha$=0.05). Hence, the sample size was sufficient for the study.

## 2.4 Research Instrument

This study utilized three standardized tests to gather data and answer the research objectives. These adopted instruments measured the overall level of secondary traumatic stress, emotional self-regulation, and self-efficacy. Additionally, it aimed to determine the impact of secondary traumatic stress on emotional self-regulation and self-efficacy and the mediation effect of self-efficacy in the relationship between secondary traumatic stress and emotional self-regulation among forensic examiners.

Secondary Traumatic Stress Scale - DSM 5, developed by Bride (2013), to assess the effects of secondary trauma on forensic examiners. The scale has 20 items, divided into four subscales: intrusion, avoidance, negative cognition and mood, and arousal subscale. The total score was derived by adding the individual item scores of the scale, where a greater score signified an increased occurrence of symptoms. According to Sprang and Garcia (2022), the Secondary Traumatic Stress Scale developed by Bride (2013) consistently showed a high level of internal consistency with an alpha coefficient ranging from .92 to .96 in various research. Another standardized test used was the Difficulties in Emotion Regulation Scale (DERS-36), developed by Gratz and Roemer (2004) to measure overall emotional self-regulation. The DERS produced an overall score between 36 and 180; larger scores indicated greater emotional regulation challenges. The DERS revealed high internal consistency ($\alpha$ = 0.93), and the total correlation between items varied between r =.16 and r =.69. Lastly, the study used the General Self-efficacy (GSE) scale of 10 items. The General Self-Efficacy (GSE) Scale was determined to be unidimensional based on the research conducted by Schwarzer and Jerusalem (1995, as cited in Lazić et al., 2021) with Cronbach's alpha ranging from .75 to .90. To predict both coping with day-to-day difficulties and adapting to a variety of stressful life events, the scale was developed to evaluate a general feeling of perceived self-efficacy. The answers to all ten items were summed to provide the final composite score, which varied from 10 to 40.

## 2.5 Data Gathering Procedure

First, the researcher asked for approval from the Director of the PNP Forensic Group to conduct the study among forensic examiners within the National Capital Region. Once the request was approved, the researcher asked the admin officers and training officers of the respective office/unit to provide data on personnel and the total number designated as forensic examiners. After that, the study utilized a simple random sampling using a fishbowl technique to include the number of respondents needed. Upon getting the respondents needed, the researcher started the data gathering. Since the researcher was designated as the training PNCO in the National Headquarters, PNP Forensic Group, he asked for help from the respective admin officers and training officers of the respondents to answer the research instrument. To consider the availability of respondents and not hinder their duties, the survey questionnaires were sent through Google Forms. Before answering the survey, the researcher provided a letter of informed consent indicating the purpose and background of the study. After accomplishing the informed consent, the respondents consecutively answered the three standardized instruments (i.e., General Self-efficacy Scale, Secondary Traumatic Stress Scale, and Difficulties in Emotion Regulation Scale). The output from the instruments included the respondents' (a) demographic profile, (b) overall level of self-efficacy, (c) overall level of secondary traumatic stress, and (d) overall level of emotional self-regulation. After recording the data gathered, it was sent to the statistician for analysis.

## 2.6 Ethical Considerations

This study provided informed consent to the respondents with information regarding the purpose and background of the study and obtained approval from the organization before data gathering. In data gathering, the privacy and identities of the respondents were maintained during this research. The obtained data and information were strictly confidential following the Data Privacy Act. Also, this study guaranteed that the authors of the numerous publications and studies mentioned in this paper were properly cited and referenced. With the researcher's present affiliation in the organization as a training officer, the respondents were chosen from other office/unit assignments. They were also informed that their involvement in the research was completely voluntary and that they had the right to refuse to participate at any point that would not affect how the researcher treated them after granting informed consent.

## 3.0 Results and Discussion

### 3.1 Secondary Traumatic Stress (STS) among Forensic Examiners

Table 1 shows that overall secondary traumatic stress was Little/No (Mean=1.38, SD=.59) among forensic examiners. The symptoms experienced by forensic examiners have minimal impact on their level of secondary traumatic stress despite their work being consistently exposed to traumatic material and clients' traumatic experiences. The results imply that they still have developed symptoms at a low level.

**Table 1.** Level of secondary traumatic stress (STS) among forensic examiners

| Indicative Statement | Mean | SD | Interpretation |
|---|---|---|---|
| 1. I felt emotionally numb. | 1.60 | 0.95 | Little/No STS |
| 2. My heart started pounding when I thought about my client's work. | 1.51 | 0.88 | Little/No STS |
| 3. I seemed as if I was reliving the trauma(s) experienced by my client(s). | 1.45 | 0.80 | Little/No STS |
| 4. I had trouble sleeping. | 1.62 | 0.95 | Little/No STS |
| 5. Reminders of my work with clients upset me. | 1.32 | 0.69 | Little/No STS |
| 6. I had little interest in being around others. | 1.50 | 0.89 | Little/No STS |
| 7. I felt jumpy. | 1.38 | 0.72 | Little/No STS |
| 8. I was less active than usual. | 1.49 | 0.85 | Little/No STS |
| 9. I thought about my work with clients when I did not intend to. | 1.43 | 0.78 | Little/No STS |
| 10. I had trouble concentrating. | 1.46 | 0.77 | Little/No STS |
| 11. I avoided people, places, or things that reminded me of my client's work. | 1.32 | 0.78 | Little/No STS |
| 12. I had disturbing dreams about my work with clients. | 1.26 | 0.68 | Little/No STS |
| 13. I wanted to avoid working with some clients. | 1.27 | 0.65 | Little/No STS |
| 14. I was easily annoyed. | 1.38 | 0.77 | Little/No STS |
| 15. I expected something bad to happen. | 1.27 | 0.64 | Little/No STS |
| 16. I noticed gaps in my memory about client sessions. | 1.34 | 0.73 | Little/No STS |
| 17. I expected negative emotions. | 1.44 | 0.74 | Little/No STS |
| 18. I engaged in reckless or self-destructive behavior. | 1.21 | 0.52 | Little/No STS |
| 19. I unrealistically blamed others for the cause or consequences of the trauma(s) experienced by my client(s). | 1.18 | 0.48 | Little/No STS |
| 20. I had negative expectations about myself, others, or the world. | 1.21 | 0.54 | Little/No STS |
| **General Assessment** | **1.38** | **0.59** | **Little/No STS** |

The secondary traumatic stress in this sample can be attributed to the forensic examiners' features, organizational support, and training development given by the organization. Professional development and specialized training can help these examiners to prevent the severe impact of trauma exposures. With their knowledge and technical skills in forensics, they can manage and recover more effectively from indirect trauma exposures, reducing the likelihood that they would suffer from severe psychological distress. Zeybek et al. (2023) disclosed that strengthening one's professional skills and aligning them with one's educational background positively impacts compassion fatigue and burnout. Additionally, Sutton et al. (2022) mentioned that specialized training in trauma could be helpful for individuals experiencing secondary traumatic stress (STS). Embracing a culture that acknowledges and validates the presence and manifestation of STS can significantly enhance employee health. Knowing STS and its manifestations can assist individuals in validating their emotions by recognizing that their feelings are not exclusive to them. This enables individuals to accept these emotions as typical aspects of their work without fear of being branded as weak or unsuited.

### 3.2. Emotional Self-Regulation (ESR) among Forensic Examiners with Indirect Trauma Experience

Emotional Self-Regulation was High (Mean=1.88, SD=.51) among forensic examiners with indirect trauma experience, as shown in Table 2. Forensic examiners may face challenges in understanding and recognizing their own emotions due to exposure to stressful situations. It also indicates that these forensic experts are trying to conceal their feelings and try to inhibit disclosure of their true feelings or are choosing to ignore them, which may lead to reluctance to seek organizational support for their mental health. Despite this difficulty, they show that they can control their emotions, especially when exposed to traumatic material or indirect trauma caused by client's personal experiences. This demonstrates the resilience and adaptability of forensic experts with effective coping mechanisms to maintain professionalism and balance emotions when confronted with challenging situations.

**Table 2**. Level of emotional self-regulation (ESR) among forensic examiners with indirect trauma experience

| Indicative Statement | Mean | SD | Interpretation |
|---|---|---|---|
| 1. I am clear about my feelings (R). | 2.27 | 1.39 | High ESR |
| 2. I pay attention to how I feel (R). | 2.43 | 1.38 | High ESR |
| 3. I experience my emotions as overwhelming and out of control. | 1.64 | 1.01 | Very High ESR |
| 4. I had no idea how I was feeling. | 1.47 | 0.86 | Very High ESR |
| 5. I have difficulty making sense out of my feelings. | 1.47 | 0.87 | Very High ESR |
| 6. I am attentive to my feelings (R). | 2.54 | 1.45 | High ESR |
| 7. I know exactly how I am feeling (R). | 2.29 | 1.44 | High ESR |
| 8. I care about what I am feeling (R). | 2.34 | 1.42 | High ESR |
| 9. I am confused about how I feel. | 1.71 | 1.11 | Very High ESR |
| 10. I acknowledge my emotions (R) when I am upset. | 3.05 | 1.47 | Average ESR |
| 11. When I am upset, I become angry with myself for feeling that way. | 1.55 | 0.82 | Very High ESR |
| 12. When I am upset, I become embarrassed for feeling that way. | 1.58 | 0.92 | Very High ESR |
| 13. When I am upset, I have difficulty getting work done. | 1.53 | 0.85 | Very High ESR |
| 14. When I am upset, I become out of control. | 1.31 | 0.70 | Very High ESR |
| 15. When I am upset, I believe I will remain that way for a long time. | 1.42 | 0.90 | Very High ESR |
| 16. When I am upset, I believe that I will end up feeling very depressed. | 1.36 | 0.85 | Very High ESR |
| 17. When I am upset, I believe my feelings are valid and important (R). | 3.73 | 1.40 | Low ESR |
| 18. I have difficulty focusing on other things when I am upset. | 1.56 | 0.82 | Very High ESR |
| 19. When I am upset, I feel out of control. | 1.29 | 0.71 | Very High ESR |
| 20. When I am upset, I can still get things done (R). | 2.75 | 1.58 | Average ESR |
| 21. When I am upset, I feel ashamed of myself for feeling that way. | 1.64 | 0.94 | Very High ESR |
| 22. When I am upset, I know I can eventually find a way to feel better (R). | 2.57 | 1.56 | Average ESR |
| 23. When I am upset, I feel like I am weak. | 1.62 | 0.88 | Very High ESR |
| 24. I feel like I can control my behaviors (R) when I am upset. | 2.74 | 1.60 | Average ESR |
| 25. I feel guilty for feeling that way when I am upset. | 1.70 | 0.99 | Very High ESR |
| 26. When I am upset, I have difficulty concentrating. | 1.61 | 0.82 | Very High ESR |
| 27. When I am upset, I have difficulty controlling my behaviors. | 1.41 | 0.79 | Very High ESR |
| 28. When I am upset, I believe that there is nothing I can do to make myself feel better. | 1.40 | 0.91 | Very High ESR |
| 29. When I am upset, I become irritated with myself for feeling that way. | 1.47 | 0.83 | Very High ESR |
| 30. When I am upset, I feel very bad about myself. | 1.39 | 0.77 | Very High ESR |
| 31. When I am upset, I believe that wallowing in it is all I can do. | 1.48 | 0.86 | Very High ESR |
| 32. When I am upset, I lose control over my behaviors. | 1.29 | 0.65 | Very High ESR |
| 33. I have difficulty thinking about anything else when I am upset. | 1.42 | 0.74 | Very High ESR |
| 34. When I am upset, I figure out what I feel (R). | 3.70 | 1.46 | Low ESR |
| 35. When I am upset, it takes me a long time to feel better. | 1.51 | 0.87 | Very High ESR |
| 36. When I am upset, my emotions feel overwhelming. | 1.48 | 0.80 | Very High ESR |
| **General Assessment** | **1.88** | **0.51** | **High ESR** |

Redmond et al. (2023) mentioned that police officers frequently felt unsafe or uncomfortable in seeking support for their mental health due to their organizational culture, workplace conditions, stigma, and individual response. Acknowledgment of the occupational or safety concern, recognition of the difficulties in policing, and reducing the stigma related to mental health were necessary to develop a consistently successful approach to police officers' well-being and mental health. Craven et al. (2022) also disclosed that crime scene investigators could deal with the emotional demands of their jobs when they could effectively manage their emotions, demonstrated resilience, had supportive coworkers, felt in control of their work environment, and found fulfillment in their work.

### 3.3. Self-Efficacy among Forensic Examiners with Indirect Trauma Experience

The results in Table 3 show that Self-efficacy was High (Mean=3.37, SD=71) among forensic examiners with indirect trauma experience. Forensic examiners are exceptionally adept at solving problems, which shows they are confident in their ability to deal with problems and find effective solutions. Forensic examiners strongly believe in their capacity to accomplish tasks and succeed in various challenges encountered within the forensic field. They perceive difficulties as opportunities to innovate and resolve issues. When faced with adversity, they demonstrate flexibility and adaptability, as well as an openness to new ideas to accomplish their established objectives, demonstrating a belief in one's ability to take control of their surroundings and oneself.

The findings were supported by Syakdiah et al. (2024), who found that individuals with higher levels of self-efficacy were more satisfied with their jobs and personal lives, indicating that they could balance their time between family and work. This implied that people with higher levels of self-efficacy had a better work-life balance because they were frequently more convinced in their ability to execute difficult tasks and deal with unexpected challenges.

**Table 3.** Level of self-efficacy among forensic examiners with indirect trauma experience

| Indicative Statement | Mean | SD | Interpretation |
|---|---|---|---|
| 1. I can always solve difficult problems if I try hard enough. | 3.47 | 0.85 | High Self-Efficacy |
| 2. If someone opposes me, I can find the means and ways to get what I want. | 2.75 | 1.20 | High Self-Efficacy |
| 3. It is easy for me to stick to my aims and accomplish my goals. | 3.37 | 0.87 | High Self-Efficacy |
| 4. I am confident that I can deal efficiently with unexpected events. | 3.39 | 0.85 | High Self-Efficacy |
| 5. I know how to handle unforeseen situations thanks to my resourcefulness. | 3.37 | 0.86 | High Self-Efficacy |
| 6. I can solve most problems if I invest the necessary effort. | 3.47 | 0.85 | High Self-Efficacy |
| 7. I can remain calm when facing difficulties because I can rely on my coping abilities. | 3.45 | 0.81 | High Self-Efficacy |
| 8. When I am confronted with a problem, I can usually find several solutions. | 3.48 | 0.78 | High Self-Efficacy |
| 9. If I am in trouble, I can usually think of a solution. | 3.51 | 0.78 | High Self-Efficacy |
| 10. I can usually handle whatever comes my way. | 3.49 | 0.78 | High Self-Efficacy |
| **General Assessment** | **3.37** | **0.71** | **High Self-Efficacy** |

Additionally, Garza (2023) stated that law enforcement officers with high self-efficacy levels have reduced levels of anxiety and negative emotions. Those with poor self-efficacy, on the other hand, are more likely to experience anxiety and burnout. Similarly, Huard et al. (2021) observed that self-efficacy's emotional abilities were positively associated with psychological well-being and adversely related to psychological stress.

### 3.4. Impact of Self-Efficacy on Emotional Self-Regulation of Forensic Examiners

As shown in Table 4, Self-efficacy significantly impacted the emotional self-regulation of forensic examiners. Data analysis showed that every 1 unit increase in Self-Efficacy scores led to a -0.243-point decrease in Emotional Self-Regulation scores.

**Table 4.** Analysis of the impact of self-efficacy on emotional self-regulation of forensic examiners

| Model | Unstandardized B Coefficients | Standardized Beta Coefficients | p-value | R-square |
|---|---|---|---|---|
| 1 (Constant) | 2.700 | | <.001 | 0.111 |
| Self-Efficacy | -0.243 | -0.334 | <.001 | |

In this case, Self-Efficacy ($\beta$=-0.334, $p<.001$) was negatively related to Emotional Self-Regulation. The r-square= .111 signified that about 11% of the variability of Emotional Self-Regulation can be explained by Self-Efficacy, and other variables can explain 89%. The levels of forensic examiners' self-efficacy impact their emotional self-regulation. Forensic examiners may experience higher levels of self-efficacy when they have lower levels of difficulty in regulating their emotions. Conversely, when forensic examiners' difficulties in emotional self-regulation increase, their self-efficacy decreases. This gives us the idea that if forensic examiners have strong beliefs in their capacity to achieve their desired goals and are resilient in the face of challenges, they can regulate their emotions and cope effectively when exposed to indirect trauma. Self-efficacy functions as a safeguard against the negative consequences of emotional stress and trauma, which leads to better psychological well-being and job success in the role of forensic examiner. Namaziandost et al. (2023) showed that participants' Emotional Regulation had a significant impact on the participants' Self-efficacy, Work Engagement, and levels of anger. Individuals should focus on regulating their emotions on the job to increase their self-efficacy, manage work-related stress, and reduce anger.

### 3.5. Impact of Secondary Traumatic Stress on Emotional Self-Regulation of Forensic Examiners

Table 5 shows that Secondary Traumatic Stress ($\beta$=0.460, $p<.001$) was positively related to Emotional Self-Regulation. Data analysis showed that every 1 unit increase in Secondary Traumatic Stress scores led to a .401-point increase in Emotional Self-Regulation scores.

**Table 5.** Analysis of the impact of secondary traumatic stress on emotional self-regulation of forensic examiners

| Model | Unstandardized B Coefficients | Standardized Beta Coefficients | p-value | R-square |
|---|---|---|---|---|
| 1 (Constant) | 1.327 | | <.001 | 0.212 |
| Secondary Traumatic Stress | 0.401 | 0.460 | <.001 | |

The r-square= .212 signified that about 21% of the variability of Emotional Self-Regulation can be explained by Secondary Traumatic Stress, and other variables can explain 79%. The levels of secondary traumatic stress experienced by forensic examiners affect their levels of difficulty in emotional self-regulation when dealing with clients' traumatic experiences. When forensic examiners experience high levels of secondary traumatic stress, they have high levels of difficulty regulating their emotions. They may find it challenging to remain focused and control their reactions when faced with the traumatic experiences of their clients due to these increased levels of emotional difficulties. On the other hand, forensic examiners who have lower levels of secondary traumatic stress have better skills to manage their emotional self-regulation effectively. They are more capable of keeping their emotions balanced and controlled in the face of traumatic and stressful experiences of their clients. Improved emotional regulation enables these individuals to focus and accomplish desired goals as forensic examiners. In support of this, Guler et al. (2024) disclosed that higher levels of overall emotional dysregulation had a positive significant relationship with the severity of traumatic symptoms. Tessitore et al. (2023) also mentioned that secondary traumatic stress could lead to problems controlling emotions.

### 3.6. Impact of Secondary Traumatic Stress on Self-efficacy of Forensic Examiners

Table 6 shows that Secondary Traumatic Stress ($\beta=-0.195$, $p=.010$) was negatively related to Self-Efficacy. Data analysis showed that every 1 unit increase in Secondary Traumatic Stress scores led to a -0.234-point decrease in Self-Efficacy scores.

**Table 6.** Analysis of the impact of secondary traumatic stress on self-efficacy of forensic examiners

| Model | Unstandardized B Coefficients | Standardized Beta Coefficients | p-value | R-square |
|---|---|---|---|---|
| 1 (Constant) | 3.697 | | <.001 | 0.038 |
| Secondary Traumatic Stress | -0.234 | -0.195 | .010 | |

The r-square= .038 signified Secondary Traumatic Stress, which can explain about 3.8% of the variability of Self-Efficacy, and other variables could explain 96.2%. When the level of secondary traumatic stress increases, the level of self-efficacy decreases due to being indirectly exposed to the trauma of their clients. In that case, there are some serious risks for their professional tasks in laboratory examinations, forensic investigations, and other frontline forensic services. They tend to avoid establishing goals, potentially impacting their credibility as expert witnesses in court procedures. Conversely, when the levels of secondary traumatic stress decrease, self-efficacy increases, and forensic examiners can effectively manage and overcome the stress associated with their work. They are more inclined to take on their task with credibility, make sound decisions, and efficiently handle the challenges of their profession. To support these findings, Ries et al. (2021) stated that a low level of felt stress was significantly correlated with high levels of general self-efficacy. A highly experienced level of stress also had a positive relationship with neuroticism and openness to new experiences. Baierlein (2022) also revealed that greater levels of coping were linked to reduced levels of Secondary Traumatic Stress.

### 3.7. Mediating Effect of Self-Efficacy to Secondary Traumatic Stress and Emotional Self-Regulation of Forensic Examiners

**Table 7.** Mediation analysis of the effect of self-efficacy to secondary traumatic stress and emotional self-regulation of forensic examiners

| | Label | Estimate | SE | 95% Confidence Interval | | Z | p-value | % Mediation |
|---|---|---|---|---|---|---|---|---|
| **Mediation Estimates** | | | | Lower | Upper | | | |
| **Indirect** | a x b | 0.04 | 0.02 | 0.01 | 0.08 | 2.66 | 0.008 | 10.7 |
| **Direct** | c | 0.36 | 0.06 | 0.24 | 0.47 | 6.33 | <.001 | 89.3 |
| **Total** | c + a x b | 0.40 | 0.05 | 0.29 | 0.51 | 7.30 | <.001 | 100 |
| **Path Estimates** | | | | | | | | |
| **Secondary Traumatic Stress → Self-Efficacy** | a | -0.23 | 0.07 | -0.37 | -0.09 | -3.28 | 0.001 | |
| **Self-Efficacy → Emotional Self-Regulation** | b | -0.18 | 0.04 | -0.26 | -0.10 | -4.57 | <.001 | |
| **Secondary Traumatic Stress → Emotional Self-Regulation** | c | 0.35 | 0.06 | 0.24 | 0.47 | 6.33 | <.001 | |

| Regression | t value | Sobel Test Test Statistics | p-value | Decisions | Remarks |
|---|---|---|---|---|---|
| Secondary Traumatic Stress and Self-efficacy | -.234 | 2.15 | 0.03 | Reject Ho | Significant |
| Self-efficacy and Emotional Self-Regulation | -.184 | | | | |

Mediator: Self-efficacy level Critical value = 1.96

As shown in Table 7, the total effect of Secondary Traumatic Stress on Emotional Self-Regulation was significant ($\beta=0.4010$, $z=7.30$, $p<.001$). With the inclusion of the mediation variable (Self-Efficacy), the impact of Secondary Traumatic Stress on Emotional Self-Regulation was still significant ($\beta=0.352$, $z=6.33$, $p<.001$). The indirect effect on Emotional Self-Regulation through Self-Efficacy was significant ($\beta=0.0431$, $z=2.66$, $p=.008$). The bias-corrected bootstrap confidence interval for the indirect effect was based on 1,000 bootstrap samples and was entirely above 0 (0.0135 to 0.0793). This showed that Self-Efficacy partially mediated the relationship between Secondary Traumatic Stress and Emotional Self-Regulation by 10.7%. There is a significant relationship between secondary traumatic stress and emotional self-regulation among forensic examiners, both directly and indirectly, through the mediating effect of self-efficacy. Specifically, when forensic examiners experience high levels of secondary traumatic stress, it tends to diminish their self-efficacy, which subsequently leads to difficulties in regulating their emotions. This underscores the importance of self-efficacy in forensic examiners coping with the emotional consequences of secondary traumatic stress, affecting their ability to manage their emotions effectively. Those with greater self-efficacy are better equipped to regulate their emotions, even in the face of secondary traumatic stress. These findings were supported by Ali (2023) and Norouzinia et al. (2021) that secondary traumatic stress had a negative significant relationship with self-efficacy. Dehghan et al. (2023) disclosed that self-efficacy had a negative significant relationship with emotion regulation, and Cemgil (2019) found a significant positive correlation between secondary traumatic stress and emotion regulation, which stated that the level of STS symptoms due to consistent exposures to indirect trauma affected their emotional control and responses.

### 3.8. Proposed Program

**Table 8.** The proposed program

| Area of Concern | Objectives | Activities/ Strategies | Person Involved | Time Frame | Source of Fund | Success Indicators |
|---|---|---|---|---|---|---|
| **Level of Negative Cognitions and Mood among Forensic Examiners** | To assist the organization in dealing with the effects of secondary traumatic stress in the workplace and to obtain data regarding the forensic examiners' present mental health. | Psychological testing and assessment (individual and/or group)<br><br>Psychoeducation on the impact of Secondary Traumatic Stress<br><br>Trauma-Focused Cognitive Behavioral Therapy (TF-CBT) for personnel with severe symptoms. | PNP Forensic Group<br><br>PNP Health Service | Semi-annual<br><br>Monthly<br><br>Depends on the symptomatology and treatment plan | PNP Forensic Group Budget and Fiscal Office | - Number of forensic examiners successfully undergone psychological assessment and psychoeducation.<br><br>- Number of personnel identified with severe symptoms of STS.<br><br>- Number of personnel recovered from severe symptoms of STS through TF-CBT. |
| **Level of Impulse Control Difficulties among Forensic Examiner** | To recognize and validate their emotions following secondhand traumatic experiences.<br>To help the forensic examiners deal with their negative beliefs or thoughts. | Stress management includes daily physical activities and mindfulness.<br>Trauma-Focused Cognitive Behavioral Therapy (TF-CBT) for personnel with high difficulties in regulating their emotions. | PNP Forensic Group<br><br>PNP Health Service | Daily<br><br>Depends on the treatment plan | PNP Forensic Group Budget and Fiscal Office | - Number of personnel who participated in the activity and personnel with improved levels of emotional regulation.<br><br>- Number of personnel recovered through TF-CBT. |
| **Level of Optimistic Self-Beliefs among Forensic Examiners** | To help forensic examiners strengthen their beliefs to succeed and overcome challenges. | Training and Development Program<br><br>Rewards and recognition | Training and Development Section | Quarterly | PNP Forensic Group Budget and Fiscal Office | - A number of specialized training sessions were conducted, and personnel were trained. |

In Table 8, the proposed Forensic Mental Health: Psychoeducation and Trauma-Focused Intervention Program comprised three areas of concern: Level of Negative Cognitions and Mood, Impulse Control Difficulties, and Optimistic Self-Beliefs. The forensic examiners of PNP Forensic Group were consistently exposed to secondary traumatic stress as part of their work in laboratory examination, fieldwork, and other frontline forensic services. This study proposed program aims to help forensic examiners develop their levels of self-efficacy and emotional self-regulation as protective factors to cope with the impact of secondary traumatic stress in forensics. Regarding this, the focus was to educate the examiners on the impact of their nature of work on their mental health and to provide intervention to individuals with severe symptoms to address its impact.

## 4.0 Conclusion

Forensic examiners have high emotional self-regulation that leads them to effectively cope and control their emotions when exposed to traumatic material or indirect trauma and high self-efficacy that drives them to have a strong belief to succeed and accomplish the task. This leads them to demonstrate flexibility and adaptability, and they are open to new ideas to achieve the goals that they have set for themselves. The secondary traumatic stress experienced by forensic examiners positively impacts the level of difficulty in emotional self-regulation and negatively impacts self-efficacy. Also, self-efficacy tends to significantly impact emotional self-regulation, where higher levels of self-efficacy lead to lower difficulties in regulating emotions. Furthermore, levels of self-efficacy tend to have a partial and significant mediating effect between levels of secondary traumatic stress and emotional self-regulation, which means the impact of secondary traumatic stress on emotional self-regulation cannot be fully mediated by self-efficacy; even without self-efficacy, secondary traumatic stress can still significantly impact the emotional self-regulation of forensic examiners.

## 5.0 Contributions of Authors

The author contributed to each section of this paper. The author reviewed and approved the final work.

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## 7.0 Conflict of Interests

The author disclosed no potential conflict of interest.

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# Empty Nest Syndrome: Loneliness and Social Support among Middle-aged Parents

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**Abstract.** This study explored the dynamics of empty nest syndrome and its relationships with middle-aged parents' feelings of loneliness and the need for social support. As the Philippines was known for having this kind of family values, this study explored the different psychological impacts on Filipino parents when their child or children moved out of their nest. This study also aimed to provide a more thorough knowledge of how individuals navigated this transition, which could ultimately direct the creation of solutions to support middle-aged parents in thriving as they got used to the "empty nest" stage. This study utilized the explanatory-sequential mixed method design. Middle-aged parents (40-64 years old) living in specific municipalities of Laguna were the respondents/participants of the study. The sampling method used was convenience and purposeful homogenous sampling, and G*Power was used to compute the suggested sample size. 74 respondents were gathered for the quantitative phase, and 5 participants for the qualitative phase. Two adopted tests were used for quantitative data gathering, and a researcher-made interview guide was used for the qualitative phase. Statistical tools used were frequency distribution, percentage, weighted mean, and Spearman's Rank Correlation Coefficient or Spearman rho. Thematic analysis was also used in the qualitative aspect of the study. Results showed that middle-aged parents experiencing empty nest syndrome had a low level of loneliness (mean score 1.96) and received high social support (mean score 5.76). A significant negative correlation ($r = -0.680$, $p < 0.001$) existed between social support and loneliness, indicating that increased social support reduced loneliness. The lived experiences of these parents revealed themes such as sadness, coping strategies like social media and spiritual interventions, emotional support from friends, adaptation to social changes, maintaining relationships, and adjusting to new parental roles.

**Keywords:** Empty nest syndrome; Loneliness; Social support; Middle-aged parents; Psychological impacts; Thematic analysis.

## 1.0 Introduction

The transition to an empty nest stage, where children moved out of the family home, represented a significant and often challenging period for middle-aged parents. This phase profoundly impacted their emotional well-being, usually leading to feelings of loneliness and an increased need for social support. Swaim (2022) said that most parents in the post-prenatal stage, where their child begins to leave their home, will allow them to explore adult life without their responsibilities to their child. The empty nest stage, therefore, becomes a crucible for examining the quality of relationships and fostering new connections, both within and outside the family structure. This event can profoundly impact the household dynamics, parental roles, and overall well-being (Bermudez-Hyun, 2023). However, other parents also struggle to adapt and may experience feelings of loneliness, depression, and occasionally loss of purpose. In the context of the Philippines, a country renowned for its strong family values and close-knit family structures, this transition was particularly poignant. According to Goyala (2019), Filipinos are family-oriented, which is integral to their lives. Middle-aged parents, typically between 40 and 64, grappled with a new reality that disrupted their daily routines and emotional equilibrium. (Morin, 2022); Brennan (2023); Psychology Today (n.d.), Sepahvand et al. (2020); Bougea et al. (2020); Ablanque and Singson (2022); and Thibodeau et al. (2020) all mentioned that empty Nest Syndrome is a term used to describe the melancholy and anxiety parents experience when their children leave the nest. Both men and women are affected, and it causes feelings of loss, sadness, concern, grief, wrath, and dread. Additionally, parents may have conflicted emotions of pride in their children's accomplishments.

This study aimed to explore the dynamics of empty nest syndrome and its relationships with middle-aged parents' feelings of loneliness and the need for social support. In addition to adding to the body of knowledge already available on Empty Nest Syndrome, this study also intended to shed light on the distinct difficulties and support systems that middle-aged parents face in a local setting by looking at this phenomenon from a broad viewpoint. Filipino culture strongly emphasizes close-knit family bonds and intergenerational living arrangements. As the Philippines has been known for family values, this study explored the psychological impact on Filipino parents when their child or children move out of their nest.

## 2.0 Methodology

### 2.1 Research Design

This study utilized a mixed-method research approach, specifically the explanatory sequential design. According to Creswell and Creswell (2022), this method entails gathering both qualitative (open-ended) and quantitative (closed-ended) data to address research inquiries or hypotheses. Integrating these two data types in the research design could be achieved through merging, explaining, transitioning from one dataset to another, or incorporating the data into a broader framework. As mentioned by Wasti et al. (2022), a mixed-methods paper assisted in gaining a comprehensive understanding by combining insights gathered from interviews or observations with data on the occurrence of characteristics within a population, as obtained through surveys. Creswell and Hirose (2019) mentioned that the sequential explanatory approach could be utilized when this study aimed to enhance the quantitative results with qualitative insights. Consequently, the qualitative data was employed to interpret and provide additional explanations for the findings obtained from quantitative data analysis. This approach consisted of a two-phase data collection method.

### 2.2 Research Locale

This study was conducted in the province of Laguna, specifically its three municipalities, Los Baños, Calamba City, and Cabuyao City. According to the 2020 Census, the province of Laguna had an overall population of 3,220,412. The population of middle-aged individuals in the Municipality of Los Baños was 24,665, Calamba City had 103,931, and Cabuyao City had 74,437. Aside from considering the convenience of the research locale, the researcher specifically chose these three municipalities as they had many middle-aged individuals in the province of Laguna. Furthermore, these three municipalities offered a rich and diverse setting for studying Empty Nest Syndrome. The varied settings, economic activities, educational institutions, and community structures presented an opportunity to explore the nuances of loneliness and social support among middle-aged parents in different local environments.

### 2.3 Research Participants

The study respondents were middle-aged parents with empty nest syndrome from the selected municipalities of Laguna, such as Los Baños, Calamba City, and Cabuyao City. The respondents of the study had a total of 74 middle-aged parents with empty nest syndrome. The initial sample size that was computed by G*Power was 84. However, due to the lack of respondents in the locale, only 74 individuals could participate in the study. In this study, the respondents should have the following criteria for them to be qualified in this research: a) should have a child or children who left home for some reason, such as going to college or university, working in another place far from home, getting married, deciding to live on their own, etc., and b) must be in the middle-aged stage or 40-64 years of age. On the other hand, the study participants were chosen according to the results of the quantitative data collection. Five (5) participants obtained extreme levels of loneliness and social support from the quantitative results of the study.

**2.4 Research Instrument**

This research utilized research instruments to gather the data and answer this study's objectives. These instruments included two standardized adopted research questionnaires and one researcher-made interview guide question validated by the experts. UCLA Loneliness Scale (Version 3) was used to determine the respondents' loneliness levels. This standardized test is a 20-item scale based on the concept of Daniel Russel. This is designed to determine one's feelings of loneliness and social isolation. The scores on the scale range from 20 to 80. Higher scores indicated a higher level of loneliness. For the UCLA Loneliness Scale (Version 3), it was indicated that the measure was highly reliable, both in terms of internal consistency (Cronbach's alpha ranging from .89 to .94) and test-retest reliability over one year (r = .73). Convergent validity for the scale was indicated by significant correlations with other measures of loneliness. Construct validity was supported by significant relations with measures of the adequacy of the individual's interpersonal relationships and correlations between loneliness and measures of health and well-being.

Another adopted instrument to be used is the Multidimensional Scale of Perceived Social Support which Gregory D. Zimet developed. The MSPSS is a 12-item self-administered questionnaire designed to measure the perceived adequacy of social support from three sources: family, friends, and a significant other. Each of these three dimensions was assessed with four items. Response choices were a 7-point Likert-type scale (1 very strongly disagree to 7 = very strongly agree). This could be interpreted as the mean scale scores falling between 1 and 2.9, categorized as indicative of low support, while scores ranging from 3 to 5 signify moderate support, and scores from 5.1 to 7 indicate high support. While this approach appeared to offer enhanced validity, it may pose challenges if respondents were scarce within any of the specified groups. The Multidimensional Scale of Perceived Social Support and its subscales have shown strong internal consistency across multiple and very diverse subject groups. Across the 13 subject groups evaluated in six studies, coefficient alphas for the total scale ranged from .77 to .92 (mean = .87). Cronbach alphas values ranged from 81 to .93 (mean = .87) for the Family subscale, from .78 to .94 (mean = .88) for the Friends subscale, and from .79 to .98 (mean = .88) for the Significant Other subscale. The construct validity was also established in the MPSS.

For the qualitative data collection, the researcher created a researcher-made interview guide with questions about their lived experiences of having the empty nest syndrome. This consists of eight (8) interview guide questions that helped them describe their lived experiences as middle-aged parents with empty nest syndrome. Five experts in the field validated the questions to ensure their validity. The validators were composed of one (1) research adviser, one (1) research director, one (1) qualitative analyst, one (1) Psychologist and one (1) psychology professor.

**2.5 Data Gathering Procedure**

The quantitative data collection involved administering two adopted tests to the study's target respondents online using Google Forms. The qualitative data was collected via Zoom Meetings and in-person interviews adhering to health protocols during this post-pandemic era.

For the procedure, the researcher first researched the number of middle-aged parents living in Laguna's three municipalities, such as Los Baños, Calamba City, and Cabuyao City. G*Power was used to determine the suggested sample size of the target respondents. A "Call for Respondents" post on social media, which consisted of the criteria of the qualified respondents, was used. After determining the study's respondents, the researcher started the data-gathering procedure.

For the quantitative phase, the researcher included the letter of informed consent to the respondents in Google Forms indicating the background and purpose of the study. The respondents agreed with the informed consent before proceeding to the questionnaire. After agreeing to the informed consent, the researcher administered the two adopted tests, the UCLA Loneliness Scale (Version 3) and the Multidimensional Scale of Perceived Social Support, using Google Forms. After collecting the quantitative data, the researcher chose the respondents with extreme levels in both test results for a follow-up interview for the qualitative data phase.

For the qualitative phase, the researcher asked for the participants' availability and preferred mode of the interview (online or face-to-face). Before conducting the interview, the participants were sent informed consent. Once the informed consent was signed, the researcher and the participant scheduled the interview. The interview was conducted via Zoom Meeting and face-to-face, depending on the participant's availability.

### 2.6 Ethical Considerations

In this study, the privacy and security of the respondents were the utmost priority of the researcher in adherence to Republic Act No. 10173, or the Data Privacy Act of 2012. The ethical guidelines specified in the LCBA Research Manual were also followed. Anticipating these challenges in advance is essential to prevent any potential issues that could emerge during the study. Informed consent was utilized in this research to gather the data from the respondents. The researcher ensured that questionnaires were not used that contained offensive, discriminatory, or inappropriate language that could potentially harm the participants. Preserving the privacy and confidentiality of the respondents was the top priority, primarily for their safety and to prevent the identification of their identities by readers. All the names of the participants were not included in this study. With this, the researcher clearly stated that exclusive access to the respondents' information was granted only to them, and all data and information collected for the study were maintained confidentially and anonymously. Furthermore, individuals considering participation in the research were briefed on the study's procedures and potential risks. Lastly, participants were not obligated to join the research; they retained full autonomy in completing the questionnaire and could opt out of the study without facing any consequences.

## 3.0 Results and Discussion

### 3.1 Loneliness of Middle-Aged Parents with Empty Nest Syndrome

**Table 1.** Level of loneliness of middle-aged parents with empty nest syndrome

| Indicators | Mean | Interpretation | Rank |
|---|---|---|---|
| 1. How often do you feel "in tune" with the people around you? | 3.19 | Sometimes | 3.5 |
| 2. How often do you feel that you lack companionship? | 2.36 | Rarely | 12 |
| 3. How often do you feel there is no one you can turn to? | 2.18 | Rarely | 17 |
| 4. How often do you feel alone? | 2.28 | Rarely | 14 |
| 5. How often do you feel part of a group of friends? | 3.24 | Sometimes | 1 |
| 6. How often do you feel that you have a lot in common with the people around you? | 3.08 | Sometimes | 8 |
| 7. How often do you feel you are no longer close to anyone? | 2.12 | Rarely | 20 |
| 8. How often do you feel that those around you do not share your interests and ideas? | 2.42 | Rarely | 10 |
| 9. How often do you feel outgoing and friendly? | 3.14 | Sometimes | 7 |
| 10. How often do you feel close to people? | 3.18 | Sometimes | 6.5 |
| 11. How often do you feel left out? | 2.14 | Rarely | 19 |
| 12. How often do you feel that your relationships with others are not meaningful? | 2.20 | Rarely | 16 |
| 13. How often do you feel that no one knows you well? | 2.22 | Rarely | 15 |
| 14. How often do you feel isolated from others? | 2.16 | Rarely | 18 |
| 15. How often do you feel you can find companionship when you want it? | 2.51 | Rarely | 9 |
| 16. How often do you feel that there are people who understand you? | 3.22 | Sometimes | 2 |
| 17. How often do you feel shy? | 2.38 | Rarely | 11 |
| 18. How often do you feel that people are around you but not with you? | 2.34 | Rarely | 13 |
| 19. How often do you feel that there are people you can talk to? | 3.18 | Sometimes | 6.5 |
| 20. How often do you feel that there are people you can turn to? | 3.19 | Sometimes | 3.5 |
| **General Assessment** | **1.96** | **Low Level of Loneliness** | |

Table 1 shows that middle-aged parents experiencing empty nest syndrome reported a low level of loneliness, with a mean score of 1.96 on the UCLA Loneliness Scale. This finding suggested that while some parents did experience loneliness, it was not pervasive across the sample. The low levels of loneliness reported by the participants suggested that contrary to some expectations, many parents adapted relatively well to the transition, especially when they had strong social support networks. According to Sissons (2023), the American Psychological Association described loneliness as a cognitive and affective pain or unease resulting from being alone or believing that one is alone. Loneliness can affect people of all ages, and finding connections and support may help to alleviate those feelings. Chai (2022) also mentioned that loneliness is a universal emotion that people may experience several times. Factors include lack of companionship, being left out and disconnected from someone close to them or being far away from family and close friends. Furthermore, according to an article by Jargon

(2022), the middle-aged stage of life can feel quite busy and isolated. Balancing work and family responsibilities often leaves little room for cultivating friendships, especially for women.

### 3.2 Social Support of Middle-Aged Parents with Empty Nest Syndrome

**Table 2.** Level of social support of middle-aged parents with empty nest syndrome

| Indicators | Mean | Interpretation | Rank |
|---|---|---|---|
| 1. A particular person is around when I am in need. | 6.00 | Strongly Agree | 3.5 |
| 2. There is a special person with whom I can share joys and sorrows. | 6.03 | Strongly Agree | 2 |
| 3. My family tries to help me. | 6.03 | Strongly Agree | 3.5 |
| 4. I get the emotional help and support I need from my family. | 6.05 | Strongly Agree | 1 |
| 5. I have a special person who is a real comfort source. | 5.89 | Strongly Agree | 6.5 |
| 6. My friends try to help me. | 5.46 | Strongly Agree | 10 |
| 7. I can count on my friends when things go wrong. | 5.28 | Strongly Agree | 12 |
| 8. I can talk about my problems with my family. | 5.70 | Strongly Agree | 8 |
| 9. I have friends with whom I can share my joys and sorrows. | 5.62 | Strongly Agree | 9 |
| 10. A special person in my life cares about my feelings. | 5.81 | Strongly Agree | 7 |
| 11. My family is willing to help me make decisions. | 5.89 | Strongly Agree | 6.5 |
| 12. I can talk about my problems with my friends. | 5.34 | Strongly Agree | 11 |
| **General Assessment** | **5.76** | **High Social Support** | |

Regarding social support, Table 2 showed a high level of support, with a mean score of 5.76 on the Multidimensional Perceived Social Support Scale. This high social support indicated that many parents had strong social networks that provided emotional, instrumental, and informational support during this transitional phase. The American Psychological Association (2021) mentioned that having social and emotional support is advantageous to an individual. This could help improve their autonomous problem-solving skills by elevating their self-worth and self-reliance. Additionally, Raypole (2023) stated that emotional support can help a person feel less alone, and it is not always easy to give this kind of support to other people due to their different circumstances. This kind of support can also help people with mental and physical conditions improve their quality of life. A study by Mohd et al. (2019) revealed that factors such as being with the whole family, having a wide range of social networks, often bonding with loved ones, having emotional and social support, and being supported by the whole family could be linked to reducing symptoms of loneliness and depression in Asian adults.

### 3.3. Relationship Between Social Support and Loneliness Among Middle-Aged Parents with Empty Nest Syndrome

**Table 3.** Analysis of the relationship between social support and loneliness among middle-aged parents with empty nest syndrome

| | Social Support | p-value | Remarks | Decision |
|---|---|---|---|---|
| **Level of Loneliness** | -.680 | <0.001 | Significant | Reject Ho |

Table 3 shows that higher levels of social support were associated with lower levels of loneliness. The quantitative data thus suggested that social support played a crucial role in mitigating the loneliness experienced by middle-aged parents during the empty nest stage. A study by Gan et al. (2020) found that perceived social support is related to less loneliness, which may ultimately result in improved life satisfaction. The findings also showed that social support and loneliness mediated the participant's life satisfaction. Another study by Zhang and Dong (2022) found a low level of loneliness in people with high levels of social support. These results indicate that increasing social support could be a useful strategy for lessening loneliness, which could have some guiding and reference value for enhancing mental health.

### 3.4 Lived Experiences of Middle-Aged Parents

The qualitative phase of the study provided additional insights into the lived experiences of middle-aged parents. Thematic analysis of the interview data revealed several themes.

***Worried and Feelings of Sadness***

The theme, Worried and Feelings of Sadness, was derived from the five participants' responses on how they described their feelings after their child /children had left home. These themes appeared frequently in the respondents, capturing the emotions that the participants were going through while adjusting to being apart from their loved ones—especially their children. Based on the responses showed a deep sense of worry and sadness stemming from the impending separation. Participant 1 and 2 expressed concern about their child's departure, highlighting the conflicting emotions of sadness over their absence and relief over their newfound independence.

One participant stated, "*Of course, the worry comes first because he is very close to me… a small quantity of a mama's boy. ... it is not happy because he is just starting to be away from me. However, of course, I also felt sad because you do not know if he is always in our house. However, I also felt relieved because he is living independently now*".

It also emphasized their anxiety as a parent, especially considering the vulnerability of their daughter in a new environment. These sentiments were also shared by Participant 3, who articulated the fear of potential dangers their child may encounter and stated,

"*At first, as you said, the first feeling. Sadness, fear, not because I do not trust my child, but because of what might happen… who they might be with*".

Moreover, the subordinate theme of "Worried" was recurrent throughout the responses, reflecting the pervasive anxiety experienced by the participants. Participant 4 underscored their worries, particularly regarding their youngest child's safety, while also acknowledging the bittersweet nature of their independence and stated:

"*There are worries because my youngest is a girl. When they are far from you, you worry somehow… I am also happy because they will learn on their own*".

Participant 5 shares a different perspective, with the subordinate theme "Used to this Feeling of Being Alone," noting their adaptation to solitude due to previous separations, yet the underlying worry still lingers. The participants' displays of fear result from their deep love, worry for their kids' welfare, and separation sadness. This complex emotional landscape highlights the importance of family ties and the difficulties of letting go. This theme emphasizes the deep attachment between parents and children and the emotional challenges associated with significant life transitions, such as children leaving home for the first time. Understanding the psychological impact of these transitions is essential for developing effective interventions and support systems that promote smoother adjustments for parents and children.

According to Morin (2022), Empty Nest Syndrome refers to the melancholy, and sometimes distress, that parents experience after their children leave home. It affects both men and women and causes feelings of loss, sadness, worry, grief, anger, and dread. An article by Psychologs (2023) mentioned that parents experience numerous emotions as their children pursue their educational journey and venture into the world beyond home. Witnessing their children's educational and personal advancements filled them with pride and a sense of accomplishment, as they perceived each milestone as a step towards independence and self-discovery. However, alongside these positive sentiments, parents also grappled with feelings of anxiety, particularly when their children study in foreign lands. Concerns about their safety, adaptation to new cultures, and exposure to different influences weighed heavily on their minds. Additionally, there was a deep-seated fear of growing emotionally distant from their children as they became absorbed in their studies and lives. Finally, Boctoy (2023) mentioned that Empty Nest Syndrome encompassed several stages parents experienced when their child moved out of the home. Initially, there was a sense of denial, where parents hoped for frequent visits but realized their home was no longer the center of their child's life. This led to feelings of grief and loneliness as parents grappled with a sense of aging and loss of purpose. Recognizing these emotions could be vital in overcoming the negative effects. As time passed, there was acceptance and relief, where parents understood the benefits of separation and took pride in their child's independent life. There is a stage of joy and freedom as parents embrace newfound opportunities and enjoy greater personal freedom, financial stability, and time for their interests and relationships. This supported the results from the quantitative phase that while the parents generally felt that people understood them, there were still days that they felt lonely due to their child's departure. These systems would be designed to cater to the emotional requirements of families, thereby nurturing resilience, promoting well-being, and cultivating robust familial interactions amidst substantial life transitions.

***Engagement, Communication, Social Media, and Spiritual Intervention***

This theme emerged from the responses of the five participants about the strategies that helped them cope with their feelings of loneliness. The responses highlighted the importance of being engaged in employment or productive activities as coping mechanisms. The subtheme "Engaging themselves to Work" from Participant 1 stated,

"*I did not do much because I also had work, so I did not experience extreme sadness because I had other distractions… my work became my form of leisure*," which means they found support in their work, viewing it as a form of leisure or distraction from negative emotions.

This suggested that engaging in meaningful work could provide a sense of purpose and fulfillment and serve as a buffer against stress and loneliness. Engaging oneself in work could become a significant coping mechanism for middle-aged parents facing an empty nest. With fewer responsibilities at home, parents could immerse themselves more fully in their careers, viewing work as a distraction and source of fulfillment to fill the void left by their children's absence. Participants 2 and 3 highlighted the subtheme "Constant Communication," particularly through messaging apps, as a vital coping strategy. They needed to know the whereabouts of their loved ones, especially in potentially dangerous areas, emphasizing the role of communication in providing reassurance and a sense of security. This indicated that maintaining regular contact with others could help alleviate anxiety and fear, especially in uncertain circumstances.

Participant 2 stated, "*I always talk to them on Messenger… especially at night. I want to know where they are if they have gotten home*."

Constant communication, whether through messaging apps, phone calls, or video chats, became essential for maintaining connections with adult children who have left the nest. Parents found comfort in staying updated on their children's lives, offering support from a distance, and feeling reassured about their well-being. Another coping strategy stated by Participant 4 was using social media while engaging in other physical activities, which explains the subtheme "Usage of Social Media and Engaging to Farming Activities." Social media could play a similar role in keeping parents connected to their adult children, providing glimpses into their activities, milestones, and experiences. Platforms like Facebook or Instagram have allowed parents to stay involved in their children's lives, although virtually, and share moments of joy and pride. The last subordinate theme from Participant 5 was "Spiritual Intervention."

As mentioned, "*…...In a way, I cannot be with them anymore, but I read the Bible as my outlet because when they got married, it was during the pandemic*."

Spiritual intervention could offer comfort and guidance to parents navigating the transition to an empty nest. Turning to faith, prayer, or religious practices could provide comfort during times of loneliness and uncertainty, offering a sense of hope and purpose beyond the immediate challenges of adjusting to an empty household. Overall, the subordinate theme highlights the complex nature of coping strategies and the importance of addressing individual needs and preferences in promoting resilience and emotional well-being. This also supports the quantitative results wherein coping strategies highlighted in the original context can be highly relevant to middle-aged parents experiencing empty nest syndrome, offering various avenues for managing feelings of loss, maintaining connections with adult children, and finding fulfillment and meaning in this new stage of life.

According to Margolis (2023), the workplace holds significant potential in addressing the loneliness crisis. Purposeful initiatives like the Surgeon General's "Inside Scoop" can foster authentic colleague connections. Having a close friend at work enhances commitment, productivity, and overall contentment with one's job. Encouraging interpersonal bonds at work enhances employee happiness and positively impacts performance. Similarly, according to Robinson and Sheldon (2024), if one is hesitant about initiating spontaneous phone calls, especially during times of loneliness, one can send a text to arrange a suitable time for a call. Alternatively, establishing a weekly schedule for phone conversations with a friend or family member could provide a comforting routine to anticipate during lonely moments. Also, engaging in a hobby or pursuing an interest could lessen feelings of isolation while reinforcing one's sense of purpose and significance. Correspondingly, Saltzman et al. (2020) cited that people often use social support as a coping mechanism during times of crisis. This presumption depends on preexisting good relationships or the availability of technology to preserve these connections. Finally, a study by Adamczyk et al. (2022) discovered that reduced satisfaction with social connections and increased daily spiritual experiences correspond to lessened feelings of family and social loneliness. Daily spiritual experiences' positive impact on life's purpose specifically pertained to loneliness within specific domains and became evident among lower satisfaction levels with social and intimate relationships.

***Adaptation and Adjustment to Various Aspects of Social Interaction***

Adaptation and Adjustment to Various Aspects of Social Interaction was the theme that emerged from the participants' statements. They discussed how their social lives had been impacted by various factors such as work commitments, distance, and technological advancements. Despite the challenges of being an empty nester, the participants demonstrated resilience and flexibility in maintaining social connections and routines. The subordinate theme derived from the responses of Participants 1 and 2 was the "Socially Active," which both exhibited a pattern of remaining socially active despite their respective circumstances.

Participant 1 stated, "*It is the same... I am still friendly with everyone. Of course, when you have work, you have many companions. Especially my colleagues. We always go out, eat here, and hang out there when we meet. it's always work,*" emphasizing the importance of maintaining friendships and socializing with colleagues, while Participant 2 mentioned "*Social life... still normal. Just the same. On weekends, I pick them up. Moreover, we always go to the mall. I do not like swimming, just the mall. My spouse and I, the two of us, eat out. When we pick up the others, we go to the mall first. Just the mall, hahaha.*"

These responses suggest that social engagement remained a priority for these individuals, contributing to their overall well-being and sense of connection. Another response highlighted a focus on work as a distraction or engagement. Participants expressed contentment with their job and implied that the demands of work help lessen feelings of loneliness or detachment. This theme suggested that individuals may find support or fulfillment in immersing themselves in their professional responsibilities, thereby mitigating the impact of social isolation.

Participant 3 said, "*Because I am here, I have work. So I do not have time to think about it too much. Because of the amount of work, I have here, it is like it entertains me*."

Engaging themselves in work can serve as a distraction for middle-aged parents coping with empty nest syndrome. On the other hand, Participant 4 acknowledged the role of technology, particularly social media platforms like Messenger, in linking the distance between themselves and others. Participants perceived technology as a compensatory mechanism for maintaining social connections despite physical separation. As stated,

"*The distance does not affect much... it is like things like Messenger in technology compensate it*."

This indicated the importance of digital communication tools in facilitating social interaction and reducing feelings of loneliness. Technology, particularly social media platforms, could play an important role in bridging the gap between middle-aged parents and their children who have left home. Parents have used social media to stay connected with their children, sharing updates, photos, and messages to maintain a sense of closeness despite physical distance. Another response reflected a sense of acceptance towards their situation. Despite experiencing prolonged separation from family due to work abroad, Participant 5 expressed a lack of significant emotional impact. This theme suggested that individuals became accustomed to certain social dynamics or conditions, leading to a sense of normalization or adaptation.

"*It is still the same. It is like I have been far from my family abroad for a long time. So, it feels like nothing has changed. It is like working, coming home late at night*," as stated by Participant 5.

Some middle-aged parents may have already adjusted to the empty nest phase of life, particularly if their children have been away from home for an extended period. They may have developed coping mechanisms or routines that have helped them navigate feelings of loneliness or loss, ultimately reaching a point of acceptance or normalizing their circumstances. To support this, Poudel et al. (2020), several studies revealed that social support can be perceived from a variety of sources, such as family, friends, partners, and teachers, that is related to positive outcomes. Munyan (2021) stated that social support refers to people who frequently interact with and are familiar with a person or thing. Interpersonal relationships are the foundation of social stability and are essential to mental health. Social support can greatly influence the individual's mental health on their physical, interpersonal, and psychological level. If the individual lacks social support, it could also negatively affect their mental and physical health. Finally, according to an article by Psychology Today (n.d.), empty nest syndrome represents a chance to revamp one's life after raising children to cater more to adult priorities. Although parents experiencing empty nest syndrome felt the absence of their children, they also experienced a degree of liberation from the daily duties of child-rearing. This newfound freedom often allowed them to redefine or rejuvenate their identities. This also supported the quantitative results, which showed that middle-aged parents can still be sociable despite their situation as empty nesters. By recognizing the challenges and employing various coping strategies, these parents can effectively navigate this transitional period and find fulfillment and purpose in their lives beyond parenthood.

***Emotional Support, Companionship, and Connection From Friends and Loved Ones***

The theme, Emotional Support, Companionship, and Connection from Friends and Loved Ones was derived from the participants' statements about the social support they received during the empty nest stage of their lives. The responses revealed the importance of the different kinds of social support from significant people in their lives. The constant presence of a supportive friend who listens and helps whenever needed emphasizes the importance of having someone to share thoughts and experiences with. One participant stated,

"*For me... I always have someone with me. He is the one I always talk to; whenever I need something, he helps me. He is the only one who listens to me when I share something*."

Participant 2 expressed the value of companionship through simple activities like sharing a meal, indicating that even small gestures of togetherness could bring happiness. It was also shared how their bond with colleagues provides emotional support despite limited opportunities for outings, emphasizing the importance of conversation and shared experiences during breaks. Other participants shared similar sentiments, emphasizing friends' availability for companionship and support in times of need.

The other participant mentioned, "*I have many friends here, those I work with on the farm. When I need something, I have someone to talk to and be with... like that*."

Finally, Participant 5 discussed finding support in various social circles, including family and friends from Bible study, highlighting the role of these connections in coping with feelings of solitude. This describes the essential role of a supportive friend in providing emotional support. Their emphasis on having a constant companion who listens and actively assists when needed highlights the profound impact of interpersonal relationships on emotional well-being. This indicates the significance of having someone with whom one can share joys, sorrows, and everything in between, demonstrating how genuine connections can serve as pillars of strength during challenging times. These shared experiences of middle-aged parents with empty nest syndrome also foster a sense of belonging and purpose, helping parents navigate the newfound freedom and redefine their identities outside their caregivers' roles. Middle-aged parents may grapple with empty hours once filled with parental responsibilities. However, parents may also seek support in diverse relationships, including friendships, extended family, and community groups. Engaging in social activities, volunteering, or pursuing personal interests can help fill the void left by the empty nest and provide a sense of purpose and fulfillment. These responses demonstrate the nature of emotional support and relationships from friends and family. This also supports the quantitative data results, which revealed that despite the challenges middle-aged parents face when their children leave home, they feel well-supported by their social networks. It emphasizes how interpersonal relationships support people's mental health, highlighting the basic human desire for empathy, understanding, and companionship.

According to Sourjah (2021), instrumental support encompassed all the tangible help individuals received from others. It manifested as selfless assistance or providing useful items that alleviate their concerns and enhance their well-being. Contrary to the misconception that instrumental support lacked emotional depth when offered by family and friends, it carried significant emotional weight for the recipient. Receiving instrumental support ultimately had a positive impact on one's mental well-being. In addition, Gümüşsoy et al. (2020) reiterated that social support includes the emotional and practical support one receives from their social network and how well they employ it. It is also mentioned that much social support that was obtained while pregnant reduced anxiety. In other words, social support—from peers, organizations, communities, and family—helped people feel less stressed and improved their mental and physical health.

***Maintaining Stable Relationships***

This theme showed the importance placed on the participants in keeping their relationships steady and consistent despite various circumstances or changes in their lives. Each participant's response reflected their efforts to uphold stability and continuity in their interactions with others. The participants emphasized maintaining their same friendly demeanor despite any sadness or loneliness they might have experienced. Their commitment to remaining cheerful and sociable suggested a conscious effort to preserve the stability of their relationships.

One participant stated, "*It is just the same... because I do not think much about the sadness, so my interactions with others remain the same. I am still cheerful and friendly*."

Most participants shared the same sentiments, expressing that they remained unchanged in their interactions with others. This consistency implied a desire to maintain stable and reliable relationships without allowing external factors to disrupt them. It also highlighted the role of busyness in sustaining their relationship with someone despite physical distance. By keeping themselves occupied with work, they could mitigate loneliness and maintain a stable connection with the other person.

In maintaining stable relationships, middle-aged parents facing empty nest syndrome might have consciously prioritized the stability of their relationships with their spouse, friends, and other family members. With their children no longer living at home, parents might have sought to strengthen and maintain connections with their remaining family members and friends to fill the void left by their children's departure. One participant stated,

"*No, nothing has changed. It is the same. How I was before is how I still feel towards others*."

By upholding a consistent and positive demeanor, parents might have strived to reassure themselves and others that they were adapting well to this new phase of life and could still maintain fulfilling relationships outside of their role as parents. Middle-aged parents may also find solace and support in stable relationships with their adult children, even if they no longer live at home. Parents may maintain regular communication with their children and stay involved despite the physical distance, thereby preserving a sense of connection and continuity in their parent-child relationships. The results support the quantitative results that highlight the vital role that supportive relationships play in promoting overall well-being and mental health. By understanding and nurturing these social connections, individuals may be better equipped to fight loneliness and experience greater fulfillment. It is also about prioritizing quality over quantity in social interactions, investing time and effort to build strong and supportive connections with others, and being there for those experiencing loneliness or social isolation.

To support this, Chung and Kim (2023) mentioned that social support and a feeling of community were found to be favorably correlated with age-friendly environments. Reducing loneliness in an age-friendly setting requires social support. A study by Asghar and Iqbal (2021) indicated that social connectedness and interpersonal support were considerably favorably correlated and that hopelessness and loneliness were negatively correlated with both. Conversely, lower levels of interpersonal support were found to be a major predictor of greater hopelessness in adults.

***Various Changes in the Parent-Child Relationship***

The main theme of the participants' responses was "Various Changes in the Parent-Child Relationship." This theme described the evolving dynamics and shifts in roles, responsibilities, and interactions between parents and their children. The participants highlighted the aspects of parental support and financial independence. The transition from providing financial support to their child to recognizing their child's ability to sustain themselves financially was discussed. One participant stated,

"*When he left, I did not ask for any salary because I had a job. Since he started working, I have not given him any money because he already has a job...*"

This reflected a significant change in the parent-child relationship, where the child became more self-reliant, leading to adjustments in the parental role. Another participant mentioned,

"*It is not an obligation. If they give, okay. If not, no problem*."

This perspective emphasized that children were not obliged to help their parents financially. It showed a shift from traditional beliefs that children should provide financial support for their parents as they age. The participants acknowledged their child's employment status and refrained from providing financial assistance, recognizing their child's ability to support themselves. This highlighted a supportive parental attitude towards fostering financial autonomy in their children. One response reinforced the theme of supportive parents while indicating a shift towards providing urgent assistance rather than regular financial support. This suggested a deeper understanding of parental support, focusing on addressing immediate needs rather than continuous provision. As stated,

"*As long as they need something, they must tell me. It is manageable to go to them if something urgent or needs to be given to them*."

This implied the ongoing parental instinct to protect and care for their children, even as they transitioned into adulthood. Middle-aged parents might find relief in providing immediate assistance to their children when needed, reaffirming their role as nurturers and providers, though in a different capacity. The response from Participant 2 showed the subtheme of vigilant parents who closely monitor their children's activities and well-being, even when they are away. The participant stated,

"*I check more often if they are already in their dorm... I also make sure their GCash account has money because if they need something, I can send it right away,*" which demonstrated a proactive approach to parental care and protection by taking steps like verifying their child's whereabouts and making sure they had enough money.

This indicated a trend toward more parental supervision and engagement in their kids' lives, especially in the digital age when surveillance devices were easily accessible. With their children living independently, middle-aged parents may constantly worry about their well-being and safety, especially without daily interactions and oversight. On the other hand, Participant 5 explained the subtheme of evolving parent-child bonding dynamics. The participant reflected on the transformation of their relationship with their child following significant life events, such as marriage. The shift from regular bonding activities to a redefined dynamic emphasized the impact of life transitions on the parent-child relationship and the need for adaptation and adjustment to maintain connection and closeness. The statement,
"*We no longer have our bonding moments eating out. Because now he is married. Now he bonds with his spouse. It is not like when we were together, and we bonded outside, even without any occasion*," emphasized the emotional impact of empty nest syndrome on middle-aged parents.

As their children embark on their life journeys, parents may experience a profound sense of loss and nostalgia for the close bonds they once shared. The absence of regular interactions and shared experiences may prompt middle-aged parents to reevaluate their relationships with their children and seek new ways to connect and maintain closeness despite physical distance. The themes and subthemes discussed in the context of various changes in the parent-child relationship offer valuable insights into the experiences of middle-aged parents facing empty nest syndrome. This also supports the quantitative results, which reveal the complex understanding of loneliness among middle-aged parents; on average, parents are experiencing a low level of loneliness. This suggests that many feel adequately supported and connected within their social circles or family networks. However, the results also highlight a significant difference between feeling understood by others and lacking companionship. By recognizing and understanding these dynamics, parents can navigate this transitional phase with greater awareness, resilience, and emotional support.

According to Mansoor and Hasan (2019), children somehow choose to move away from their family homes for reasons like marriage, pursuing higher education, or advancing in their careers. The outcomes suggested that parents commonly feel a sense of relief when their children leave home as their parental duties conclude. Consequently, this situation enabled couples to revive and experience a more affectionate relationship. These results could be explained by the fact that parents came to terms with the inevitability of their children leaving the nest to establish their own families and pursue their professional paths.

***Various Adjustments and Strategies in Life***

The main theme from the participants' responses is "Various Adjustments and Strategies in Life." This theme encompassed how individuals cope with the challenges and changes they encounter. Participants 1 and 4 highlighted the importance of occupation and companionship in fighting feelings of loneliness. It was mentioned that

"*I have a job that keeps me occupied... and I always have someone with me. That is why I do not think much about feeling lonely*," which means having a job that keeps them occupied and having constant companionship, which served as a distraction from negative emotions.

This distraction could provide a sense of purpose and fulfillment, helping parents cope with loneliness. This response suggested that engaging in meaningful activities and having social support were essential strategies for adjustment. On the other hand, one participant expressed a sense of normalcy in their life, indicating minimal adjustments despite facing challenges. Their casual attitude toward adjustments suggested resilience or adaptability to circumstances, viewing them as part of everyday life rather than significant disruptions. As stated by Participant 2,

"*How did I adjust? I did not; it was just normal. Like... How did I adjust? I did not. It just feels normal to me. I am okay. I am happy.*"

Another response highlighted the engagement in social and religious activities as a strategy for adjustment. Participant 5 participated in various activities throughout the week, keeping themselves busy and fulfilled, thus reducing feelings of boredom or loneliness. This implied that middle-aged parents may find support and companionship through participating in community activities, joining clubs or groups, or attending religious services. These activities provide opportunities for social interaction, support, and a sense of belonging.

These themes highlight the importance of resilience and adaptability in navigating life's transitions. By embracing change, seeking support, and finding new sources of meaning and purpose, middle-aged parents can embrace the empty nest phase of their lives with optimism and resilience. The empty nest allows parents to reevaluate their priorities, pursue their interests, and invest in their well-being. By embracing this newfound freedom and autonomy, middle-aged parents can proceed on a journey of self-discovery, fulfillment, and renewed purpose beyond their roles as caregivers. To support this, Ablanque and Singson (2022) said that as parents reach the empty nest stage, they frequently face several difficulties that make them feel exposed on multiple levels. However, they also discover chances to create coping strategies to get through this new stage of life between these obstacles.

***Parental Challenges and Emotional Adjustment***

The theme, Parental Challenges and Emotional Adjustment emerged from the various struggles and emotional adjustments experienced by parents due to the absence or separation from their children, particularly in the context of modern communication dynamics and changing family structures. For middle-aged parents, the departure of their children marked a significant transition in their lives, prompting them to confront feelings of loss, loneliness, and uncertainty about their roles and identities outside of parenthood. Moreover, the themes highlighted the importance of acknowledging and addressing the emotional needs of middle-aged parents during this transitional period. Empty nest syndrome was not merely a temporary phase but a profound emotional adjustment that required support, understanding, and self-care. By recognizing and validating their sadness and longing, middle-aged parents could begin to navigate this transition with greater resilience and self-awareness. Participant 1 showed a sentiment of not dwelling too much on sadness despite missing their child, reflecting a common struggle of balancing emotions amid separation. Meanwhile, Participant 4 shared the same sentiments and acknowledged the shift in dynamics from immediate, personal interactions to virtual communication, emphasizing the longing for the physical presence of their children.

"*Maybe sometimes. The situation is just different. In other words, the situation has changed because when they are beside you, it is immediate, and there is a personal touch. Now, it is via messenger or just verbal... Sometimes you cannot help but miss them, but that is how it is,*" as stated.

Meanwhile, responses from Participants 2 and 3 showed the worry and uncertainty that often accompany parental separation, particularly during challenging times like the pandemic. Their concern about the well-being of their child and the difficulty in discerning their true state due to distance underscored the emotional toll that parental separation could take. It also showed the emotional vulnerability of middle-aged parents grappling with empty nest syndrome. Concerns about their children's safety, happiness, and success in the absence of direct parental supervision could heighten parental anxiety and contribute to feelings of distress and apprehension. Participant 3 stated

"*You know, what really bothers me is not knowing if they are okay or not. Maybe they are not okay but don't open to me because they don't want me to worry. I'm not sure, I don't know if they are eating properly because of this and that. That's it, during the pandemic. That's when I really worried a lot*."

Finally, one participant's reflections on missing routine activities and bonding moments with their child strongly resonated with the experiences of parents navigating empty nest syndrome and stated

"*Of course, I miss my child whom I served every morning, cooked their meals, prepared their things for work, did their laundry, and so on. Of course, I miss those tasks now that they are married because I no longer hang their uniform for work… I miss that kind of routine with my child now that they are married*"

The absence of familiar routines, such as preparing meals, doing laundry, and engaging in leisure activities with their children, could intensify feelings of emptiness and nostalgia for middle-aged parents. To summarize, parental challenges and emotional adjustment, coupled with feelings of sadness and longing, emphasize the profound impact of empty nest syndrome on middle-aged parents. By acknowledging the emotional complexity of this transition, fostering meaningful connections with their adult children, and embracing opportunities for personal growth, middle-aged parents can navigate this period of change with resilience, grace, and a sense of optimism for the future. According to the quantitative results, while the parents generally feel that people understand them, a notable subset still experience a sense of loneliness due to a perceived lack of companionship. This could be attributed to busy schedules, geographical distance from friends or family, or life transitions.
To support this, a study by Riswanaty and Bongyoga (2021) revealed that the individual's empty-nest syndrome has an impact on aspects of family life quality, particularly emotional well-being, which is characterized by the subject's feelings of melancholy 1-3 months following the child's departure. Other elements, such as family relations, parenting, and physical and material well-being, vary in each subject. According to Bougea et al. (2020), empty nest syndrome has been linked to various things. Different cultural backgrounds of men and women deal with the empty nest phase differently and have different coping techniques. Depression, behavioral problems, and cognitive decline are all signs of emotional suffering brought on by the empty nest.

### 3.5 Proposed Action Plan

Table 4 presents the proposed Building Stronger Connections: Supporting Middle-Aged Parents in Transition Action plan, which is composed of three areas of concern: Loneliness and Social Support Assessment, Awareness Of The Lived Experiences Of Middle-Aged Parents With Empty Nest Syndrome, and a Personal Growth and Exploration Program.

**Table 4.** Proposed action plan

| Area of concern | Objectives | Activities/ Strategies | Person involved | Time frame | Source of fund | Success indicators |
|---|---|---|---|---|---|---|
| Loneliness and Social Support Assessment | To identify specific areas of loneliness and social isolation experienced by parents. | Psychological testing and assessment (individual and/or group)<br><br>Group therapy sessions/peer facilitation | Psychologist/ Counselor<br><br>Middle-aged Parents<br><br>Government Representative | Every six months | DSWD<br><br>Municipal Budget | Several middle-aged parents have successfully undergone psychological testing and assessment. |
| Awareness of the lived experiences of middle-aged parents with empty nest syndrome | To raise awareness on the stages and experiences of middle-aged parents once they reach the empty nest stage of their lives. | Webinar: Empowering Empty Nesters: Navigating Empty Nest Syndrome with Resilience and Community Support | Middle-aged parents<br><br>Family Members<br><br>Mental Health Professional | Every 1st of June (World Parents' Day) | DSWD | A number of middle-aged parents and their children successfully joined and learned in the webinar to become aware of the empty nest syndrome. |
| Personal Growth and Exploration Program | To encourage self-exploration and personal growth among middle-aged parents. | The seminar workshop focused on self-discovery exercises such as journaling, vision boarding, and guided reflection. | Middle-aged parents<br><br>Family Members<br><br>Mental Health Professional | Annual Activity | DSWD<br><br>Municipal Budget | A number of middle-aged parents and their children successfully joined and learned in the seminar workshop. |

***Loneliness and Social Support Assessment***

This program addressed loneliness and social isolation among middle-aged parents through psychological assessment and personalized interventions. Its objective was to pinpoint specific areas of loneliness experienced by parents and then offer tailored support to enhance their social connections. Activities within the program included psychological testing and assessment to understand the extent of loneliness and group therapy sessions or peer facilitation to provide a supportive environment for parents to share experiences and learn coping strategies.

***Awareness of the Lived Experiences of Middle-Aged Parents with Empty Nest Syndrome***

The program aimed to shed light on the often-overlooked phenomenon of empty nest syndrome experienced by middle-aged parents. Through a webinar titled "Empowering Empty Nesters: Navigating Empty Nest Syndrome with Resilience and Community Support," the program intended to offer a platform for discussion and support. By involving middle-aged parents, family members, and mental health professionals, the initiative recognized the multi-faceted nature of this transition. It sought to provide insights into the stages and experiences encountered by parents as they navigated this significant life change, ultimately fostering resilience and community connection in the face of empty nest syndrome.

***Personal Growth and Exploration Program***

The program was designed to address the personal growth needs of middle-aged parents by facilitating self-exploration and development beyond their roles as caregivers. Participants were encouraged to embark on a journey of self-discovery and fulfilment through a seminar-workshop featuring activities like journaling, vision boarding, and guided reflection. The program acknowledged the importance of holistic support in fostering individual growth and a sense of purpose by involving middle-aged parents, family members, and mental health professionals. It sought to create a supportive environment where participants could explore their identities, aspirations, and values, ultimately empowering them to lead more fulfilling lives beyond their parenting responsibilities.

## 4.0 Conclusion

The research identifies specific aspects of parental loneliness, highlighting the vital function that family support plays throughout the empty nest syndrome phase. It proves that social support and loneliness significantly correlate negatively, emphasizing the value of strong social networks. Understanding parents' real-life experiences helps us better grasp coping mechanisms and the need for emotional support. The suggested mental health program provides middle-aged parents with a workable solution to their loneliness. To further improve support networks, future research should concentrate on longitudinal studies, various family dynamics, cultural variances, digital social networks, and the assessment of mental health programs.

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The author solely contributed to each section. The author reviewed and approved the final work.

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# Development and Implementation of Training Resource Package for School Heads

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**Abstract.** This study aimed to develop a training resource package and implement and evaluate the training program for Western Visayas school heads based on their priority competency needs, according to the Philippine Professional Standards for School Heads (PPSSH). Using the Analysis, Design, Development, Implementation, Evaluation (ADDIE) model, this descriptive developmental study identified the priority competency needs of school heads, assessed the quality of the Training Resource Package, measured participants' learning before and after the program, and evaluated their satisfaction with the training sessions, venue and accommodation, program management, and resource persons. Statistical analyses included mean and Wilcoxon Signed Rank Test with a significance level 0.05. Results showed that school heads' needs covered learning assessment, teaching standards, school planning, professional development, learner discipline, school facilities, learning environment, teacher performance feedback, and learner achievement. A Training Design and Proposal encompassed program title, description, prerequisites, duration, management level, target participants, budget, activity requirements, funding sources, rationale, objectives, outputs, training methods, and action plan. The Training Resource Package was rated high quality (M=3.0). Among 104 randomly selected school heads from 21 School Divisions in Region VI, participants' competence increased from "highly competent" (M=66.99%) to "very highly competent" (M=96.19%) post-training, with a significant improvement ($p=0.00 < \alpha$). Participants reported strong satisfaction with sessions (M=3.99), program management (M=3.99), venue (M=3.99), accommodation (M=3.98), and resource speakers (M=3.99). It is recommended that school heads should apply the competencies acquired from the training program to improve instructional supervision practices, enhance school leadership, and advocate for opportunities for teachers and staff to participate in similar training programs to foster continuous growth and improvement within the school community. Furthermore, as instructional leaders, school heads should design and implement relevant and needs-based professional development programs for teachers.

**Keywords:** Training implementation; Training evaluation; Training resource package; School heads; ADDIE model; Western Visayas.

## 1.0 Introduction

Republic Act 9155, the Governance of Basic Education Act of 2001, mandated that school heads function as instructional leaders and administrative managers. Furthermore, Republic Act 10533, the Enhanced Basic Education Act of 2013, required school heads or principals to possess the skills necessary to fulfill their roles as academic, administrative, and community leaders within the Department of Education (DepEd) (RM 339 s. 2021). The DepEd underscored the importance of quality educators and school leaders in achieving high-quality student learning outcomes, as detailed in the Philippine Professional Standards for Teachers, School Heads, and Supervisors (DO 42, s. 2017; DO 24, s. 2020; DO 25, s. 2020). DepEd Undersecretary Mateo stated, "Quality learning outcomes are produced by quality teachers, who are supported by effective school leaders" (as cited in DepEd, 2020).

DepEd Order No. 24, s. 2020, titled National Adoption and Implementation of the Philippine Professional Standards for School Heads (PPSSH), set professional standards for school heads. These standards guided the processes of recruitment, selection, performance appraisal, rewards, recognition, talent management, and professional development programs, thereby ensuring the delivery of quality education and the establishment of a robust human resource system. The PPSSH aimed to support school heads in enhancing teacher quality and student achievement, promoting professional development through lifelong learning, and encouraging reflective practices for continuous professional growth. As primary leaders within the educational system, school heads were responsible for the smooth operation of schools and implementing all school-based education programs and projects in alignment with DepEd's vision and mission. Senol (2020) highlighted the importance of continuous and sustainable professional development for school principals. This development encompassed acquiring current knowledge, skills, values, and attitudes; understanding technological advancements; managing and implementing educational reforms; and continuously improving student and teacher learning, policy implementation, and school community health.

For over two years, aside from the School Heads Academy designed to prepare aspiring educators for leadership roles, the Regional Office in Western Visayas has not delivered significant training interventions or programs to address the professional needs of school heads. This gap prompted the researcher to develop a needs-based, timely, relevant, and appropriate professional development program aimed at upskilling and reskilling the school heads of Region VI. As stewards of their schools, school heads played a vital role in creating an enabling and supportive environment for effective teaching and learning. Therefore, they should be provided with training and other learning and development interventions to equip them with the necessary knowledge, skills, and attitudes to support teachers effectively (DM No. 46, s. 2023).

This study aimed to develop a training design proposal tailored to the learning and development needs of school heads in Region VI. Based on this proposal, the researchers also created a timely, relevant, and quality-assured Training Resource Package for school heads to implement through a region-led Training of Trainers (TOT) program. By providing a structured and relevant training program, the study can enhance the leadership capabilities of school heads, which supports improved teaching quality and student outcomes. The training implemented was anchored on Albert Bandura's social learning theory, which enabled the participants to pick up knowledge from their surroundings and created a setting where they picked up knowledge from their learning facilitators, program managers, co-participants, and fellow school leaders (Mcleod, 2023). The findings and recommendations from this study can inform policy and practice, ensuring that school leaders are well-equipped to meet the challenges of modern education. Developing a quality-assured Training Resource Package also sets a precedent for future training programs, fostering a culture of continuous professional growth among educational leaders.

## 2.0 Methodology

### 2.1 Research Design

This study employed a quantitative research design to describe the priority learning and development needs of school heads, the quality of the Training Resource Package, and participants' satisfaction with the training to be conducted through Regional Training of Trainers. It also utilized developmental research design. It is a research design used for knowledge production studies to improve instructional design, development, and evaluation (Spatioti et al., 2022). Furthermore, this study employed the Analysis Design-Development Implementation Evaluation (ADDIE) Model to develop a training resource package, implement it, and evaluate regional trainers' training. According to ELM Learning (2024), the ADDIE instructional design process is frequently used for creating instructional courses and training programs.

### 2.2 Data Source and Research Participants

The Human Resource Development Section Specialists of the 21 Schools Division Offices (SDOs) in Region VI, Philippines, were the data source for the 2023 Priority Learning and Development Needs of School Heads. The Schools Division Superintendent endorsed this secondary data source to the Regional Office through the Human

Resource Development Division. The school heads were the target participants in the developed training resource package. The training was implemented through Regional Training of Trainers on January 23-26, 2024, to 104 randomly selected participants. The Participant's Role in each phase of the Study was described as shown in Table 1.

**Table 1**. Participants' role in each phase

| Phase | Participants | Role |
|---|---|---|
| Analysis | Human Resource Development Office Personnel | Consolidated and prioritized the needs of school heads using the Matrix for Identifying the Priority Improvement Areas |
| Design | Researcher | Developed the training design and proposal based on the priority needs of School Heads |
| Development | Certified National Educators Academy of the Philippines (NEAP) Learning Facilitators (LFs), Select HRDS Specialist and Master Teachers, National Professional Development (PD) Assessors | Developed and enhanced the adopted and training resource package<br><br>Quality assured the training resource package. |
| Implementation | Certified National Educators Academy of the Philippines Learning Facilitators, Select HRDS Specialist and Master Teachers, HRDD Personnel, Schools Division Office Monitoring and Evaluation Experts, Quality Assurance Division Supervisor<br><br>Select School Heads of twenty-one (21) Schools in the Division | Served as resource speaker/learning facilitator and simulation panelist/reactor of the sessions<br><br>Served as members of the Program Management Team (PMT) and Technical Working Group (TWG)<br><br>Served as participants to be trained as implementers and trainers |
| Evaluation | Schools Division Office Monitoring and Evaluation Experts, Quality Assurance Division Supervisor, and researcher | Conducted, Gathered, and Analyzed the evaluation result for reaction level and pretest-posttest result for learning level |

### 2.3 Research Instrument

The Regional Office, through the Human Resource Development Division, as part of its office function, gathered and consolidated the priority learning and development needs of school heads of 21 Schools Division Offices (SDOs) of Region VI through the issuance of Regional Memorandum No. 804 series 2023 dated October 20, 2023. The same Office subjected the data to the Matrix for Identifying the Priority Improvement Areas (based on DO 44, s. 2015) to identify the priority learning needs of school heads. The researcher utilized the same secondary data to identify the level of priority learning needs of the school heads of the Region. The quality of the Training Resource Package in terms of Professional Development Program Design and Professional Development Learning Resource Materials was determined using an attached tool from DepEd Memorandum 44 series 2023. To determine the participants' level of learning before and after participating in the program, the researcher administered a Pre-Test and Post-Test. The pretest and post-test tools are part of the developed training resource package, which underwent the same quality assurance process. To determine the level of satisfaction of participants on the conducted training in terms of (a) Session, (b) Program Management Team, (c) Venue and Accommodation, and (d) Resource Person, the instrument used was the End-of-Program Evaluation Tool utilized by the Quality Assurance Division of DepEd Regional Office VI.

### 2.4 Data Gathering Procedure

The process of gathering pertinent data in this study was based on the Analysis, Design, Development, Implementation, and Evaluation (ADDIE) model. The data-gathering procedure was composed of three (3) phases: pre-implementation, implementation, and post-implementation. Figure 1 illustrates the data collection procedure of this study.

### 2.5 Data Analysis

The mean was used to identify the level of priority learning and development needs, the quality of the Training Resource Package in terms of Professional Development Program Design and Professional Development Learning Resource Material, and the participants' satisfaction level with the conducted training. On the other hand, the Wilcoxon Signed Rank Test was used to determine if there was a significant difference in the participants' level of learning before and after participating in the program. The level of significance used in this study is 0.05. If the p-value is less than or equal to α, then the null hypothesis should be rejected.

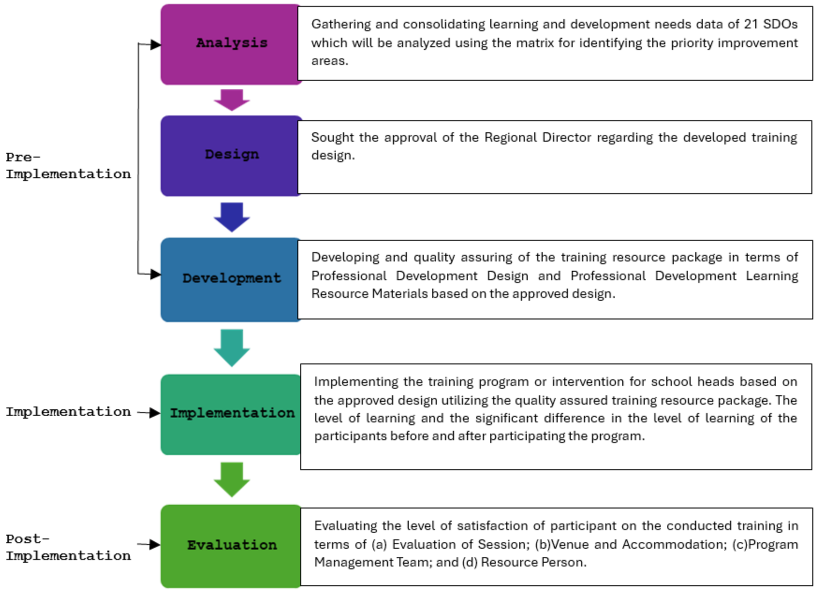


**Figure 1.** Data collection procedure using ADDIE Model

### 2.6 Ethical Considerations

The studies involving human respondents were conducted under the regimes and regulations of research ethics. Written informed consent to participate in the study was communicated to the subjects and participants. The purpose of the study, benefits, and risks were laid down to the respondents before they were asked for their consent to participate. The data drawn out from the study were treated as a whole. This study will not present personal data that may be identifiable to a participant. The information gathered from the subjects of the study was kept confidential. Personally identifiable data was anonymized so that it could not be linked to other data by anyone else. The data of the subjects were treated with utmost confidentiality. Physical, social, psychological, and all other types of harm were kept to an absolute minimum for the duration of the study. There were no competing interests that should exist in the study. The researcher ensured that this work was free of plagiarism or research misconduct, and he accurately represented the results of this study.

## 3.0 Results and Discussion

### 3.1 Priority Learning and Development Needs of School Heads of Region VI

***In terms of Functional Competencies***

Table 2 shows The Priority Learning and Development Needs of School Heads of Region VI regarding Functional Competencies. The overall functional competency needs of School Heads of Region VI is 4.18, described as "high priority." This means that all the following enumerated functional competencies in the Table were high-priority competency needs of school heads of the region.

Higher education and experience alone are not sufficient to make a school administrator effective, according to Nacional et al. (2023), who also emphasizes the need for organizational growth and long-term goal accomplishment. Furthermore, initial and ongoing training in management techniques, instructional leadership, and leadership conduct is essential, especially for the professional development of all teachers and those designated as heads of schools (Nacional et al., 2023). The most significant professional development needs of principals were found to be encouraging team commitment, building a learning organization, maintaining and inspiring continuous improvement, establishing instructional direction, and effectively communicating, according to a study titled "the professional development needs of rural high school principals" (Salazar as cited by Dayuha, 2024). Additionally, given that school heads' actions directly impact the school's overall efficacy, the principals are major players, backbones, and executives of school administration. According to Dillon-Peterson (as cited by Nacionales et al., 2023), their responsibilities include instructing, encouraging, cheering, facilitating, brokering, offering resources, and commanding. As the brains and heart of the school, they are like the spring to the watch and the engine to the ship. School heads can become well-versed and proficient in management issues by participating in conferences, workshops, seminars, and courses on management and administration (Nacionales et al., 2023). Effective planning is vital for school program execution, requiring principals to create strategies and organize tasks to achieve program objectives (Gumilan & Decano, 2021).

**Table 2.** Descriptive results for the functional competencies of school heads

| | **Indicators** | **Rating** | **Interpretation** |
|---|---|---|---|
| a) | Learning assessment | 5.00 | Very High Priority |
| b) | Teaching standards and pedagogies | 5.00 | Very High Priority |
| c) | School-based review, contextualization, and implementation of learning standards | 5.00 | Very High Priority |
| d) | Professional development of school personnel | 5.00 | Very High Priority |
| e) | Learning environment | 4.75 | Very High Priority |
| f) | Teacher performance feedback | 4.75 | Very High Priority |
| g) | Learner achievement and other performance indicators | 4.75 | Very High Priority |
| h) | School planning and implementation | 4.50 | Very High Priority |
| i) | Learner discipline | 4.50 | Very High Priority |
| j) | School facilities and equipment | 4.50 | Very High Priority |
| k) | Research and innovation | 4.25 | High Priority |
| l) | Program design and implementation | 4.25 | High Priority |
| m) | Strand Monitoring and evaluation processes and tools | 4.25 | High Priority |
| n) | Leadership development in individuals and Teams | 4.25 | High Priority |
| o) | Learner's voice | 4.25 | High Priority |
| p) | Performance management | 4.25 | High Priority |
| q) | Personal and professional development | 4.25 | High Priority |
| r) | Management of school organizations | 4.00 | High Priority |
| s) | School safety for disaster preparedness, mitigation, and resiliency | 4.00 | High Priority |
| t) | The general welfare of human resources | 4.00 | High Priority |
| u) | Records management | 3.75 | High Priority |
| v) | Financial management | 3.75 | High Priority |
| w) | Management of staff | 3.75 | High Priority |
| x) | Emerging opportunities and challenges | 3.75 | High Priority |
| y) | The general welfare of human resources | 3.75 | High Priority |
| z) | Management of diverse relationships | 3.75 | High Priority |
| aa) | Inclusive practice | 3.75 | High Priority |
| bb) | Policy implementation and review | 3.50 | High Priority |
| cc) | Community engagement | 3.50 | High Priority |
| dd) | Professional networks | 3.50 | High Priority |
| ee) | Communication | 3.25 | Moderate |
| | **Overall Mean** | **4.18** | **High Priority** |

Leading teachers in monitoring students' progress and learning, utilizing assessment data to improve student learning, and modeling and guiding them to understand effective instruction better are all examples of what instructional leaders do (Southworth as cited by Alonzo et al., 2019). The Department of Education (DepEd) Order No. 34, s. 2018 (Philippines) stresses the importance of contextualized learning delivery, requiring school heads to adapt curriculum and instruction to the local context. Kotting (2022) emphasized the role of district officials in providing professional development opportunities for principals and establishing infrastructure for effective school leadership. Hattie (2015) noted that providing effective feedback is a powerful strategy for improving student learning, highlighting the need for school heads to coach and provide feedback to teachers. Bantolo and Arenga (2021) found that school heads displayed high levels of professional competency and enthusiasm for the teaching profession, developing projects for ongoing professional and personal development, including moral recovery among staff.

Contrary to some findings, Dellomas and Deri (2022) revealed that school heads intensively practice learner discipline policies developed with stakeholders and follow regulations regarding facilities and equipment. Cheney & Davis (cited in Bantolo & Arenga, 2021) stated that effective school administrators create positive learning environments overseen by capable school leaders. Regarding Teacher Performance Feedback, Education First (as cited by Williams, 2021) reported that high-achieving districts provide teachers with opportunities for feedback throughout the academic year. The report emphasized how crucial it is for educators to get regular feedback to maintain professional development and foster a culture where receiving is accepted and encouraged. Bantolo and Arenga (2021) also agreed, highlighting that school heads demonstrated exceptional communication skills, fostering informed decision-making, resolving learning issues, attending to leaders' professional development needs, collaborating on development plans, and establishing clear structures and work arrangements to support shared leadership and governance.

***In terms of Core and Behavioral Skills and Leadership Competencies***

Table 3 shows the priority learning and development needs of school heads in Region VI regarding core and behavioral skills and leadership competencies. The overall mean of core behavioral skills and leadership competency needs of School Heads of Region VI is 3.53, described as "high priority." This means that all the enumerated core and behavioral skills and leadership competencies, as shown in Table 3, were high-priority professional development needs of school heads of the region.

**Table 3**. Descriptive results for the core skills and behavioral and leadership competencies

| Indicators | | Rating | Interpretation |
|---|---|---|---|
| 1. | Provides feedback and technical assistance such as coaching for performance improvement and action planning. | 5.00 | Very High Priority |
| 2. | Conceptualizes and implements learning interventions to meet identified training needs. | 4.75 | Very High Priority |
| 3. | Does long-term coaching or training by arranging appropriate and helpful assignments, formal training, or other experiences to support a person's learning and development. | 4.75 | Very High Priority |
| 4. | Facilitates workforce effectiveness through coaching and motivating/developing people within a work environment that promotes mutual trust and respect. | 4.50 | Very High Priority |
| 5. | Develop and adopt service improvement programs through simplified procedures that will further enhance service delivery | 4.25 | High Priority |
| 6. | Examine the root cause of problems and suggest effective solutions. Foster new ideas and processes and suggest better ways to do things (cost and/or operational efficiency). | 4.25 | High Priority |
| 7. | Improves the skills and effectiveness of individuals through employing a range of development strategies. | 4.250 | High Priority |
| 8. | Delivers error-free outputs most of the time by confirming the standard operating procedures correctly and consistently. Able to produce very satisfactory quality of work in terms of usefulness/acceptability and completeness with no supervision | 4.00 | High Priority |
| 9. | Demonstrates the values and behavior enshrined in the Norms of Conduct and Ethical Standards for public officials and employees (RA 6713). | 4.00 | High Priority |
| 10. | Achieves results with optimal use of time and resources most of the time. | 4.00 | High Priority |
| 11. | Initiates activities that promote advocacy for men's and women's empowerment | 4.00 | High Priority |
| 12. | Works constructively and collaboratively with others and across organizations to accomplish organizational goals and objectives. | 4.00 | High Priority |
| 13. | Demonstrates an ability to think "beyond the box". Continuously focuses on improving personal productivity to create higher value and results. | 3.75 | High Priority |
| 14. | Writes routine correspondence/communications, narrative, and descriptive reports based on readily available information data with minimal spelling or grammatical error/s (e.g., memos, minutes, etc.). | 3.75 | High Priority |
| 15. | Performs all the stages of a result-based performance management system supported by evidence and required documents/forms. | 3.75 | High Priority |
| 16. | Practices ethical and professional behavior and conduct, considering the impact of his/her actions and decisions. | 3.75 | High Priority |
| 17. | Promotes a creative climate and inspires co-workers to develop original ideas or solutions | 3.75 | High Priority |
| 18. | Cultivates a learning environment by structuring interactive experiences, such as looking for future opportunities that support achieving individual career goals. | 3.75 | High Priority |
| 19. | Translates creative thinking into tangible changes and solutions that improve the work unit and organization. | 3.50 | High Priority |
| 20. | Utilizes technologies to access information to enhance professional productivity, assists in conducting research, and communicates through local and global professional networks. | 3.50 | High Priority |
| 21. | Recommends appropriate and updated technology to enhance productivity and professional practice. | 3.50 | High Priority |
| 22. | Makes specific system or work method changes to improve performance. Examples may include doing something better, faster, at a lower cost, or more efficiently or improving quality, customer satisfaction, and morale without setting any specific goal. | 3.50 | High Priority |
| 23. | Assumes a pivotal role in promoting the development of an inspiring, relevant vision for the organization and influences others to share ownership of DepEd goals to create an effective work environment. | 3.50 | High Priority |
| 24. | Make specific changes in the performance management system or in your own work methods to improve performance (e.g., does something better, faster, at lower cost, more efficiently; improves quality, customer satisfaction, morale, and revenues). | 3.50 | High Priority |

| | | | |
|---|---|---|---|
| 25. | Expresses self clearly, fluently, and articulately. | 3.25 | Moderate |
| 26. | Uses basic persuasion techniques in a discussion or presentation, e.g., staff mobilization, appeals to reason and emotions, uses data and examples, visual aids | 3.25 | Moderate |
| 27. | Sets high-quality, challenging, realistic goals for self and others | 3.25 | Moderate |
| 28. | Maintains a professional image by being trustworthy, regular in attendance and punctuality, good grooming, and communication. | 3.25 | Moderate |
| 29. | Sets personal goals and direction, needs and development. | 3.25 | Moderate |
| 30. | Prioritize work tasks and schedules (through Gantt charts and checklists.) | 3.25 | Moderate |
| 31. | Can explain and articulate organizational directions, issues, and problems. | 3.25 | Moderate |
| 32. | Use an appropriate medium for the message. | 3.00 | Moderate |
| 33. | Avoid rework, mistakes, and wastage through effective work methods by placing organizational needs before personal needs. | 3.00 | Moderate |
| 34. | Takes personal responsibility for dealing with and correcting customer service issues and concerns. | 3.00 | Moderate |
| 35. | Sets performance standards and measure the progress of employees based on office and department targets. | 3.00 | Moderate |
| 36. | Know the different written business communication formats used in the DepEd. | 2.75 | Moderate |
| 37. | Prepares basic compositions (e.g., letters, reports, spreadsheets, and graphics) using Word Processing and Excel. | 2.75 | Moderate |
| 38. | Prepare a simple presentation using PowerPoint. | 2.75 | Moderate |
| 39. | Persuades, convinces or influences others to have a specific impact or effect. | 2.75 | Moderate |
| 40. | Expresses a desire to improve and may express frustration at waste or inefficiency. May focus on new or more precise ways of meeting goals set. | 2.50 | Moderate |
| 41. | Adjust communication style to others. | 2.50 | Moderate |
| 42. | Identifies different computer parts, turns the computer on/off, works on a given task with acceptable speed and accuracy, and connects computer peripherals (e.g., printers, modems, multimedia projectors, etc. | 2.00 | Low Priority |
| **Overall Mean** | | **3.53** | **High Priority** |

Research confirms that effective formal leadership and management are crucial for enhancing the governance, learning, teaching, relevance, and success of higher education institutions (Bolden et al.; Bryman; Middlehurst; Parrish; Ramsden; Scott et al., as cited by Hofmeyer, Sheingold, Klopper, & Warland, 2015). In a research titled "The Professional Development Needs of Rural High School Principals," Salazar (as cited by Dayuha, 2021) found that encouraging team commitment, establishing a learning organization, encouraging and maintaining continuous improvement, defining instructional direction, and effectively communicating were the principals' top five professional development needs. This aligns with Agravante et al. (2023), who identified mentoring and coaching as high-priority needs for upskilling school heads' leadership competencies, emphasizing the importance of designing training programs based on school heads' core skills, behavioral, and leadership needs.

Further, the World Bank (as cited by Basic Education Sector Transformation End-of-Program Evaluation Study, 2021) highlighted in a 2014 assessment that 40% of Filipino teachers required more in-service training. The study indicated that the lack of professional development plans and inadequate school-level mechanisms, for which school heads are responsible, results in training that does not address individual teachers' needs, leading to a gap between available opportunities and growth requirements.

Contrary to this, Bantolo et al. (2021) found that school heads' human resource management and professional development competencies were rated "very high." They excelled in identifying staff potential, offering growth opportunities, creating professional learning communities, managing performance, establishing performance appraisal committees, using relevant policies, assigning teachers to their areas of competence, and identifying other personnel needs.

Hussin et al. (2015) observed that older school heads often have an "ICT phobia," preferring traditional methods, which hinders their effectiveness in a modern, internet-driven world. They found that school administrators needed training programs to improve their skills in using essential software and applications, highlighting the value of ICT in enhancing instruction, learning, and administration. This suggests that the multifaceted responsibilities of school principals make their role particularly challenging.

Indeed (2023) agrees that school heads need high-quality, continuous professional development (PD) programs to enhance their leadership skills and knowledge. The specific needs of school heads in Region VI, such as coaching, mentoring, and feedback, were identified in the study, aligning with broader literature emphasizing tailoring PD programs to address these needs (Nicholas, 2021). While Nicholas' research highlights the importance of career network building, the study focused on the specific PD needs in Region VI. Contrastingly, broader literature discusses additional aspects such as employee morale and career advancement (Hart, 2022; Sokolović et al., 2023) and various PD modalities, including coaching, mentoring, and peer networks (McClay, 2021; Mendez, 2023). This highlights the importance of a comprehensive professional development approach that addresses specific regional needs and broader professional growth areas.

School principals still require training to adapt to and anticipate changes in the educational environment as it develops. This is why it is important to investigate training participation from the perspective of one's readiness for training, as this readiness is assumed to determine one's excitement for taking part in the training and dedication to using it to succeed academically (Udik et al., 2021).

### 3.2 Quality of Training Resource Package

The researcher, along with other resource package developers, developed a Training Resource Package for school heads' professional development based on the 2023 priority learning and development needs of school heads of Schools Division Offices (SDOs) of DepEd Region VI. The quality of the Training Resource Package was evaluated in terms of a) Professional Development Program Design and b) Professional Development Learning Resource Materials.

#### *In terms of Program Design*

As shown in Table 4, the overall mean of the Training Resource Package (TRP) quality in terms of Professional Development Program Design is 3.0, which is described as "high quality." This means that the program design, as assessed by the professional development program evaluator, was interpreted to be of excellent quality.

**Table 4.** Descriptive results for the program design quality

| Indicators | Mean | Description |
|---|---|---|
| a) Rationale for the Proposed PD Program | 3.0 | High Quality |
| b) Alignment to the Professional Standards | 3.0 | High Quality |
| c) Target Participants Profile | 3.0 | High Quality |
| d) Articulation of Learning Objectives | 3.0 | High Quality |
| e) Session Contents | 3.0 | High Quality |
| f) Program Methodology | 3.0 | High Quality |
| g) Assessment Strategies and Tools | 3.0 | High Quality |
| h) Session Outputs | 3.0 | High Quality |
| i) Workplace Application | 3.0 | High Quality |
| j) Time Requirement | 3.0 | High Quality |
| k) Learning Resource Materials | 3.0 | High Quality |
| l) Resource Speaker/Subject-Matter Expert | 3.0 | High Quality |
| m) Gender Equality, Disability and Social Inclusion | 3.0 | High Quality |
| n) Monitoring and Evaluation Plan | 3.0 | High Quality |
| o) Budget Requirements | 3.0 | High Quality |
| p) Program Management Team | 3.0 | High Quality |
| **Overall Mean** | **3.0** | **High Quality** |

#### *In terms of Learning Resource Material Quality*

As shown in Table 5, the overall mean of the quality of the Training Resource Package in terms of Learning Resource Materials is 3.0, which is described as "high quality." This means that the learning resource materials, as assessed by the professional development program evaluator, were considered of excellent quality. LRMs include those used by learners, such as handouts, brochures, worksheets, templates, manuals or tool kits, activity materials (e.g., case studies, structured learning exercises, etc.), learning journals or diaries, and job aids. These could also be the materials used by the resource speaker or subject-matter expert, such as the session guide and related references, presentation materials, non-print materials (e.g., video and other multimedia materials), and activity materials (DepEd Memorandum 44 s. 2023).

The findings were parallel to Crew's (2023) statement, which enumerated the characteristics of high-quality instructional materials: rich in information, standards-aligned, current, easily available, and user-friendly. Moreover, these materials were captivating and tailored to accommodate individuals of all backgrounds and skill levels. On the other hand, if professional development is badly executed, even the best-planned programs may not provide the expected results (Darling-Hammond et al., 2017). High-quality instructional content significantly impacts the participants' learning outcomes (Crew, 2023). The quality-assured learning materials may additionally fill learning gaps, raise assessment scores, support mastery of the content, and engaging and interesting resources.

**Table 5.** Descriptive results for the learning resource material quality

| Indicators | Mean | Description |
|---|---|---|
| **A. General Standards** | **3.0** | **High quality** |
| 1. The types and combinations of materials (e.g., projected slides for presentation, worksheets, and templates for workshops, etc.) in the learning resource package are appropriate to and supportive of delivery methods. | 3.0 | High quality |
| 2. Content of Learning Resource Material (LRM) will contribute to achieving learning objectives. | 3.0 | High quality |
| 3. The content of LRM is accurate and authority-based. | 3.0 | High quality |
| 4. LRM adheres to DepEd branding guidelines | 3.0 | High quality |
| 5. LRM is copyright compliant. | 3.0 | High quality |
| 6. LRM adheres to GEDSI principles. | 3.0 | High quality |
| 7. LRM observes correct spelling, grammar, and word usage. | 3.0 | High quality |
| 8. LRM uses appropriate technologies (whenever available and cost-effective). | 3.0 | High quality |
| 9. Available quality-assured learning resource materials from the Learning Resource Portal are tapped for possible adoption or customization. | 3.0 | High quality |
| **B. LRM-Specific Quality Standards** | **3.0** | **High quality** |
| ***Printed LRMs*** | ***3.0*** | ***High quality*** |
| 1. Printed LRMs are readable, organized, and well laid out. | 3.0 | High quality |
| 2. Illustrations, images, graphs, and tables are appropriate, clear, properly labeled or captioned, and colored when necessary. | 3.0 | High quality |
| 3. Printing is of good quality (i.e., no broken letters or images, correct alignment, and even print density). | 3.0 | High quality |
| ***Presentation Slides*** | ***3.0*** | ***High quality*** |
| 1. Slide templates are simple and non-distracting (the office's standard template is applied if one is available). | 3.0 | High quality |
| 2. Slides are well laid out: | 3.0 | High quality |
| 3. Slides have no distracting elements (i.e., irrelevant music, sound effects, animations, transitions, and background images). | 3.0 | High quality |
| ***Non-Print Materials*** | ***3.0*** | ***High quality*** |
| 1. Non-print LRMs enhance the learning experience and sustain understanding of the content. | 3.0 | High quality |
| 2. User support material provides adequate and clear instructions. | 3.0 | High quality |
| 3. LRM can run on all platforms using minimum system requirements. | 3.0 | High quality |
| ***Audio*** | ***3.0*** | ***High quality*** |
| 1. Speech and narration are clear and easily understood (using correct pacing, intonation, and pronunciation). | 3.0 | High quality |
| 2. Music and sound effects are appropriate and suitable to the concept. | 3.0 | High quality |
| 3. There is complete synchronization of audio with the visuals, if any. | 3.0 | High quality |
| ***Visuals*** | ***3.0*** | ***High quality*** |
| 1. Visuals provide an accurate representation of the concept discussed. | 3.0 | High quality |
| 2. Screen displays (text) are uncluttered, easy to read, and aesthetically pleasing. | 3.0 | High quality |
| 3. Visual presentations (non-text) are clear and easy to interpret. | 3.0 | High quality |
| 4. Visuals sustain interest and do not distract users' attention. | 3.0 | High quality |
| ***Session Guides*** | ***3.0*** | ***High quality*** |
| 1. Session guides are aligned with the proposed PD program design: | 3.0 | High quality |
| **Overall Mean** | **3.0** | **High quality** |

In addition, the quality of the Training Resource Package passed the standards of the Professional Regulation Commission (PRC) through the Continuous Professional Development (CPD) accreditation process. The package was submitted online through the Continuing Professional Development Accreditation System (CPDAS) on the first week of December 2023. On December 16, 2023, the program titled Reengineering Champions Through Instructional Supervision: Regional Training of Trainers (title of the program) was officially accredited with Program Accreditation Number- PTR 2023-419-3348, making it the first PRC Accredited Program of DepEd Region VI. Fifteen CPD units were granted for the completers of the program.

Passing through the PRC Accreditation Process leads to CPD units to be earned necessary for the renewal of PRC license card based on Republic Act No. 10912 or An Act Mandating and Strengthening the Continuing Professional Development Program for All Regulated Professions, Creating the Continuing Professional Development Council, and Appropriating Funds Therefore, and for Other Related Purposes. This is aligned with Skinner's theory (McLeod, 2023), where positive outcomes (CPD units) function as reinforcement, making participation in these PRC-accredited programs more likely in the future (repeated behavior). In line with this, Burke and Salas (2016) highlighted the importance of quality assurance processes in ensuring training effectiveness. Receiving accreditation from the Professional Regulation Commission (PRC) strengthens the credibility of the training resource package. The above result was also related to the findings of Darling-Hammond and Sykes (2013). Packages can be curated to address specific needs, close skill gaps, and maximize development impact.

### 3.3 Evaluation of Learning of the Participants

The level of learning of the participants before and after participating in the program is shown in Table 6.

**Table 6.** Pre-test and post-test performance of the participants

| | Mean | SD | Description |
|---|---|---|---|
| Pre-Test | 66.9 | 11.4 | Very Satisfactory |
| Post-Test | 96.2 | 4.51 | Outstanding |

Participants' learning significantly improved after the program. This improvement in knowledge and skills (positive outcome) could potentially increase the likelihood of future participation in similar programs (repeated behavior), aligning with Skinner's reinforcement principle (McLeod, 2023). Also, the findings revealed a significant improvement in learning. The training program was potentially designed based on adult learning principles (self-direction, active participation, focus on experience) and could have facilitated knowledge acquisition by catering to adult learners' needs and preferences (Khalil et al., 2016). This aligned with the theory's emphasis on creating a meaningful adult learning experience.

The program incorporated observational learning opportunities such as role-playing, video viewing, case analysis, and simulation, which could have contributed to the improvement. Social learning theory (McLeod, 2023) suggests that individuals learn by observing others, and the program has provided a supportive environment for this type of learning. The above results were also affirmed by Darling-Hammond et al. (2017), who stated that professional learning should be connected to teachers' experiences in preparation and induction, as well as teaching standards and evaluation, to guarantee a cohesive system that supports educators across the whole professional continuum. To provide a comprehensive system centered on the professional development of teachers, it should also provide a bridge to leadership opportunities.

**Table 7.** Analysis of the difference in the performance of the participants before and after participating in the program

| | Mean | SD | Sig. (2-tailed) | Decision |
|---|---|---|---|---|
| Pretest vs Posttest | -29.20 | 12.29 | .000 | Reject the null hypothesis. |

*p-value significant at > 0.05

Table 7 revealed a significant difference in the participants' learning levels before and after participating in the program ($p=0.00 < \alpha$). This implied that the participants' learning levels differed before and after participating in the program. The mean difference of 29.20% asserted that the participants had higher learning levels after participating in the program. This result was corroborated by the study of Gao et al. (2018), which showed results of pre-and post-training self-assessments of trainees on knowledge and skills. Wilcoxon's signed ranks test indicated a significant improvement in the post-training assessment for all 25 items in eight modules compared to the pre-training evaluation ($p < 0.001$).

The above result also supported the findings of Guskey (2009), which state that collaborative learning can enhance school heads' confidence and ability to implement change. According to Udik et al. (2021), principal training can enhance three principal practice areas: instructional leadership, human resource management, and organizational leadership; fostering a culture of self-assurance and camaraderie; and promoting student achievement, teacher well-being, instructional practices, and school organizational health.

The findings revealed that participants' learning significantly improved after the program. This improvement in knowledge and skills (positive outcome) could potentially increase the likelihood of future participation in similar programs (repeated behavior), aligning with Skinner's reinforcement principle (McLeod, 2023). Also, the training program was potentially designed based on adult learning principles (self-direction, active participation, focus on experience), which could have facilitated knowledge acquisition by catering to adult learners' needs and preferences. This aligned with the theory's emphasis on creating a meaningful adult learning experience. Additionally, the program's design might have utilized the participants' prior experience (entry behavior) as a foundation for building new knowledge, further aligning with Adult Learning Theory (Khalil et al., 2016). Lastly, the program's design, incorporating observational learning, could have contributed to the improvement. Social learning theory (McLeod, 2023) has suggested that individuals learn by observing others, and the program has provided a supportive environment for this type of learning.

## 4.0 Conclusion

School heads' needs covered learning assessment, teaching standards, school planning, professional development, learner discipline, school facilities, learning environment, teacher performance feedback, and learner achievement. The Training Resource Package was rated high quality (M=3.0). Among 104 randomly selected school heads from 21 School Divisions in Region VI, participants' competence increased from "highly competent" (M=66.99%) to "very highly competent" (M=96.19%) post-training, with a significant improvement ($p=0.00 < \alpha$). Participants reported strong satisfaction with sessions (M=3.99), program management (M=3.99), venue (M=3.99), accommodation (M=3.98), and resource speakers (M=3.99). It is recommended for the National Educators Academy of the Philippines (NEAP), the training arm of DepEd, to build on the success of the conducted training sessions by continuing to offer programs according to the needs of its personnel and ensure that training venues and accommodations meet high standards to provide conducive environments for learning and participants' satisfaction, and provide resources and support to the program management team to facilitate efficient organization, clear communication, and responsiveness to participant needs. Likewise, school heads, as instructional leaders, should also design and implement relevant and needs-based professional development programs for teachers.

## 5.0 Contributions of Authors

No other author is mentioned in this paper.

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## 7.0 Conflict of Interests

The author declares no conflicts of interest about the publication of this paper.

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# Unveiling the Impact of National Task Force to End Local Communist Armed Conflict (NTF-ELCAC) in Four Barangays of Tangub City

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**Abstract.** The Communist armed conflicts in the Philippines trace their origins to various communist organizations dating back to 1930, notably the Hukbalahap Rebellion (1942–1954) led by the Communist Party of the Philippines (CPP). Subsequently, the New People's Army (NPA), an offshoot of the CPP, emerged in 1969, continuing the rebellion. In response, the Local Government Unit of Tangub, alongside agencies like the Department of Interior and Local Government (DILG), Department of Social Welfare and Development (DSWD), the Armed Forces of the Philippines (AFP), and Philippine National Police (PNP), adopted the National Task Force to End Local Communist Armed Conflict (NTF-ELCAC) under President Rodrigo Roa Duterte's EO 2018, aiming to achieve peace and halt conflicts between the NPA and AFP in affected barangays. This study assessed the implementation of NTF-ELCAC in Tangub City, Misamis Occidental, using a mixed-method approach involving both qualitative and quantitative methods. Surveys were conducted with 140 respondents from four conflict-affected barangays: Sicot, Owayan, San Antonio, and Hoyohoy. Findings revealed that respondents were well-informed about communist groups in the Philippines and NTF-ELCAC, expressing positive feedback on project experiences, improved socio-economic conditions, enhanced peace and order, and strengthened relationships with the government. Suggestions for program improvement and policy issues were also highlighted. Theoretical implications underscored the importance of social solidarity and the role of social institutions in fostering a balanced society.

**Keywords:** NTF-ELCAC; Communist armed conflict; Conflict-affected areas; Communist insurgency.

## 1.0 Introduction

According to Asia Report (2011), the communist insurgency in the Philippines has continued long, and it has ceased to receive the attention it deserves. The Philippine Government was unable to control and develop large parts of the country because of the longstanding communist insurgency. The biggest threat to the Government is the continuing fight against the Armed Forces of the Philippines (AFP) and the New People's Army (NPA), which complicates the prospect of peace in Mindanao. They continue to kill hundreds each year, including tribal leaders, local politicians, and civilians who also die due to conflict. They are primarily active in the mountainous and typhoon-hit areas like Central Luzon and Northern Luzon, CALABARZON, Bicol, Eastern Visayas, Negros Occidental, and eastern and southern Mindanao (Caraga, Davao, and the Compostela Valley). The current government has made this strong declaration to stop the conflict between the Communist Party of the Philippines – National Democratic Front – New People's Army (CPP – NDF – NPA) and the Armed Forces of the Philippines (AFP). One of its priorities is attaining peace in the country. Stated under the Philippine Development Plan 2017

– 2022 aims to achieve sustainable peace through the process of developing conflict-affected and vulnerable communities.

President Rodrigo Roa Duterte issued a Whole-of-Nation Approach to pursue the country's peace agenda, which is to end the insurgency of the Local Communist Terrorist Groups and to cease the 50 years of trickery, fraud, and brutality they committed against the Filipinos. One of its programs is the National Task Force to End Local Communist Armed Conflict (NTF-ELCAC). The main goals of this program are to obtain sustainable peace in the country under the rule of law and provide different kinds of assistance to former rebels and their families as well as individuals living in conflict-affected areas or barangays (Memorandum Circular No. 03).

*"You cannot defeat the government in a million years of fighting. Now, 53 years later, I cannot see any achievements from the communist group. I did not see any progress to their movements, but rather, it has become a group of bandits solely." - (PRRD, 2021)*

According to Lt. General Felimon Santos, practicing good governance and efficient delivery of basic services to the cities and provinces would create flexible communities. This act will also encourage the members of the communist terrorist groups to return to the government. Good governance is one of the solutions to resolve the problem with the communist terrorist groups. Executive Order No. 70 is like a signal that this is not only the fight of the AFP and PNP against the communist groups but also includes all government agencies from the national to the barangay level with assigned duties and responsibilities that could help resolve the insurgency problem. To counter the motivations that could lead to insurgency, the Whole-of-Nation Approach assures that there will be no reason anymore for the communist terrorist groups to trouble the helpless communities.

As stated on the Official Website of Tangub City, Tangub City is located on the northern shore of Panguil Bay (an arm of Iligan Bay). It has a coastal road that connects this city to Ozamiz and Oroquieta. The main road of this city connects the Zamboanga Peninsula to the main part of Mindanao. That is why the common occupations of the area are fishing and Coconut (copra) cash crops (Pletcher & Gaur, 2017). Tangub is known for its peaceful and rural atmosphere, but there is a hidden side to the story. Some places in the area are the hen pens of the New People's Army (NPA), which are not pleased with the current administration.

According to the Commanding Officer of the 10th Infantry Battalion (101B), Lt. Col. Ryan Severo, on one Saturday morning of August 2018 in Barangay Hoyohoy, Tangub City, Misamis Occidental, troops under Joint Task Force Zampelan clashed with a group of communist rebels during their operation. The troops were there to verify and respond to the reports regarding the CPP-NPA (Communist Party of the Philippines-New People's Army) harassing the civilian community in the area. The attack lasted for 40 minutes and ended when the communist group retreated. There were no reported injuries or killed among the rebels, but one of the AFP suffered minor injuries. They have recovered an AK47 rifle with four empty magazines, two half-sacks of rice, a stash of dried fish, and two backpacks during their clearing operations—the 1st Infantry Division Commander of the AFP, Maj. Gen. Roseller Murillo requested the NPA to surrender (Tibay, 2018).

The Local Government Unit of Tangub, together with the different agencies such as the Department of Interior and Local Government (DILG), the Department of the Social Welfare Development (DSWD), the Armed Forces of the Philippines (AFP), Philippine National Police (PNP), and other members adopted the National Task Force to End Local Communist Armed Conflict (NTF – ELCAC) under the EO 70 s. 2018 of President Rodrigo Roa Duterte to obtain peace and end the conflict between the New People's Army (NPA) and the Armed Forces of the Philippines (AFP) in the area. The Armed Forces of the Philippines (AFP) was the one who identified the four barangays in the city to be included as beneficiaries of NTF-ELCAC these are Barangay Sicot, Barangay Owayan, Barangay San Antonio, and Barangay Sicot, since these barangays are conflict-affected areas. Every cluster under the program has conducted outreach programs, presented plans, and offered many opportunities to the people in the four barangays (Official Publication Vol. 2 October - December 2020 of City Mayor's Office of Tangub).

Tangub City started to implement NTF–ELCAC in November 2020. The implementation of NTF-ELCAC in Tangub City also brought stories of hope to the community. Some are very vocal about the benefits they have received in the program. According to Punong Barangay Alejandro O. Sarajeno of Owayan Tangub City Misamis

Occidental, in his 20 years in service, it is the first time he felt the government's help because of NTF - ELCAC. NTF-ELCAC was adopted and implemented in the four conflict-ridden Barangays of Tangub City (Barangay Sicot, Barangay Owayan, Barangay San Antonio, and Barangay Hoyohoy) to address the insurgency that is happening in the area. This study unveils the impact of the implementation of NTF–ELCAC in the City of Tangub from the perspective of the residents of the four barangays and the responses of the implementers in the area.

Based on the problem identified in this study, the researcher assessed the implementation of NTF–ELCAC. Specifically, this study will explore the impact of the two-year implementation of NTF-ELCAC on the respondents regarding socio-economic aspects, peace and order, and social relations.

## 2.0 Methodology

### 2.1 Research Design

The study used a mixed-method technique, using both qualitative and quantitative design. It used quantitative research techniques in the four selected barangays of Tangub City: Barangay Sicot, Barangay Owayan, Barangay San Antonio, and Barangay Hoyohoy. The study used a survey questionnaire comprising close-ended and open-ended questions. Although paper questionnaires were used, an open-ended question is still essential since it will be used to uncover trends in thought and opinion and dive deeper into the problem (Wyse, 2011).

### 2.2 Research Locale

Tangub City is found at the southern curve of the D-shaped province of Misamis Occidental. Mt. Malindang bounds it in the north, Ozamis City in the east, Panguil Bay in the South, and the Municipality of Bonifacio in the West. It can be reached by plane in one hour and twenty minutes from Manila, thirty minutes by plane from Cebu to Ozamis City overnight travel via boat from Cebu City, and three hours and thirty minutes by public utility bus from Cagayan de Oro City. Sheltered by the mighty Mt. Malindang Range and embraced by the placid Panguil Bay, Tangub City comprises fifty-five barangays spread over 16,572 hectares. The topography is approximately 40% plain along the coast of Panguil Bay and 6% rolling and hilly, gradually rising to the Mt. Malindang National Forest Reservation area. The city does not have high-rise buildings and does not have traffic congestion. Based on the 2011 BHW data, the city's population density is four people per hectare. Barangay Maquilao has the highest population density, 4,705 people per sq. km. In contrast, Barangay Owayan has only 24 people per sq. km (City Government of Tangub, 2012).

### 2.3 Research Participants

A total of 150 respondents, composed of 140 survey respondents who are residents of Sicot, Barangay Owayan, Barangay San Antonio, and Barangay Hoyohoy, were selected as part of this research. They were chosen through a convenience sampling technique. In addition, ten key informants were interviewed who are the implementers of the program NTF-ELCAC, who come from different agencies, and one representative from every barangay. They were selected through purposive sampling.

### 2.4 Research Instrument

The interview and survey questionnaire were crafted from the guidelines on resolving NTF–ELCAC under Executive Order No. 70 s. 2018. The fundamental elements of the program and goals were converted into questions. The survey questionnaire contains closed-ended and open-ended questions to understand the respondents' answers. The first part is about the Socio-demographic Profile of the respondents; the second part is about the Knowledge and Awareness of the respondents about NTF-ELCAC; the third part is the feedback of the respondents to the programs implemented by NTF-ELCAC, while fourth part is about the changes in the lives of the respondents on the two-year implementation of NTF-ELCAC in terms of (a) socio-economic aspect, (b) peace and order, (c) social relations. The fifth part presents the Concerns and Issues of the Respondents regarding the implementation of NTF-ELCAC, and the last part is their Recommendations. Regarding the key informants, interviews consisted of open-ended questions about the implementation of NTF-ELCAC.

### 2.5 Data Gathering Procedure

The following was the procedure for the data gathering:

(a) The researcher submitted a letter to the Local Chief Executive requesting a survey in their Local Government Unit, including the conflict-affected barangays, Barangay Hoyohoy, Barangay San Antonio, Barangay Sicot, and Barangay Owayan.
(b) Before conducting an interview, the researcher asked for every respondent's consent; upon approval, the data was gathered.
(c) The researcher assured that every respondent was able to know the flow of the interview, including their confidentiality and anonymity as well as their privacy
(d) The data were collected and analyzed.

**2.6 Ethical Considerations**
As this study utilized human participation and assistance, certain issues were addressed. These issues were necessary for ensuring privacy and the security of participation. These issues were identified in advance to prevent future problems that could have arisen during the research process. Among the significant issues, their consent is data confidentiality and protection.

***Informed Consent and Voluntary Participation***
Before conducting research, both key informants and survey respondents knew what was being asked of them, and consent was provided voluntarily or freely. The study's purpose was disclosed to the participants before the interview and survey; they could choose whether to participate. Following Mindanao State University Iligan Institute of Technology (MSU-IIT) protocols, the researcher utilized Form No. 13 to represent participants' informed and voluntary consent. The consent form ensures the freedom to participate or withdraw at any time. They are also assured of the confidentiality and privacy of their data.

***Respondents and Key informants***
In the research, survey and interview questionnaires were drafted prominently and concisely to prevent conflicts among the respondents. It was also translated into "Bisaya" so that it was easy for the respondents to read and understand such questions. Consent or form 13 has been given for their signature and for them to be aware of the protocols. People who participated in the research were given ample time to respond to the survey; aside from that, they could change their answers as often as they wanted to avoid errors and inaccuracies. The respondents' and critical informants' cooperation was acknowledged very well. For them to be comfortable, they were also assured that the data gathered from them would be treated with the strictest confidence and that they would only be the ones who could view it aside from the researcher; this also helped them to be very open in terms of answering the survey/interview. At the end of the interview or survey, the researcher assured the respondents of respecting participants' comfort and maintaining the highest ethical standards throughout the research process, fostering trust and integrity.

## 3.0 Results and Discussion

**3.1 Impact of the two-year implementation of NTF-ELCAC**
***Socio-Economic Condition***
As shown in Table 1, there were changes in terms of the socio-economic status in the area. Before the implementation of the program, it was tough for the farmers in the community to go to the market of city to sell their products because of the muddy road, and only carabaos, horses, and dump trucks were the only modes of transportation that they could use aside from walking. They have mentioned that the farm-to-market road project has helped the socio-economic condition of the barangay, especially now that the city has provided free transportation for their products to the market every Sunday of the week. This is one of the projects of NTF-ELCAC that has also helped the students in the area, aside from the free education that the program has provided. Before the implementation, it was hard for the students to go to school since even motorcycles could not cross the road. Nowadays, it is easy for people to go to the city back and forth because the road is already concrete and accessible to any transportation. Aside from the farm-to-market road, other projects of NTF-ELCAC have developed their socioeconomic condition, such as training for different livelihoods, wood carving, food processing, carpentry, and employment. This can be supported by the statement below.

*"Our lives here in Barangay Sicot are complicated; the vehicles that could come near here before were only dump trucks, and it is only every Sunday to transport our bananas, our goods to be sold in the market, that is the only vehicle that could come*

*near here in our barangay, and it will stop in Barangay Paiton (the barangay before Barangay Sicot) because they cannot cross the road here in our barangay, so the people here would have to walk using balsa and horses to carry their products to where the dump truck has stopped. It was tough, and that is the only livelihood we have; it is still farming, but it is better today, especially since now, every Sunday, there is free transportation that would go here directly because the roads are already accessible; that is why there is a big difference from before and now in terms of our socioeconomic." - (Barangay Captain, Sicot)*

**Table 1.** Impact of the two-year implementation of NTF-ELCAC in terms of socio-economic

| **Indicators** | **Brgy. Hoyohoy** | | | **Brgy. Owayan** | | | **Brgy. San Antonio** | | | **Brgy. Sicot** | | | **Total** | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Y | N | M | Y | N | M | Y | N | M | Y | N | M | **Y** | **N** | **M** |
| 1. There is growth in terms of business opportunities in the area. | 20 | | 15 | 23 | 2 | 10 | 15 | 3 | 17 | 30 | | 5 | **88** | **5** | **47** |
| 2. Job opportunities are offered. | 20 | | 15 | 24 | 3 | 8 | 16 | 2 | 17 | 25 | 6 | 4 | **85** | **11** | **44** |
| 3. Livelihood conditions greatly improved. | 24 | | 11 | 26 | 1 | 8 | 13 | 6 | 16 | 26 | 6 | 3 | **89** | **13** | **38** |
| 4. Unemployed individuals greatly decreased. | 26 | 2 | 7 | 24 | 6 | 5 | 19 | 7 | 9 | 22 | 9 | 4 | **91** | **24** | **25** |
| 5. Free education is being offered. | 28 | | 7 | 32 | | 3 | 19 | 4 | 12 | 33 | 2 | | **112** | **6** | **22** |

*"As the BDP is envisioned to bring development to conflict-prone communities, the initiatives under the program aim to address the gaps identified by the civilian agencies and the security sector in Davao. It has been a goal for the Regional Task Force of Region XI that the BDP package for the Region shall address the main drivers and causes for NPA recruitment among disgruntled and marginalized communities, such as the lack of education infrastructure, inaccessibility, basic services, healthcare, and connectivity in its isolated and disadvantaged areas." - (National Security Adviser Sec. Hermogenes Esperon)*

According to Gido (2021), the Barangay Development Program of NTF-ELCAC is an initiative that aims to develop the socio-economic aspect of the barangay. It focuses on providing farm-to-market roads, health centers, electrification, water and sanitation facilities, schools, and livelihood opportunities. The BDP is envisioned to give peace and development initiatives through different socioeconomic programs and projects to the communities previously under the CTG.

According to Governor Henry Oaminal (2023), the Province of Misamis Occidental has progressed compared to before, and it is considered one of the poorest provinces in 2021. The governor also mentioned that the business opportunities in the area have been improved and that there are more job offers. Based on the Philippine Static Authority (PSA) records, the poverty issues have decreased due to road improvements and strong budgetary management that helped construct new health centers and educational facilities.

In Tangub City, under the NTF-ELCAC, various projects have been initiated, significantly enhancing the socio-economic landscape of the area. These projects encompass a range of programs, such as the construction of concrete roads, housing provision, access to free electricity, and livelihood training. Furthermore, it is noted that residents from the respective barangays are prioritized for employment whenever construction projects or infrastructure developments occur within their locality. This approach ensures that the community directly benefits from these endeavors, receiving salaries while contributing to the advancement of their neighborhoods. So they will receive a salary while working on their project. Below are some of the statements:

*"To address the area's poverty, different programs were implemented. The implementers provided training for wood carving and food processing. The people were oriented. Training was provided, and there were carpenters and ten food processors, but it stopped there. Unfortunately, the training has been implemented; it is just that the people did not apply it, and after the training, it is like nothing." - (Barangay Captain, Sicot)*

*"It has helped; it has improved the livelihood in the area; the livelihood in which the people continue is the [making bread stuffing] since there are also people who keep ordering. They have also been displaying these products in their little store at the crossing, especially since this place is a tourist destination; displaying things to sell is nice. They have been trained in livelihood; from the start, they were trained by Northwestern Mindanao State College (NMSC). There was a budget from the province; trainers were given tools and taught how to cook them. Aside from that, there is also training for vase-making, potty-making, and pots, as well as different job offers, such as farmers, carpenters, masons, and welders. Twelve Job Orders (J.O.) are assigned at the view deck and the entrance." - (Barangay Captain, Hoyohoy)*

As mentioned by Secretary Wendel Avisado in the launching of the Barangay Development Program in Davao City via Zoom last February 2021, the barangay and local government units play a critical role in the successful implementation of the Barangay Development Program and the resolution of the armed struggle. The implementers in Tangub City stated that they were trying their best to provide for the needs of the people and that there were changes in the barangay that they could observe. The implementers are confident that the program improved the standard way of living of the people because it provided farm-to-market roads that improved their mode of transportation. Unlike before, the roads were very muddy, and crossing them was hard for them; they had to wear slippers. Today, people can already wear shoes and heels when crossing the road. Aside from roads, the water system project also has helped the people with their sanitation and hygiene, and they can now correctly groom themselves to look pleasant before they go to school or the city. They were pleased with the program because it has improved the lives of the people in the barangay.

Even as implementers, they also appreciate the program because all the offices and local and national agencies are working together to help the affected areas, although they are restrained in budget. They claimed that it has dramatically helped the barangay, especially since the people cannot quickly go down from the mountain, so they have these different programs like the Serbisyo Caravan under the NTF-ELCAC in which different agencies go to the conflicted affected areas to deliver services to the community. They also mentioned that the people in the community are pleased every time they go there and that it should not end there; it will continue because they have this program sustainability and monitor the projects.

***Peace and Order***

As per the key informants, before the implementation of NTF-ELCAC, there were rampant cases of conflict in the area, which caused fear among the public. It was hard for them to work on their farms in the mountains because they were afraid to encounter the NPA in the area before the NPAs were just around the place. However, they could not do anything every time there were sightings of NPA since it would be hard for them to report to the authorities due to the muddy road, lack of signal, and lack of access to any communication. Nowadays, the renovation of roads due to NTF-ELCAC in the community has improved their lives not only in the socio-economic aspect but also in terms of peace and order. They have technologies allowing them to contact the AFP and PNP whenever they sense something malicious in the area. It is now accessible for the authorities to go to the place to respond to any emergency. The history of conflicts in the area is also one of the reasons that the people are afraid to roam around the place, especially at night. However, due to the implementation of the NTF-ELCAC program, there are already CVOs trained by the police to guard the area during the night, police visitations have become regular, and AFP is also doing its operations now and then. This can be supported by the statement below;

*"We only have NPA here; we experienced war here in 1984 when I had just recently got married; it was followed in 1985. So that was the time that there were animals injured, carabao, our house owned by our father been raided by the soldiers because the NPAs were near our house; they did that because they thought the NPAs were inside our house, but the NPAs were not there, they are just across our house." - (Barangay Captain, Hoyohoy)*

Based on Table 2, 113 of the 140 agreed that streets are now safe for the public to use even at night 19 said maybe, and only eight contradicted and answered no. Regarding the threat in the area, most respondents confirmed that there is no more threat to the people in the barangay. Also, 121 answered yes, 14 answered maybe, and only five disagreed. Table 2 also shows the case of Terrorism / Communism; out of the 140 respondents, 132 believe that the rate of Terrorism / Communism has been lessened, six are not sure, and only two answered no. Out of 140 forty respondents, 126 agreed that peace could be highly observed in the area, six answered maybe, and no one answered no. Therefore, peace in the area can be highly observed. Most community members agreed that crime incidents in the area have been lessened. Based on the table below, among the 140 survey respondents we have gathered, 133 people agreed, six were unsure, and only one disagreed.

As Governor Henry Oaminal (2023) mentioned, the Province of Misamis Occidental is a hotspot of crimes in the South. without the help of different provisions of peace and order, collaboration with the Local Government Units and law enforcement efforts, and the administration of former President Rodrigo Roa Duterte, the province could have been the drug organized crime capital of Mindanao because of the threat brought by the Kuratong Baleleng and communist groups in the area. The Governor also stated that peace is one of the government's priorities and that when there is peace, development will follow.

**Table 2.** Impact of the two-year implementation of NTF-ELCAC in terms of peace and order

| Indicators | Brgy. Hoyohoy | | | Brgy. Owayan | | | Brgy. San Antonio | | | Brgy. Sicot | | | Total | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | **Y** | **N** | **M** | **Y** | **N** | **M** | **Y** | **N** | **M** | **Y** | **N** | **M** | **Y** | **N** | **M** |
| 1. The streets are already safe for the public, even at night. | 20 | | 15 | 23 | 2 | 10 | 15 | 3 | 17 | 30 | | 5 | **88** | **5** | **47** |
| 2. There is no more threat to the people. | 20 | | 15 | 24 | 3 | 8 | 16 | 2 | 17 | 25 | 6 | 4 | **85** | **11** | **44** |
| 3. The terrorism/communism rate has been lessened. | 24 | | 11 | 26 | 1 | 8 | 13 | 6 | 16 | 26 | 6 | 3 | **89** | **13** | **38** |
| 4. Peace all over the area can be observed. | 26 | 2 | 7 | 24 | 6 | 5 | 19 | 7 | 9 | 22 | 9 | 4 | **91** | **24** | **25** |
| 5. Crime incidence in the area went down. | 28 | | 7 | 32 | | 3 | 19 | 4 | 12 | 33 | 2 | | **112** | **6** | **22** |

The answers of the residents from the barangay can support this. Most confirmed that peace and order can be observed in the area. Some claimed that their streets are already safe for the public because of the frequent visits of the AFP and PNP to monitor them. They also mentioned that there are no longer NPAs in the area because of the existence of technology, specifically cell phones, which, according to them, were a big help since it has been easier to contact and report something to the PNP and AFP. Statements from key informants in the barangays further support this;

*"The road is now safe due to NTF-ELCAC. For peace and order, armies came here. The police also visit from time to time in the barangay; they were just recently here." - (Barangay Captain, Sicot)*

*"It's not scary to go for a walk during the night; there's no [threat] anymore. Before, it was not good to go for a walk here, as the CVO was always roving around. This time, the soldiers would enter when they heard something, but for now, there are no rebels anymore, and they [NPA] are also gone. - (Barangay Captain, San Antonio)*

As stated on the Official Website of NTF-ELCAC 2019, under it is program is Localize Peace Engagement, which is in collaboration with different agencies such as PNP, DILG, and NICA, which focuses on facilitating peace talks, community consultations, and peace engagement with the CTG members to achieve sustainable peace. From the point of view of the AFP in Tangub City, they mentioned that in terms of the implementation of NTF-ELCAC, their priority is the safety of the people. They prioritize the safety of the workers during the construction of any projects in the area since there were cases of burning of government-owned equipment, which the NPA has allegedly destroyed. It was believed that this was one of the tactics of the CTG and that after that incident, the NPA manipulated the people's minds to point out that the government was the perpetrator. They have this POC (Point of Contact) in the different municipalities and barangays so that during the implementation of projects, especially the BDP, it will be monitored by the AFP and Peace and Order Council to maintain the safety of the people in the community.

***Social Relationship***

As mentioned by the key informants in the barangay, their relationship with the government is now different from before; they are closer and no longer afraid of the soldiers and police officers. Some claimed that it was also because they were affected by the conflict in the area and that the improvements in the barangay in terms of livelihood, farm-to-market road, electrification, etc., brought by the NTF-ELCAC have helped them feel that they are being heard by the government which has rebuilt their relationship. This statement can support this.

*"Our relationship with the government is different from before. The people are closer to the government now. As I always said, the people feared the soldiers, but now they are not scared anymore." - (Barangay Captain, Sicot)*

In terms of domestic violence, Table 3 below shows that 99 people agreed that domestic violence had been reduced, while there are only three people disagreed and 38 of them were not sure. The result shows that domestic violence has been reduced in the area. Most of the respondents agreed that conflict among neighbors has declined. 82 answered yes, only 41 answered maybe, and 17 answered no. So, we can conclude that the conflict among neighbors has declined. Also, 12 answered yes, eight answered maybe, and only three answered no. Based on this result, "Bayanihan" can be observed among the people in the community.

Further, 96 respondents agreed that discrimination had been lessened. 31 were unsure and answered maybe, and 13 and thirteen disagreed. The result indicated that discrimination in the area had been lessened. Almost all respondents agreed that the relationship between the people and the government significantly improved since 103 answered yes. While 29 of them were not sure, and three people disagreed. Based on the results, we can say there is an improvement in the relationship between the government and the people in the barangay.

**Table 3.** Impact of the two-year implementation of NTF-ELCAC in terms of social relationship

| Indicators | Brgy. Hoyohoy | | | Brgy. Owayan | | | Brgy. San Antonio | | | Brgy. Sicot | | | Total | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Y | N | M | Y | N | M | Y | N | M | Y | N | M | **Y** | **N** | **M** |
| 1. Domestic violence has been reduced. | 26 | 1 | 8 | 24 | 2 | 9 | 18 | | 17 | 31 | | 4 | **99** | **3** | **38** |
| 2. Conflict among neighbors has declined | 27 | 3 | 5 | 22 | 8 | 5 | 13 | 1 | 21 | 20 | 5 | 10 | **82** | **17** | **41** |
| 3."Bayanihan" among the people in the area can be observed. | 33 | 2 | | 34 | | 1 | 27 | 1 | 7 | 35 | | | **129** | **3** | **8** |
| 4. Discrimination has been lessened. | 28 | 3 | 4 | 25 | 4 | 6 | 20 | 4 | 11 | 23 | 2 | 10 | **96** | **13** | **31** |
| 5. Relationships between the people and the government significantly improved. | 29 | 1 | 5 | 25 | 3 | 7 | 22 | 2 | 11 | 27 | 2 | 6 | **103** | **8** | **29** |

As reported by Joyah Mae Quimoyog in the Philippine Information Agency (2023), the AFP explained that the projects produced by NTF-ELCAC represent the government's sincere desire to discuss, develop, and implement programs that could help the people in the conflicted-affected areas. The Regional Director Agnes De Leon of DILG Region 1 added that the government's effort to bring community services would strengthen public trust. Regarding the people's social relationships in Tangub City, the residents from the different barangays also express their sentiments.

As stated, the dynamic between the residents and the government has undergone a notable transformation, characterized by increased proximity and diminished fear of soldiers and police officers. Some attribute this change to the impact of previous conflicts in the region, suggesting that recent improvements such as enhanced livelihood opportunities, farm-to-market roads, and electrification, among others, have played a significant role in rebuilding trust and fostering a closer relationship with the government. According to some of the informants:

*"There has been a big change because people have seen that the government has helped a lot. So, they have nothing to criticize; indeed, we cannot call it criticism and bash [because] it is true, and the people have experienced it. The road here is quite difficult; we always walk to the highway since the road is not cement, no gravel, and only soil; it was very muddy before. Then, when you carry something, you will carry it in your head while walking up to the highway, wearing nothing; you cannot even wear slippers. Can you imagine that? That is how it was before. The students before could not go to [school] because you had to travel that hard to get there, but now it is very okay; we are closer to the government." - (Barangay Captain, Owayan)*

*"It seems like our relationship with the government has been calm since the conflict is diminishing because it was so bad before that everything has been affected due to the war between NPA and the soldiers. There were many war cases here, but it's worse in Tudela. It was very chaotic, but now it is somewhat peaceful, which made the people in our barangay suffer before. If your barangay is fighting, you will become afraid so that you will evacuate. That is one of the factors that made the people suffer before; it was the conflict." - (Barangay Captain, Hoyohoy)*

According to Sangguniang Panlalawigan Member of Ilocos Sur Benjamin Maggay 2023, to bring peace and development the people must cooperate with the government; he was also hoping that through the programs of NTF-ELCAC and the presence of different agencies PNP, DILG, AFP and all other government bodies the people would not be recruited by the CTG. Based on PNP in Tangub City, the people were pleased about the implementation; it has dramatically improved their relationship with them; whenever they would go there in the area, they could now see the smiles on the faces of the people in the community, and that the people are no longer afraid with uniformed personnel. They can now receive different reports of incidents; even minor crimes like drunkards in the areas will now be reported to them. The PNP was also pleased with the current relationship that they have compared to before, and they can now feel the trust among the people in the community. Nowadays, people communicate with them, and when there are sightings of NPA, the civilians would directly call and report it to them.

As mentioned by other implementers, they have noticed good changes in the relationship between the community and government. The AFP also claimed that the people were no longer afraid of them anymore compared to before that every time they visited the area, they could feel hatred in their eyes because they believed that during those times, the civilians were already members of the NPA. Now, it has changed, and there were times when people would cry if ever the military decided to leave the area to be transferred to other places since they had created a good relationship with them already; that is how close the relationship between the people from the barangay and the military is.

## 4.0 Conclusion

This study can also be supported by the recently published research journal article of Nicolas et al. (2024), wherein the findings declared positive changes in the economic situation of the people in selected communities in Kibawe, Bukidnon, Philippines. The implementation of NTF-ELCAC has developed their livelihood and infrastructures, providing easy access to essential services, healthcare, and education, significantly affecting their socio-economic development. It was claimed that the government has successfully reduced poverty in the areas and also has given programs to the Indigenous people. Aside from that, it has also improved its mode of transportation due to the farm-to-market road project of the NTF-ELCAC. The people in the community can now easily travel from their barangay to other areas with more opportunities for employment, education, and other services. It has been confirmed that the people in the selected communities encouraged their involvement in assemblies and seminars conducted in the barangay, improving their social relationship with the government. The paper also stated that through NTF-ELCAC, the number of insurgency incidents has now lessened. The NTF-ELCAC in Kibawe, Bukidnon, has impacted the lives of the Indigenous people in terms of political, social, and economic. Moreover, according to the study of Sumad-on (2021), through the coordination of different agencies such as PNP, AFP, and the local government and the participation of the community with the help of the Barangay Local Government Unit, the threat against terrorism and criminal will be successfully defeated, and peace and order will be maintained.

Travis Hirschi's Control Theory could significantly enhance this study's analysis of the community's situation. A deficiency in social bonds with society has led individuals to engage in deviant behavior and support the NPA. In conflict-affected areas of Tangub City, no new surrenderees have emerged in the four barangays, with residents often referred to as "MASA" due to their previous support for the NPA, making them eligible beneficiaries of NTF-ELCAC. Before implementation, residents harbored fear towards city dwellers, including soldiers, police, and LGU personnel, as these figures were seldom seen in their barangays. Living in remote mountainous areas with muddy roads, often traversable only by foot or horse, further isolated these communities, hindering the establishment of external relationships. The absence of LGU presence underscores a lack of social bonds, aligning with Hirschi's Social Control theory. However, following NTF-ELCAC implementation, positive shifts in social bonds among barangay residents and society have been observed.

The implementation of NTF-ELCAC has changed the situation; it has also corresponded to the four factors of Control Theory, such as attachment, which explains that strong attachments prevent a person from committing crimes and the rejection of those expected to help them, such as the government is one of the biggest causes of why they have no choice but to commit crimes. Knowing the social relationship status of the people from the conflict-affected areas, it has been revealed that the respondents have no attachment to the people outside their barangays because they do not receive visitors to the area often. However, with the implementation of NTF-ELCAC, the roads are now developed, there are people from the government assigned in the area, and there were a series of visits from the government because of the projects being implemented, seminars, assemblies, and meetings. So, it has resolved the issue of lack of attachment; the government has now established a strong attachment with the people from the barangay. This explains why they are now close with the soldiers, police, and the LGU.

The next factor is commitment; this talks about what the person is committed to doing. People would be less likely to commit deviants if they had properties; they were achievers, accomplished, and educated. This was measured by knowing the socioeconomic status of the area. It was revealed that there were changes in terms of the livelihood, business, and education of the people in the area because of the implementation of NTF-ELCAC, which has helped them get closer to the government instead of the NPA. The people in conflict-affected areas spend their free time differently than those who live in the city, especially since the area lacks different establishments, activities, and opportunities.

The element of involvement affects the social bond of a certain person, and according to Hirschi, if people are involved in many activities, they are less likely to commit crimes. With this, this study tried to find out the people's experiences with the projects implemented by NTF-ELCAC. The implementation of NTF-ELCAC in the area has greatly helped the people in the barangay to get busy since the program also implemented different projects and provided opportunities and education. So, the people in the barangay, instead of joining the NPAs or committing crimes, are now busy working, and some are now at school continuing their education.

In terms of belief, according to Hirschi, the person would be less likely to commit crimes if they knew the importance and values of the law. The people in the community have been manipulated by the NPA, which was a big factor in why they were trying to question and disobey the law imposed by the government. However, NTF-ELCAC has dramatically changed their views about the law, especially now that they are not afraid to approach our police and soldiers anymore; this is because of the conduction of seminars, awareness programs, and orientation, which has dramatically opened their eyes to the beauty and importance of the program.

The presence of NTF-ELCAC in Tangub City has fostered a robust connection between the Local Government Unit, other agencies, and the residents of the area. This relationship aligns with the factors outlined in Travis Hirschi's Control Theory, particularly attachment, commitment, involvement, and belief, which have been strengthened through various projects initiated by the NTF-ELCAC. As a result, the government has gained better control over the situation, implementing programs and providing free education, thereby deterring individuals from engaging in deviant behavior.

After two years of program implementation, the positive impact on the lives of the residents is evident. The socio-economic development in the area has significantly improved, particularly with the successful execution of the Barangay Development Program (BDP), which addresses the community's fundamental needs. Additionally, there is a notable enhancement in peace and order within the barangay, primarily attributed to the collaborative efforts of the Armed Forces of the Philippines (AFP) and the Philippine National Police (PNP). Moreover, there has been a notable improvement in the social rapport between the residents and the government. People express a newfound closeness to the government, feeling unreserved in their interactions and reporting suspicious activities directly to the AFP and PNP without fear.

This work helps to determine the program's status and whether the local government of Tangub should continue the program. Aside from that, it has also identified the recommendations of the people for the program. Most of the respondents believed that the program is good and that it has improved their lives. The various implementations of different projects based on the 12 clusters are mainly why they wanted it to be continued. They suggested that the program should finish what it has started and that they are expecting the fulfillment of the ongoing and upcoming projects that should be implemented in their barangays. On the side of the implementer, they also wanted to continue it, especially since they could see the changes among the people in the barangay. They have even suggested more programs to help marginalized individuals like women, laborers, and the urban poor. All in all, the implementation of the program NTF-ELCAC under the Whole-of-Nation-Approach with its policy EO 70 and product RCSP implemented by the different agencies in the LGU Tangub City together with the people of the conflict-affected barangays have gained positive and negative impact based on the collected data of the researcher. This study focused only on Unveiling the Impact of NTF-ELCAC in Four Barangays of Tangub City. Thus, the researcher suggests that future researchers compare the implementation in Tangub City to the other neighboring places that also implemented NTF-ELCAC, such as Lanao Del Norte, Zamboanga Del Norte, Davao Del Sur, etc., for it to be more interesting and intensive.

## 5.0 Contributions of Authors

Reyscielle B. Casuyon gathered data in the four conflict-affected barangays: data analysis, writing, and encoding. Amabelle A. Embornas was the thesis adviser who guided the researcher with data analysis, editing, and writing.

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## 7.0 Conflict of Interests

The authors of this work declare no conflicts of interest about the publication of this paper.

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# Sentiment Analysis of Student Evaluation for Teachers Using Valence-Aware Dictionary and Sentiment Reasoner

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**Abstract.** This paper analyzed the quality of teaching using the Student Evaluation of Teaching (SET). The Valence Aware Dictionary and Sentiment Reasoner (VADER) was utilized to assess textual comments, providing a comprehensive view of teaching effectiveness beyond numerical ratings. The objectives were to identify faculty strengths and areas for improvement based on student feedback, analyze sentiment toward teaching methods, and determine the optimal number of clusters within the dataset. The analysis included 28,222 student comments from three semesters, preprocessed through tokenization, stopword removal, part-of-speech tagging, and lemmatization. A word cloud visualized common terms, while K-means clustering and the Elbow method identified five as the optimal number of clusters. Results indicate that most comments are positive, emphasizing effective teaching methods' role in creating a positive educational experience. The findings suggest integrating machine learning with VADER and expanding the dataset for broader insights. Institutions should develop effective teaching strategies, prioritizing regular feedback collection and analysis.

**Keywords:** Teaching effectiveness; Student Evaluation of Teaching (SET); Sentiment analysis; Feedback collection.

## 1.0 Introduction

Student Evaluation of Teaching (SET) is frequently used in higher education to collect feedback from students on the quality of instruction. The goal is to improve teaching methods and obtain perspectives that standard evaluations may not capture. Initially, standardized questionnaires with multiple-choice or Likert scale ratings became more prevalent for evaluating course organization, instructor communication, and student involvement. Student evaluations of teaching (SETs) continue to be widely utilized for gathering student feedback, serving various purposes such as guiding improvements in education, influencing staffing decisions, and evaluating academic programs. The reliability and validity of SETs are currently the subject of ongoing scrutiny and discussion. While some studies suggest that student evaluations of teaching can be advantageous, others highlight potential biases, such as students showing a preference for more accessible courses or participating in popularity contests. Higher education institutions depend heavily on student evaluations to enhance teaching, determine faculty hiring, and influence upcoming courses (Newman & Joyner, 2018). Gathering and combining the feedback from these evaluations is usually complicated due to the personal opinions involved. While the numerical scores offer a way of quantifying teaching evaluations, the comments given in prose form are essential. They can be used to show how students view things, their experiences, and even suggestions that may help in the future. It may not be easy to summarize or evaluate this type of subjective response since there are various kinds of replies due to the language being used subjectively.

At the university level, it is essential to assess how effective a teacher is to ensure that the quality of education is attained. The SET is the tool that drives this assessment process. SET is designed to collect feedback from students about their experiences when learning. The system must score instructors based on quantitative data that measures their performance. However, the qualitative comments or thoughts made by the students need more attention but are often ignored. Although they give much insight into what could be wrong with specific methods or materials used during lectures, such statements are frequently not taken seriously enough, and they miss out on being constructive critics in this way. Quantitative data provides general knowledge, but qualitative feedback offers more detailed and nuanced insights, which may improve teaching evaluations' overall comprehension and efficacy. Yuan and Yang (2019) presented a text analytics model for analyzing comments in Student Evaluation of Teaching (SET) forms. The comments are grouped into three categories: course content, teaching style, and instructor performance, going beyond simple feeling analysis. This allows instructors to discover specific areas they need to improve by using student perceptions. Herold (2019) noted that other institutions can utilize these same remarks for evaluation and peer learning. Emphasizing growth over judgment helps create a culture of ongoing improvement in teaching practice. One is advised to combine numerical scores with sentiment analysis methods. A profound difference exists between rating something and knowing why it was rated that way, providing deeper insights into students' experiences. Moreover, the intrinsic subjectivity of qualitative data (Cheng & Li, 2022) adds even more complexity, highlighting the importance of inter-rater reliability when analyzing comments. This ensures that multiple readers consistently understand the tone and meaning behind them.

This study analyzed student evaluations of teaching at Cavite State University—Silang Campus. The researchers used the Valence-Aware Dictionary and Sentiment Reasoner (VADER) to examine the students' sentiments. Li et al. (2023) stated that student feedback is essential in evaluating effective teaching and giving directions for faculty growth. The research aims to identify the strengths and areas for faculty improvements based on student feedback, analyze overall sentiment toward the instructors' teaching methods, and determine the optimal number of clusters for the 2022-2023 and 2023-2024 first semester datasets. This research aims to add to discussions on effective teaching techniques and evaluating student attitudes. It intends to provide direction for faculty development programs, promote specific improvements in teaching methods, and enhance the overall education experience for teachers and learners. By examining all angles, this study uncovers various dimensions of appraising instruction at higher levels, which will continuously improve and promote innovation in university teaching.

## 2.0 Methodology

### 2.1 Research Design

The researchers employed a quantitative, non-experimental method to investigate how students perceive teaching quality, assess feedback, and examine sentiment. The data for this study was obtained from the Student Evaluation of Teaching (SET) at Cavite State University – Silang Campus Human Resource Management. Quantitative research methods are valuable for revealing the relationships between variables and their outcomes. Li et al. (2023) highlighted the impact of project-based learning on enhancing student performance by examining data from various studies, emphasizing the importance of quantitative approaches in educational research. This approach was chosen because it provides unbiased assessment and evaluation, enabling precise numerical descriptions of student opinions, responses, and feelings.

Moreover, using quantitative methods allows for applying statistical methods to detect patterns and trends in the data, which improves the ability to generalize findings because of the larger sample sizes commonly used. Based on the existing SET data, a non-experimental method proved feasible and effective, avoiding additional experimental procedures. The credibility and verification offered by well-known quantitative tools like VADER for sentiment analysis further reinforced the choice, guaranteeing precise and practical insights to enhance educational practices.

### 2.2 Data Source

The dataset was obtained from the Human Resources (H.R.) department, specifically the Student Evaluation for Teachers (SET) data from 2022 to 2024. The dataset was compiled and anonymized to ensure a comprehensive and representative dataset. Although not directly involved in the research, students contribute essential feedback as their evaluation forms serve as the primary dataset for sentiment analysis using VADER (Valence Aware Dictionary and sEntiment Reasoner). Their input is crucial for understanding the perceived effectiveness and quality of teaching. Teachers are included as indirect participants as they are the ones being evaluated. The evaluation primarily examines the feelings conveyed in student feedback about teachers' performance, aiming to recognize patterns and potential areas for enhancement. Ethical concerns have been taken into account by anonymizing the data and securing the required permissions from the educational institution, thereby adhering to ethical standards to safeguard the privacy and confidentiality of all individuals involved.

### 2.3 Research Instruments

Researchers used various methods to organize the gathered data systematically during the data analysis phase. Researchers provided a detailed description of each algorithm used in the study to ensure complete understanding. To enhance the quality of the textual data, the researchers utilized the Natural Language Toolkit (NLTK) and its functionalities for tasks such as tokenization, removal of stop words, and stemming. The initial step involved preparing the input text adequately for sentiment analysis and language translation. For sentiment analysis, the researchers used the VADER method and the Vader Sentiment library to evaluate sentiment polarity quantitatively. VADER is specifically designed for social media text and can differentiate between positive, negative, and neutral expressions, which helps in better understanding the sentiments expressed in the gathered student feedback.

In the language translation phase, ChatGPT was used for its natural language processing capabilities to provide accurate and contextually relevant translations of Tagalog text. The translated material underwent validation by an English evaluator, and sentiments expressed in both English and Tagalog were thoroughly analyzed in a bilingual way. Matplotlib, Tkinter, and WordCloud were used to display the sentiment analysis results visually. Matplotlib and Tkinter generated charts, graphs, and a user interface, providing a comprehensive visual depiction of sentiment distributions. The dataset was divided into distinct groups using K-means clustering to identify strengths and areas requiring improvement. The elbow method, a cluster analysis approach, was used to determine the best number of clusters. Additionally, a WordCloud was used to visually present commonly used words in the comments, offering further insight into the primary themes conveyed in the feedback.

### 2.4 Ethical Considerations

The researchers maintained anonymity and confidentiality by keeping participants' information private and inaccessible to third parties. The dataset was anonymized.

## 3.0 Results and Discussion

### 3.1 Strengths of the Faculty Using VADER

Table 1 shows the most common comments for faculty strengths based on students' evaluations. These comments give an idea about teachers' characteristics or actions that students find meaningful.

**Table 1.** Most frequent comments on the strengths of the faculty

| Frequency | Comments |
|---|---|
| 3238 | Professional |
| 943 | They value the concerns of their students. |
| 903 | Good at teaching |
| 527 | Mastery the lesson |
| 364 | Knowledgeable |
| 356 | Explains well |
| 343 | Kind, discipline, and creativity |
| 326 | Strong communication skills |
| 286 | The professors push us to do our best in every activity and meeting. |
| 244 | She always makes sure we learn from her. |
| 168 | Time management and teaching methods |
| 161 | Active listening |
| 123 | She has strong communication skills. Also, she demonstrates professionalism. |
| 97 | Gives appropriate examples and maximizes time |
| 41 | They can make the students feel at ease when learning something new. |

The professionalism of professors was mentioned 3238 times showing how much students care about them being on time, ready for class, and polite, among other things. This was followed by 943 comments that stressed how valuable it is for lecturers to listen to students' worries and then act on them – indicating understanding, empathy, and support to students. Also, among the critical factors cited was good at teaching, with 903 mentions, 527 mentions for mastery of the lesson, 364 mentions for knowledge, 356 mentions for explaining well, and strong communication skills with 326 mentions. Likewise, teachers with good command over subject matter while simplifying complex ideas were equally recognized by the students. Good communication, which includes attentive listening, is consistently highlighted as crucial for successful and engaging teaching. The ability to promote and support student's academic development is highly valued, as is the significance of well-organized and innovative teaching strategies that incorporate different approaches and efficiently use time.

Analyzing most comments in student assessments provides a distinct representation of the qualities and actions highly esteemed by educators. Characteristics such as professionalism, articulate communication, successful instruction, encouragement, and structured teaching approaches are fundamental factors that enhance the quality of the learning process. By concentrating on these elements, teachers can improve their instructional methods and successfully fulfill their students' needs and demands. Educators with extensive expertise can better engage students and promote a deeper comprehension of the subject matter (Wieman, 2019). Furthermore, a thorough assessment of teacher effectiveness shows that professional knowledge, encompassing both subject matter and pedagogical knowledge, significantly impacts teaching quality and student results (Kaliris et al., 2022).

### 3.2 Positive Attributes and Areas for Improvement of the Faculty

Table 2 provides an overview of common student feedback regarding ideas for improving their educational experience. The frequency of each comment can determine the level of agreement among students.

**Table 2.** Most frequent comments on suggestions for improvements

| Frequency | Comments |
|---|---|
| 150 | Be more engaging |
| 87 | Nothing |
| 85 | Please refrain from canceling classes when only 1-2 hours are left before the class. |
| 68 | Teaching should be slowed down because it is too fast, and the work should be reduced because there are too many activities and homework. |
| 66 | It would be better to master what she teaches because sometimes the students make too many corrections. |
| 63 | I do not have any suggestions because Ma'am is good at teaching. |
| 46 | There is nothing more because she has fulfilled all the qualities of a good teacher. |
| 45 | Teach the syntax or how to code one by one because most of the sections cannot keep up… |
| 39 | Expand the teaching further. |
| 33 | You are already okay with me, ma'am. Keep it up. |

Leading the list with 150 mentions is the suggestion that instructors should increase their involvement in their teaching methods, showing a preference for a more dynamic and participative classroom environment. Some students are content with the existing teaching methods and course structure, as they have not suggested any specific changes. Issues regarding last-minute class cancellations have been raised, indicating that improved schedule communication is necessary. Several students feel that the pace of instruction is excessively rapid and the workload is overly burdensome. In addition, there are worries regarding the instructors' knowledge in the fields. On a bright note, 63 comments praise teaching excellence, and 46 comments acknowledge that the instructors exhibit all the attributes of effective teaching. Students seek a systematic method to grasp syntax in technical or coding-oriented courses. Additionally, 39 comments express a wish for a wider range of topics to be covered, while 33 comments emphasize the importance of upholding the current teaching standards.

The student experience could be improved by implementing some suggestions. Despite the positive feedback, it will take a focused effort to address the challenges, boost engagement, improve communication, adjust the teaching pace, and ensure a thorough understanding of the subject matter. The potential exists for these changes to enhance the quality of education in schools, benefiting both students and teachers. It is achievable to uphold high standards while continuously pursuing educational excellence by adopting a comprehensive approach. Research shows that adjusting the pace of instruction can significantly impact student satisfaction and learning. For example, a meta-analysis discovered that students experience benefits from a well-balanced teaching pace that neither rushes nor drags, leading to improved comprehension and retention of information.


**Figure 1.** Word Cloud Visualization for strengths of the faculty


**Figure 2.** Word Cloud Visualization for suggestions for improvement

The most common terms in student feedback are highlighted in a word cloud, with their size reflecting both frequency and relevance. The researchers determined the significance of the words in the word cloud by examining word association, which involved analyzing the frequency and co-occurrence of words in the feedback comments to identify key terms that best represented student opinions. It was crucial to analyze how often certain pairs of words appeared together and the connections between them to uncover the important terms that represented student viewpoints. By examining co-occurrences and contextual relationships, the researchers could pinpoint words associated with positive, neutral, or negative feelings. The word cloud was created diligently to precisely encapsulate the primary themes and concerns in the students' feedback, thereby providing an effective representation. Data visualization simplifies identifying large datasets' patterns, trends, and irregularities (Brush, 2023).

The word association provides a comprehensive understanding of how students view their instructors' strengths and areas for growth. Students' favorable comments underscore their emphasis on effective communication, a strong understanding of the subject matter, approachability, and engaging teaching approaches. Students value instructors who are well-prepared, knowledgeable, and thoughtful. Critical feedback points to areas where instructors can improve their teaching methods. Key themes include the necessity for more precise and slower explanations, improved time management, and more interactive and engaging discussions. The recommendations include providing detailed demonstrations of coding problems, improving the management of workloads and due dates, and ensuring effective communication and understanding with all students. When combined, these observations offer a thorough understanding of the faculty's strengths and areas for development, enabling focused actions to improve the overall educational experience.

**Table 3.** Word association of Word Cloud visualization for strengths of the faculty

| Word | Comment |
|---|---|
| Student | She can communicate with her students, unlike others. Always caters to what the students need. |
| Teaching | She is extremely skilled at teaching and can convey even difficult lessons. She enjoys teaching and is good at it. |
| Good | Approachable and good at explaining lessons. Good at making PowerPoint presentations. |
| Lesson | He is excellent at explaining lessons and assigned activities. He masters the lesson he teaches, knows every detail, and has answers even if students keep asking questions. |
| Considerate | Sir is very kind, easy to talk to, and very considerate. Very considerate incredibly to students and ready to help when we do not know what to do. |
| Subject | She is great, especially since she is already familiar with the subject. Has extensive knowledge of the subject been taught. |
| Knowledgeable | Ma'am is knowledgeable in what she teaches. He is super-duper knowledgeable about the lessons; of course, he is a walking DSM-5 TR. |
| Approachable | He is approachable. He is not intimidating because when you meet Sir, he always smiles, which is infectious. He is also approachable and good at explaining lessons. |
| Topic | Sir is good at discussing topics; he explains every topic properly and makes it easier to understand. |
| Well | He teaches well, and I learned much from him as a student. He explains the lesson well. |
| Always | She is excellent and proficient, always prepared, and updates her resources. She also always teaches and explains the lesson well. |
| Understand | It finds a way to make us understand the lesson. She explains what she teaches clearly in a way that students understand. |
| Mastery | Excellent at teaching and demonstrates mastery of the subject being taught. Mastery of the subject he teaches. |
| Activities | The teaching is good, and some activities help hone our abilities. She teaches well and is hands-on with activities. |
| Discussion | He explains the discussion clearly. Engaging discussion. |

**Table 4.** Word association of Word Cloud visualization for suggestions for improvement

| Word | Comment |
|---|---|
| Student | Avoid speaking too fast, as sometimes students cannot hear it. Also, listen to other students, not just one student. |
| Nothing | Nothing; she is already excellent. Nothing to say. |
| Teaching | Expand the teaching further. Expand the teaching further. |
| Lesson | Please explain the lesson more clearly so we can understand it better. Do not rush through the lesson too much. |
| Please | Please reduce the workload given, especially in asynchronous tasks. Even if it is not her schedule, she still gives them, and the assignments lack sample outputs. Please announce immediately when there will be an activity |
| Understand | Provide more demonstrations of actual coding problems so students can better understand and apply them in real-time. It is somewhat complicated to understand if the logic in coding is not demonstrated. Understand the students who cannot run the code he gives. |
| Ma’am | Ma'am, I hope you lower the standard of your exam questions because they were challenging. Ma'am provides PowerPoint presentations, but I do not think everything is explained thoroughly. |
| Activities | It would be better to teach the other activities first before assigning them. Please take it slow with activities, especially with due dates; do not make them all simultaneously. |
| Sometimes | Sometimes, I cannot hear what sir is saying. Sometimes, his teaching does not match the materials he provides, his computations are unclear, and he does not reply properly when we have concerns. |
| Time | It is just about time... we feel short on time, like when answering exams. The time is not enough to finish... it is still fun to take a math exam. He should come to class on time and dismiss class on time. |
| Subject | I suggest that he pay more attention to students struggling with his subject, be more active during class, and show more interest. |
| Hope | I hope his explanation of computation is clearer, and when he corrects computations, he makes sure they are correct. I also hope she reduces the right-minus-wrong way she checks our exams because it is stressful, and her exams are already difficult. |
| Better | Proper teaching approaches would be better. Please explain the lesson more clearly so we can understand it better. |
| Discussion | Please speak louder during discussions. Discussions should be more interactive. |
| Need | Discussions need to be more interactive. Sir needs to speak slower because sometimes we cannot keep up. |

### 3.3 Overall Sentiments of the Students

As shown in Table 5, out of 28,222 student responses, 67.8% (19,178 comments) were positive, 28.2% (7,917 comments) were neutral, and 4.0% (1,127 comments) were negative. The prevailing positive feedback suggests that most students are content with their instructors' teaching approaches, course materials, and class participation. The analysis of student feedback identified the most frequently used words and their corresponding comments, offering insight into students' primary themes and feelings. A summary table has been prepared to display the top 15 commonly used words, their frequencies, and sample comments illustrating the context in which these words are used.

**Table 5.** Most occurring words, frequency, and sample comments in the overall sentiment of the students

| Rank | Word | Frequency | Sample Comment | Sentiment |
|---|---|---|---|---|
| 1 | Students | 5818 | They value the concerns of each student | Positive |
| 2 | Good | 5170 | Good Teacher | Positive |
| 3 | Teaching | 4010 | Very good at teaching | Positive |
| 4 | Lesson | 2590 | She is good at explaining her lessons | Positive |
| 5 | Subject | 2512 | Good teachers Have a mastery of the subject and keep the students' interest. | Positive |
| 6 | Teacher | 2329 | A very interesting teacher, kind and good at discussing our lesson | Positive |
| 7 | Class | 1677 | Holds classes as much as possible despite his busy schedule. Effective way of teaching. Humorous and knowledgeable not only by the book but also in life | Positive |
| 8 | Approachability | 1575 | Her strength is her approachability. That is why talking to her and raising concerns is easier. | Positive |
| 9 | Time | 1499 | Always provide PPT on time for the class discussion | Positive |
| 10 | Well | 1376 | Kindness, understanding the students well, and fun when teaching. | Positive |
| 11 | Great | 1352 | I thought she was strict, but she was not as the days went by. She was doing her best to be a great leader so we could be better students. | Positive |
| 12 | Clear | 1309 | He emphasizes every word clearly and clearly and gives a positive environment. | Positive |
| 13 | Understand | 1269 | We understand that we have to meet the timeline of the lesson, and we appreciate that you are giving us 5 mins. to breathe and relax ourselves | Positive |
| 14 | Appropriate | 1249 | Respond in a more appropriate manner | Negative |
| 15 | Considerate | 1192 | Be more considerate, especially on working students. | Negative |

The frequency analysis of words uncovers the main themes in students' feedback, providing important insights into their concerns and priorities in the educational setting. The repeated use of the word "students" with 5818 mentions underscores a focus on their needs, underscoring the significance of addressing them to enhance the overall educational experience. Furthermore, the amount of positive feedback regarding the quality of teaching, as demonstrated by words such as "good," with 5170 mentions, 4010 mentions for "teaching," and 2329 mentions for "teacher," indicates a high degree of satisfaction with the skills and delivery of educators. Moreover, the importance that students attach to the effectiveness of lessons and the clarity of the content emphasizes the significance of well-explained and easily understandable material. Students greatly value instructors' mastery and expertise in the subject, as indicated by terms like "knowledgeable" and "subject expertise."

It is important to acknowledge that students appreciate friendly and approachable teachers because they help create an environment of support during learning. Stressing the importance of well-organized lessons and punctuality depends on timely delivery and reasonable arrangement of class activities. The educators are supposed to show effective communication skills, empathy, and respect towards others, which learners highly respect. These views contain useful tips for instructors wishing to enhance student satisfaction and academic performance. These ideas are helpful for teachers who want to make their students happy and do well in school. One way teachers can understand how kids feel about their classes is by using sentiment analysis. This will tell them if their teaching style is good and what needs to be changed (Kastrati, 2021). Giving feedback is essential in improving students' learning experiences and teaching quality at tertiary level education. Conventional ways of providing feedback have been said to only partially take care of student's needs for improvement (Mamoon-Al-Bashir et al., 2016).

### 3.4 Optimal Cluster for Student Evaluation

Cluster analysis must be performed to examine data analysis and pattern discovery. Usually, data are divided into k-clusters using the K-means clustering method based on their similarities. Determining the correct number of clusters (k) in K-means clustering is difficult. The Elbow Method is a rule-of-thumb technique that involves graphing the within-cluster sum of squares (inertia) against the number of clusters to find the most suitable k. The primary idea of partitioning objects into classes (or clusters) so that the similarity between having things in one cluster is made higher than when having them placed within different clusters should be applied to several data sets as it helps promote cohesive units while differentiating amidst disparate elements (Liu, 2022b).

Figure 3 shows the findings of grouping data into k-means clusters for two principal components by comments made on student evaluation of teachers. To improve clarity, the dataset has been condensed to two principal components, with the x and y axes denoting the first and second principal components. Each comment is represented by a point on the scatter plot and is assigned a color based on its cluster. Using the clustering algorithm, the data has been segregated into distinct groups, each indicated by a different color. This visualization indicates the presence of underlying patterns in the data. Clusters with closely grouped points suggest strong similarities among the comments, whereas widely dispersed points indicate weaker similarities.

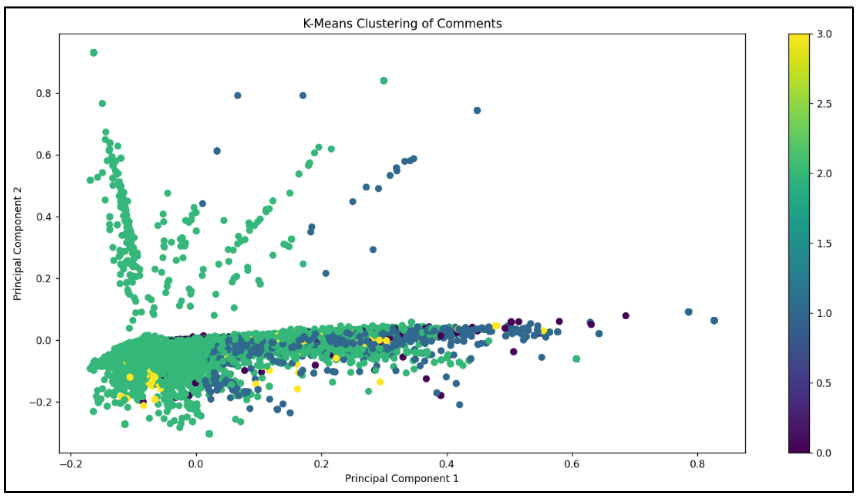


**Figure 3.** Scatter Plot

The Elbow Method chart (Figure 4) plays a fundamental role in determining the best number of clusters by displaying the inertia against the number of clusters. Inertia represents the total squared distances from the samples to their nearest cluster center (Hegab et al., 2022). It gauges how closely the data points are grouped around the centroids. The graph begins with a high inertia value at one cluster, signaling subpar clustering. As the cluster count rises, the inertia notably decreases up to three clusters, indicating better clustering. The decline rate then becomes less rapid, causing a distinct change in direction at around 4 to 5 clusters. This change means the point at which adding more clusters results in only a small decrease in inertia, indicating that the additional clusters have little impact on improving the model. Thus, the most suitable number of clusters is about 4 or 5 since it considers detailed segmentation and model complexity requirements. With k= 5, researchers strike a balance that avoids too few clusters (underfitting) and too many clusters (overfitting).

The graph shows that inertia decreases rapidly from k= 1 to k= 5, meaning adding more clusters leads to significantly better clustering quality. Nevertheless, after k= 5 onwards, this decrease is not so fast anymore. This suggests that extra groups created beyond five do little to reduce variance among points within each group. If the researchers choose k= 4, it implies that four different groupings best capture the structure of our data. Here, intra-similarity is maximized while preventing clusters from becoming too specific.

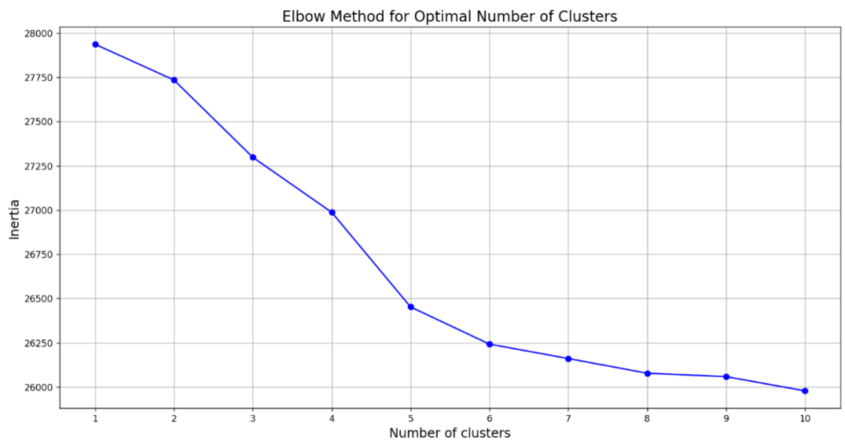


**Figure 4.** Elbow Method

The graph supports this result visually, demonstrating that the most marked decrease in inertia is when moving from four to five clusters, and then this decline steadies. Such a dramatic shift on the inertia curve—often called an "elbow"—indicates that additional clusters above k=5 do not significantly lower within-group diversity. Thus, according to the examination of the elbow method, including numerical information and its graphic representation, it can be assumed that k=5 is a perfect number of clusters, considering both numerical results and visual representation. Having such value will make the model less complicated but still practical enough for comments segmentation, which is meaningful.

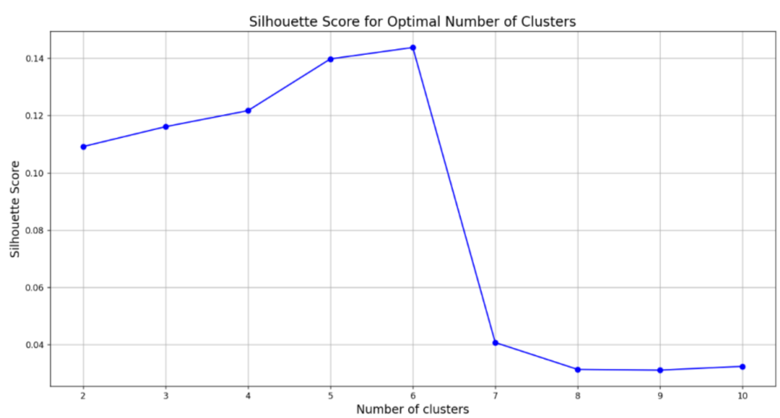


**Figure 5.** Silhouette Score

Another method to consider when determining the ideal amount of clusters is the Silhouette Score plot (Figure 5), as it evaluates the clustering quality. Ranging from -1 to 1, the silhouette score measures how alike each point in a particular cluster is to other points; -1 indicates that points are most dissimilar, while 1 indicates most similar. A higher score represents better-defined and more consistent clusters according to this metric. As the plot suggests, adding clusters increases this value until it peaks at around 5 clusters, which equals 0.14. After 6 clusters, however, the silhouette score decreases rapidly – especially after 6 clusters – signifying that clusters become less distinguishable and more likely to overlap. The decrease indicated that extra clusters did not significantly improve the clustering quality and might worsen it. Consequently, according to the silhouette score, the best number of clusters is approximately 4 or 5, consistent with findings produced by the Elbow Method. Hence, researchers determined that 5 clusters are the optimal cluster in this study.

Figure 5 shows an analysis of the silhouette score, which makes it clear that the best number of clusters ranges from about 4 to 5. The silhouette score has a peak of 0.14 at 5 clusters, indicating that the clusters are most well-defined and separated; it evaluates cluster cohesion and separation. When 5 clusters are established, there is a noticeable drop in silhouette scores, which shows poor clustering quality; the same findings are supported by The Elbow Method. As a result, the researchers determined that 5 clusters present the most dependable and understandable clustering solution for the dataset.

## 4.0 Conclusion

As proven by student feedback, professionalism, clear communication, and effective teaching methods are the key factors that play an essential part in creating a meaningful educational experience. The only way to achieve a good learning environment is to give priority and do the right things, like being early, having knowledge of instructional materials, and having empathy. It is of the highest importance to consider the preferences for improvement to keep up with the student's satisfaction and academic succession, such as enhancing engagement, making necessary changes in schedule communication, and speed and volume of the course work.

The analysis of student feedback reveals the importance of prioritizing the necessity of putting students' needs at the center of the learning experience, as well as communication and the teacher's subject knowledge. The good impressions, teaching quality, orderliness, and compassionate conduct indicate a good starting point and ways to improve them. Using these observations to enhance teaching effectiveness and address student requirements can create a more interactive and encouraging learning atmosphere, ultimately improving student contentment and academic achievements.

Based on the Elbow Method, inertia significantly decreases beyond 5 clusters, while the Silhouette Score peaks at 5 clusters, indicating clearly defined and separate clusters. Consequently, utilizing 5 clusters guarantees a productive and significant categorization of the comments.

## 5.0 Contributions of Authors

Kristel Anne Telmo – drafting, editing, writing, supervising, data analysis; Kervie V. Alviola – drafting, data analysis, encoding, writing; Jazler Jhon S. Desamparado – drafting, writing; John Nathaniel A. Cabigan – drafting, writing, Cereneo S. Santiago Jr. – supervising, data analysis, editing, Richard Aries A. Shimada – supervising, data analysis, interpretation


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## 7.0 Conflict of Interests

The authors declare no conflict of interest.

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# Zooming Into Perspectives: High School Educators as They Adopt to In-person Education

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**Abstract.** As there are few studies regarding teachers' insights on online teaching, this study analyzed the adjustments of pandemic teachers shifting from online to in-person teaching methods to gain a deeper comprehension of the situations they experienced. This research conducted a descriptive qualitative case study following a researcher-designed, semi-structured interview with open and close-ended guide questions. Two participants were deduced to be the study participants, who were chosen through purposive sampling. Results revealed that the pandemic caused teachers' depression and anxiety. Online learning has many drawbacks, as adopting online learning adds more pressure on struggling teachers to balance commitments. Their personal and professional lives collided, hindering their teachers' effectiveness. Therefore, they learned to develop coping mechanisms to mitigate the stress. They also recognized the benefits of online learning and sought help to improve efficiency, as it helped them to see it from an alternate perspective. Despite the risks associated with COVID-19, they have shown resilience and dedication by positioning innovative teaching methods. As a preliminary exploration into the effects of the pandemic on the academic community, this study underscores continued research and support for educators and students. The commitment and passion demonstrated by these educators deserve recognition and celebration.

**Keywords:** Academic adjustments; Coping mechanism; COVID-19; In-person teaching; Online teaching.

## 1.0 Introduction

Millions of people have been affected by the infectious coronavirus disease 2019 (COVID-19) worldwide. The increasing prevalence of COVID-19 mandated one-to-two meter away social distancing regulations to reduce the number of people exposed to the virus (Rahayu et al., 2020). All socioeconomic aspects and institutions, especially the educational sector, were affected. Academic institutions transitioned to online platforms to maintain professional education amid the global emergency (Rose et al., 2020). When an unexpected occurrence happened, institutional adaptation capabilities were tested in the rush to transition to online education (Alnajjar et al., 2020). The global pandemic significantly influenced universities' way of teaching as they shut their facilities. At the same time, many nations closed any means of traveling in and out of their territories in response to lockdowns (Schleicher et al., 2020). Due to COVID-19, individuals must remain indoors, and students of all levels cannot physically go to school. All schools worldwide use virtual learning techniques to uphold high-quality education. Students who have used e-platforms as a means of literacy have contributed to the success of their studies (Villarama et al., 2023; Sheng et al., 2021). With this sudden change, the way of learning was modified not only for students but also for teachers in terms of changing the educational techniques for both students and teachers.

In-person and virtual teaching styles are significantly distinct from each other. Both the instructors and the students sensed the discrepancies. Teachers claim they impart knowledge and information, whereas students believe they earn it (Tsegay et al., 2022). Teachers changed their strategies to sustain a good quality education, and virtual learning was adopted immediately (Villarama et al., 2022; Wu et al.,2021). Transitioning to e-learning has increased the burden and stress on university faculty and staff, who were already struggling to juggle their commitments (Villarama et al., 2022; Botturi et al., 2020). With abrupt changes in how students are taught, "pandemic teachers" faced new obligations and working conditions. Teachers felt the pressure and psychological effects of these abrupt shifts as well (Villarama et al., 2023; Alvez et al., 2021). Even though herd immunity has been implemented, the virus is not entirely eradicated. There is a risk of contracting COVID-19 in the classroom, and teachers experience anxiety about infection and education. Thus, assessing the causes of teachers' anxiety and devising the best methods for reducing it is a must to ensure children's access to high-quality education. The global pandemic forced universities to embark on largely exploratory training immediately (Oliveira et al., 2021).

This research is grounded in the conceptual underpinnings of the Job Demands-Resources (JD-R) Model. The Job Demands-Resources (JD-R) model is a theoretical framework used to explain the relationship between job characteristics and employee well-being, job satisfaction, and work engagement. Personal resources such as self-efficacy, optimism, and resilience can help individuals cope with job demands and benefit from job resources, leading to higher levels of work engagement. Work engagement, in turn, can further enhance personal resources, creating a positive feedback loop. Further, the model suggests that job demands and resources are key factors affecting employee well-being and performance (Demerouti et al., 2019). This research examined how educators responded to global pandemic-related initiatives.

Numerous studies have been initiated on education throughout the global pandemic, with teachers serving as the prime data of experiences and knowledge. However, only a few have considered the effects of teachers' stress and anxiety levels. This study focused on practical readiness among university instructors with little or no teaching experience. The study also looked at how teachers perceived significant events during their initial years of teaching during the pandemic. The primary goal of this investigation is to (1) analyze their adjustments and experiences as they underwent a quick change from online to traditional learning methods and (2) to gain a deeper comprehension of the circumstances they have encountered, which prior studies have overlooked.

## 2.0 Methodology

### 2.1 Research Design

A descriptive qualitative case study approach was employed, which enabled educational investigators to explore educational mechanisms and determine factors that affected school functions and outcomes for students and other educational actors. Additionally, descriptive qualitative research is a design with semi-structured interviews used to create questions that are more focused and relevant to the research question, developing supported interpretations (Olson, 2016; Saldana, 2021; Lungu, 2022). Particularly, the participants' real-life experiences were considered part of the study's analysis, in which their individual stories were imprinted. Understanding contemporary and complex social phenomena is one of the primary aims of case studies. Finding meaning in the factors influencing the participants' dynamism during the pandemic was plausible.

### 2.2 Research Locale and Participants

This study was carried out at the Central Luzon State University Laboratory for Teaching and Learning-University Science High School (CLTL-USHS) in Science City of Muñoz, Nueva Ecija, Philippines, as it was one of the schools in Science City of Muñoz, Nueva Ecija that transitioned from online classes to face-to-face classes, amidst the pandemic. Moreover, when gathering participants, it is important to consider the participant's observations within the framework of the study and notes regarding the environment in which the primary question takes place (Tomaszewski et al., 2020 & Asmawi et al., 2024). Thus, two (2) teachers from the CLTL-USHS participated in this study, who were selected purposively: (1) being newly employed at the selected educational institution during the COVID-19 pandemic; (2) having taught either specialist or general subjects in the first two quarters of the academic year 2022-2023; and (3) have transitioned from virtual to in-person teaching. Interviews were done in person at the participants' respective offices. The two (2) gathered participants are the only ones eligible to join the study, as they are the best fit for interview and observation.

**2.3 Research Instrument**
The instrument used was a researcher-designed with open-ended and closed-ended semi-structured interview guide questions that were checked and reviewed by three professionals with expertise in Social Science, Psychology, and Educational Research.

**2.4 Data Gathering Procedures**
Data was collected using a semi-structured interview. An interview guide with closed- and open-ended questions was used in the study to facilitate efficient and prompt data collection. Participants provided their consent for the interview. The field notes and audio/video recording device was used to document the process, which lasted an hour for each interview.

**2.5 Data Analysis**
Data were analyzed using a six-phase thematic analysis: (1) transcription, (2) theme development, (3) indexing, (4) charting, (5) mapping, and (6) interpretation of data (Labra et al., 2020 & Rajashekar et al., 2023). The responses in audio and video recordings documenting individual interviews were watched and listened to several times, while transcriptions were read several times to comprehend their varied perspectives. The interview was transcribed verbatim, and codes were created for the concepts pertinent to the study. Line-by-line coding was used to identify the thematic framework and develop the themes, which were then integrated into the subcategories through ongoing concept comparison, modification, and analysis. When patterns were found in participants' concepts and inferences, they were compared, contrasted, and interpreted as part of the charting, mapping, and interpreting process. The entire response from each interviewee was included in the interview transcription to eliminate any ambiguity as to the purpose of the data collection (Labra et al., 2020).

**2.6 Ethical Consideration**
The study followed all ethical procedures prescribed by the Central Luzon State University (CLSU) Ethics Research Committee (ERC), with ethics approval code 2023-157 on March 14, 2023.

## 3.0 Results and Discussion
**3.1 Coping Strategies**
Not just the students but also teachers were suffering from mental health difficulties such as depression and anxiety because of the pandemic. When confronted with stressful events, coping strategies are crucial in tolerating and diminishing negative emotions. The two respondents discussed how they coped throughout the days of lessons taken online.

***Time management***
Effective time management prevents overworking and enables you to balance your personal and professional responsibilities. The respondents claimed that by effectively managing their time, they could complete their tasks and still find time for relaxation.

*"I managed time by doing modules and checking outputs."*

A study about the preparation, challenges, and coping mechanisms in the pre-implementation of distance learning in the new normal stated that teachers with established routines through habits and practices in a set timetable helped make the best use of their time (Santos et al., 2022; De Villa et al., 2020).

***Peer Mentoring***
Respondents mentioned that they greatly appreciate the support and help they got from their co-workers. The holistic growth and well-being of instructors are strongly supported by guidance. They also added that they felt excited and happy to teach their subject again face-to-face after hearing the news of blended learning.

*"By seeking help from my co-teachers, I managed time in doing modules and checking outputs."*
*"I was very excited because this is the first time that I am going to teach my subjects in face-to-face."*

Most teachers prefer to have activities to create or maintain relationships with other people (Andrade et al., 2022). Similarly, teachers see the assistance they may provide one another as a valuable way to stay connected (De Villa et al., 2020).

### 3.2 Personal and Professional Obstacles

In online and in-person classes, the teachers encountered numerous difficulties in their personal and professional lives. Their ability as teachers and students' ability to study online was questioned.

#### *Pedagogical and Instructional Challenges*

They were worried about the quality of education the students were receiving, but they were also concerned about how the absence of in-person instruction would affect their students' evaluations. Teachers who participated in the study perceived the sudden shift to distance learning/teaching as difficult, as they or their colleagues had to quickly learn new technologies and adapt to the digitalization of pedagogical design. They felt guilty for not being able to provide the students with the education they needed because of the lack of communication and engagement. Modular learning also posed a struggle for them due to the difficulty in preparing learning materials.

*"There are other parents who say that this is the grade that was given to such and such. It is not my experience, but I am just sharing. Why is this person giving a grade like this when he/she did not teach? So, it is like on that particular statement; we are a little hurt because we do not have control over the pandemic and its effects."*

The shift to remote learning has presented challenges in maintaining student engagement and motivation. Teachers have reported difficulties fostering community and collaboration among students and providing individualized support to meet their diverse learning needs (Suhardi et al., 2023; Goudeau, 2021).

#### *Work-Life Balance*

The teachers had trouble organizing and balancing their personal and professional responsibilities. They found it challenging to teach students in in-person and online learning environments because of their tasks. They were frequently less efficient because of household duties such as parental and spouse responsibilities. They were concerned they would not have enough time to prepare their materials and cater to their family. They even occasionally had to forsake some responsibilities because of conflicting schedules. The teachers were also concerned that their pay did not match the amount of work they were putting in and that it was insufficient. The transition to in-person teaching also made them question their safety and the hostile nature of their workplace.

"*As we already settled in CLSU village here in CLSU, during the pandemic, there were times that my two toddlers needed to travel to sleep because I had to work at San Jose National High School. These situations were particularly difficult for them because they had to come with me."*

During the pandemic, employees with children have reported difficulties managing their work responsibilities and parenting duties. The sudden shift to remote instruction has required additional support for their children during the day while managing their obligations, leading to an imbalance in work and home life (Backhaus et al., 2023).

The sudden shift to remote instruction has blurred the boundaries between work and personal life for teachers, making it challenging to maintain a healthy work-life balance. Teachers have reported difficulty managing their time, with many working longer hours to compensate for the lack of in-person instruction (González-Ramírez et al., 2020).

### 3.3 Advantages of Online Learning

Teachers were obliged to conduct online classes during the pandemic for safety purposes. However, as the spread of COVID-19 decreased, the transition from online to face-to-face classes surfaced. Despite the sudden transition, teachers were able to prepare for it. However, many people now recognize the advantages of online classes, including convenience. According to respondents, online classes also have positive aspects.

*"When it comes to online classes, it is not all about negativity; there is positivity, too. Of course, that is the convenience of conducting online classes."*

*"The online class is exciting, especially when it is asynchronous. I learned a lot, especially by using different applications and the Internet."*

Everything has its advantages and disadvantages, which also applies to e-learning. Due to the global pandemic, teachers shifted from in-person to virtual teaching to sustain quality education (Villarama et al., 2024; Wu et al., 2021). However, the sudden transition to e-learning has increased the burden and stress on university faculty and staff, who were already struggling to juggle their commitments (Botturi et al., 2020). Nevertheless, teachers acknowledged that learning online was more enjoyable and practical (Estrellan et al., 2021). Similarly, teachers experienced disadvantages during online teaching or e-learning that gave them many advantages such as (money-saving, convenience, and flexibility). Aside from the convenience, flexibility, and cheaper cost of online teaching, teachers stated that it helped them boost their confidence, explore and employ novel teaching approaches (Villarama et al., 2024; Suhardi et al., 2023), and improve their skills as teachers by becoming more technically adept (Nambiar, 2020).

## 4.0 Conclusion

The contagious coronavirus disease 2019 (COVID-19) has impacted millions worldwide. Regulations requiring social separation of one to two meters are necessary to reduce the number of persons exposed (Rahayu et al., 2020). The closing of institutions was also affected. Learners and instructors must adapt immediately to a new modular setting (Rose et al., 2020). As they found themselves in a new educational environment, the shift to e-learning added pressure and stress on university teachers and staff, who were already struggling to combine their other commitments.

Participants in this study expressed their thoughts as they adjusted to their new roles as online lecturers. So, while working in an online environment, they were concerned about their pupils' learning efficiency. Further, they considered offline training more efficient than online schooling (Alcontin, 2021). Teachers also began to assess themselves if they were even competent in their professions. To ease these negative emotions, they sought help from their colleagues and stayed positive. Thus, certain discussions suggested that, while they were initially cautious and unsure of the approach, they gradually recognized the benefits of online education (Alnajjar et al., 2020).

With the lingering threat of COVID-19 in the classroom, teachers have demonstrated remarkable resilience and dedication in their return to traditional teaching methods. Though they may have been anxious about the risks associated with in-person instruction, their enthusiasm, and eagerness to reconnect with their students and return to their regular setting prevailed. Despite the ongoing challenges presented by the pandemic, teachers continue to play a vital role in the education and development of their students, and their commitment and passion should be celebrated and recognized. In navigating these uncertain times, it is important to support and appreciate the hard work and sacrifices of educators, who have repeatedly demonstrated their unwavering commitment to the success and well-being of their students.

Through this research, it has been revealed that newly hired instructors have faced a multitude of challenges and unique pressures during the COVID-19 pandemic. In attempting to understand teachers' coping techniques, the researchers have gained insight into their personal experiences, finding that they have much in common with their teachers. However, these instructors have faced these challenges while juggling other responsibilities, such as household tasks, making their situation even more difficult. The findings of this research highlight the need for continued support and resources for educators, particularly those new to the profession and navigating unprecedented circumstances.

The findings of this research provide valuable insight into the experiences of academic faculty members during the COVID-19 pandemic. However, to expand the understanding of this topic further, it is recommended that other scholars also delve into this field. While this study focuses on a specific institute, a larger population and setting could provide a broader perspective. In addition, future longitudinal studies are necessary to determine the long-term effects of online instruction on faculty members' professional behavior and career growth. Data source triangulation is also advised to ensure the validity and reliability of the data. By incorporating various data sources, such as time, space, and people, researchers can enhance the accuracy and comprehensiveness of their findings. Ultimately, this research serves as a starting point for a larger conversation about the impact of the pandemic on the academic community and highlights the need for continued research and support for educators.

## 5.0 Contributions of Authors

The authors indicate equal contribution to each section of this research article. The authors reviewed and approved the final work. The following are the contributions of each author: Abstract & Keywords–WHYRamirez & MCRDeLeon; Introduction–WHYRamirez, MCRDeLeon, SGSEligado, GRAGaniban, GCAVilla; Methodology-Research Design–SGSEligado, GRAGaniban, Research Locale and Participants–WHYRamirez, Research Instrument–WHYRamirez, SGSEligado & JAVillarama, Data Gathering Procedures–MCRDeLeon, SGSEligado, GRAGaniban, WHYRamirez, GCAVilla, Data Analysis–MCRDeLeon, SGSEligado, GRAGaniban, WHYRamirez, GCAVilla & JAVillarama; Ethics–MCRDeLeon, SGSEligado, GRAGaniban, WHYRamirez, GCAVilla & JAVillarama; Results and Discussion–JAVillarama, MCRDeLeon, WHYRamirez, GRAGaniban, SGSEligado, GCAVilla; and Revisions–WHYRamirez & JAVillarama.

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## 7.0 Conflict of Interests

The authors declare no conflicts of interest about the publication of this paper.

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# Barangay Officials' Manifestation of Basic Functions in Addressing Public Safety and Security Threats

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**Abstract.** This study investigated the correlation between Barangay Officials' level of manifestation of basic deliverables within the framework of the Local Government Code of 1991 and the seriousness of public safety and security threats. Utilizing a quantitative descriptive correlational design, data were collected from 401 regular residents and Barangay Officials. Results indicate that Barangay Halang officials perform strongly in executive, legislative, and judiciary functions, with mean scores of 3.65, 3.68, and 3.68, respectively, classified as "Fully Manifested." A significant discrepancy was observed between resident and official assessments, evidenced by a T-test value of 3.42 and a p-value of less than .001, with officials rating their performance higher. Public safety and security threats were rated "Very Serious" in areas such as health and social welfare services, hygiene and sanitation, beautification, solid waste collection, "katarungang pambarangay," and infrastructure facilities, with mean values ranging from 3.60 to 3.75. Additionally, significant moderately small positive correlations (p < 0.001) were identified between the officials' performance in basic deliverables and the perceived seriousness of public safety threats. The study concludes that while Barangay Halang officials perform strongly, there are opportunities for improvement, especially in stakeholder collaboration and addressing diverse community needs.

**Keywords:** Barangay officials; Public safety; Local government code; Public security threat.

## 1.0 Introduction

Local government is often the most accessible level for citizens to access services, participate in public processes, and exercise their rights. However, fiscal responsibilities are often centrally controlled, limiting financial autonomy. Local governance encompasses decision-making and service delivery at the community level. The Department of the Interior and Local Government (DILG), in collaboration with the National Barangay Operations Office (NBOO), played a pivotal role in assessing the performance of barangays in the Philippines. The Barangay Performance Management System (BPMS) is a tool utilized to evaluate barangay performance, including transparency, accountability, and service delivery. The BPMS comprehensively assesses the performance of barangays in various areas, including governance, administration, social services, economic development, and environmental management (Leal & Brutas, 2020). It aligns with the DILG's initiatives to employ mechanisms for LGUs to earn the Seal of Good Local Governance (SGLG), a rigorous assessment system evaluating LGUs based on various criteria, including financial administration, disaster preparedness, social protection, and business-friendliness. However, the specific dynamics and challenges at the barangay level necessitated localized evaluations to understand LGU performance comprehensively.

This study shifted the focus to determining the correlation between the degree of manifestation of Barangay Officials in performing their basic deliverables and the degree of seriousness of public safety and security threats. The existing research landscape had predominantly focused on higher-level LGUs, neglecting in-depth studies on barangay-level governance within the context of the Local Government Code. Empirical research on the capacities and performance of barangay-elected officials is limited, particularly within the unique context of Barangay Halang, Calamba City. Addressing this research gap was crucial in providing valuable insights into the dynamics of local governance, understanding the challenges faced by barangay-elected officials, and proposing strategies to enhance their performance and capacities. The goal was to improve local governance practices and promote sustainable development at the community level.

## 2.0 Methodology

### 2.1 Research Design

The research design for this study is descriptive correlational, chosen for its suitability in evaluating barangay officials' performance on basic deliverables and the public safety and security threats they encounter. This design aligns with the study's objectives and research questions, allowing data collection that describes respondents' assessments and explores potential associations between deliverables and threats. The correlational aspect investigates relationships between barangay officials' performance and the ability to deliver services and facilities. This is significant for policymakers and stakeholders, offering insights into how improved performance could enhance service provision and governance at the barangay level.
Locale

### 2.2 Respondents of the Study

The present investigation aimed to ensure a comprehensive and equitable portrayal of both barangay officials and barangay residents in Barangay Halang, Calamba City by incorporating a predetermined number of participants. The composition of the group of barangay officials consisted of a total of twenty individuals or 5% of the total respondents. The majority of the respondents, covering 381 (95%) of the total respondents, were residents who were registered voters of Barangay Halang. This chosen excerpt guaranteed a thorough examination of the variables under study.

### 2.3 Research Instrument

The data collection instrument for this study was a researcher-developed questionnaire designed to adhere to the provisions of the Local Government Code of 1991. It aimed to evaluate barangay officials' performance on basic deliverables and the seriousness of public safety and security threats within the framework of the code. The questionnaire focused on executive, legislative, and judiciary functions outlined in the code. To ensure validity and reliability, the questionnaire underwent a thorough validation process. Content validity was assessed through an expert review, with experts in local governance, social science research, and survey design evaluating the questionnaire's alignment with the code and its clarity, relevance, and adequacy. Lawshe's method was used to calculate the content validity ratio (CVR), which showed strong agreement among experts (CVR = 0.97). Reliability was evaluated using internal consistency measures such as Cronbach's alpha for Likert-scale questions within the questionnaire. The computed Cronbach's alpha value of 0.945 indicated excellent internal consistency. Face validity checks were also conducted to ensure the questionnaire appeared appropriate to participants and experts not involved in its development, further bolstering its overall validity.

### 2.4 Data Gathering Procedure

After obtaining permission, rigorous steps were taken to validate the survey questionnaires, a critical process before administration. A thorough evaluation and validation of the questionnaire's content were done. The questionnaires were meticulously crafted to adhere to the provisions of the 1991 Local Government Code. Experts in local governance, social science research, and survey design were incorporated into the validation process to increase validity. After the survey questionnaires had been validated and pilot-tested, they were distributed to the specified respondents using both medium- and hard-copy survey questionnaires and using Google Forms. The collected data were analyzed comprehensively using appropriate quantitative methods to generate insightful conclusions.

### 2.5 Ethical Consideration

The study adhered to the Data Privacy Act of 2012, which outlines guidelines for protecting personal information and data privacy rights. This ensured that all data collected from participants were handled with the utmost confidentiality and used solely for research purposes.

## 3.0 Results and Discussion

### 3.1 Level of Manifestation of Basic Deliverables of Barangay Halang Officials

***In terms of Executive Functions***

As shown in Table 1, the level of manifestation of basic deliverables of barangay halang officials as assessed by barangay officials themselves and residents in terms of executive functions is fully manifested, as shown in the composite assessment of 3.65 and garnered a standard deviation of 0.38 of the barangay officials and 0.32 of the residents. Enforces all laws and ordinances within the barangay, which yielded the highest mean score of 3.67, interpreted as fully manifested. On the other hand, performing other duties and functions as prescribed by law or ordinance received the lowest mean score, 3.62, and was interpreted as fully manifested.

**Table 1.** Descriptive statistics of the level of manifestation of basic deliverables of Barangay Halang officials in terms of executive functions

| **Indicators** | **Residents** | | **Officials** | | **Composite** | |
|---|---|---|---|---|---|---|
| | Mean | Interpretation | Mean | Interpretation | Mean | Interpretation |
| 1. Exercises supervision and control over all programs, projects, services, and activities of the barangay. | 3.57 | Fully Manifested | 3.75 | Fully Manifested | 3.66 | Fully Manifested |
| 2. Enforce all laws and ordinances within the barangay. | 3.58 | Fully Manifested | 3.75 | Fully Manifested | 3.67 | Fully Manifested |
| 3. Plans appointments of barangay personnel and creation and abolishment of positions as needed by the Local Government Code. | 3.54 | Fully Manifested | 3.75 | Fully Manifested | 3.65 | Fully Manifested |
| 4. Performs other duties and functions as prescribed by law or ordinance. | 3.59 | Fully Manifested | 3.65 | Fully Manifested | 3.63 | Fully Manifested |
| **Composite Assessment** | **3.57** | **Fully Manifested** | **3.73** | **Fully Manifested** | **3.65** | **Fully Manifested** |

*Legend: 3.25-4.00 Fully Manifested (FM) 2.50-3.24 Manifested (M) 1.75-2.49 Partially Manifested (PM) 1.00-1.74 Not Manifested (NM)*

These results imply that while Barangay Halang officials demonstrate strong performance in certain aspects of Executive Functions, there may be opportunities for further enhancement or diversification of their duties to better serve the community's needs and ensure comprehensive governance. This can involve continuous training and capacity-building initiatives to empower barangay officials with the necessary skills and knowledge to effectively fulfill their roles and responsibilities across all areas of Executive Functions. Additionally, fostering greater collaboration and communication between barangay officials and residents can facilitate a more inclusive and participatory approach to governance, ultimately leading to improved community well-being and development.

These findings resonate with existing literature on barangay governance capabilities and executive functions. Floranza's (2021) study underscored the importance of assessing the performance of barangay officials, highlighting the need for regular training and continuous monitoring to enhance their capabilities. Moreover, Lopez and Reyes (2020) emphasized the critical role of evaluating executive functions to ensure efficient management and leadership within barangays, advocating for capacity-building programs focusing on managerial skills and financial management. Overall, the findings from both the assessment in Barangay Halang and the existing literature underscore the importance of evaluating and enhancing the executive functions of barangay officials to promote effective governance at the grassroots level.

***In terms of Legislative Functions***

As shown in Table 2, the level of manifestation of basic deliverables of barangay halang officials as assessed by barangay officials themselves and residents in terms of legislative functions is fully manifested, as shown in the composite assessment of 3.68 and garnered a standard deviation of 0.36 of the barangay officials and 0.33 of the residents. Reviews and approves the annual budget and appropriation ordinance, which yielded the highest mean score of 3.69 and was interpreted as fully manifested. On the other hand, enacting ordinances and resolutions relevant to barangay governance received the lowest mean score of responses with 3.63 and was interpreted as fully manifested.

These results imply that while Barangay Halang officials demonstrate strong performance in certain aspects of Legislative Functions, there may be opportunities for further improvement or innovation in their legislative activities to serve the community's needs better and promote good governance. This could involve capacity-building initiatives to enhance barangay officials' legislative skills and foster greater transparency and inclusivity in the legislative process. By strengthening legislative capabilities and promoting participatory governance, barangay officials can effectively address community priorities and contribute to the overall well-being and development of Barangay Halang.

**Table 2.** Descriptive statistics of the level of manifestation of basic deliverables of Barangay Halang officials in terms of legislative functions

| Indicators | Residents | | Officials | | Composite | |
|---|---|---|---|---|---|---|
| | Mean | Interpretation | Mean | Interpretation | Mean | Interpretation |
| 1. Enacts ordinances and resolutions relevant to barangay governance. | 3.56 | Fully Manifested | 3.70 | Fully Manifested | 3.63 | Fully Manifested |
| 2. Participate in the development planning process. | 3.55 | Fully Manifested | 3.80 | Fully Manifested | 3.68 | Fully Manifested |
| 3. Review and approve the annual budget and appropriation ordinance. | 3.57 | Fully Manifested | 3.80 | Fully Manifested | 3.69 | Fully Manifested |
| 4. Conducts/Attends public hearings on important matters. | 3.56 | Fully Manifested | 3.80 | Fully Manifested | 3.68 | Fully Manifested |
| **Composite Assessment** | **3.56** | **Fully Manifested** | **3.80** | **Fully Manifested** | **3.68** | **Fully Manifested** |

*Legend: 3.25-4.00 Fully Manifested (FM) 2.50-3.24 Manifested (M) 1.75-2.49 Partially Manifested (PM) 1.00-1.74 Not Manifested (NM)*

These findings aligned with existing literature on the legislative functions of barangay officials in the Philippines. Matsuda (2017, as cited in ElMassah & Mohieldin, 2020) highlighted the legislative powers granted to barangay officials under the Local Government Code, emphasizing their role in enacting ordinances and resolutions relevant to local governance. Carpio's (2020) study on implementing curfew ordinances by barangay officials underscored the importance of consistency in legislative enforcement to maintain public order effectively. Furthermore, Mendoza and Reyes (2021) emphasized the necessity of evaluating legislative functions to ensure responsiveness to community needs, advocating for legal education, and increasing public participation in the legislative process. Together, these studies and the assessment conducted in Barangay Halang underscore the critical role of legislative functions in barangay governance and the importance of effective implementation to address community concerns and promote public welfare.

***In terms of Judiciary Functions***

As shown in Table 3, the level of manifestation of basic deliverables of barangay halang officials as assessed by barangay officials themselves and residents in terms of judiciary functions is fully manifested, as shown in the composite assessment of 3.68 and garnered a standard deviation of 0.37 of the barangay officials and 0.35 of the residents. Encourages and facilitates amicable settlements and promotes the speedy and impartial resolution of disputes at the barangay level, which yielded the highest mean score of 3.71 and was interpreted as fully manifested. On the other hand, Acts as mediators and conciliators in barangay conciliation proceedings to settle disputes among community members received the lowest mean score of responses with 3.66 and were interpreted as fully manifested.

**Table 3.** Descriptive statistics of the level of manifestation of basic deliverables of Barangay Halang officials in terms of judiciary functions

| Indicators | Residents | | Officials | | Composite | |
|---|---|---|---|---|---|---|
| | Mean | Interpretation | Mean | Interpretation | Mean | Interpretation |
| 1. Acts as mediators and conciliators in barangay conciliation proceedings to settle disputes among community members. | 3.51 | Fully Manifested | 3.80 | Fully Manifested | 3.66 | Fully Manifested |
| 2. Encourages and facilitates amicable settlements and promotes the speedy and impartial resolution of disputes at the barangay level. | 3.56 | Fully Manifested | 3.85 | Fully Manifested | 3.71 | Fully Manifested |
| 3. Enforce the settlement or impose sanctions for violations of the terms and conditions of the settlement. | 3.58 | Fully Manifested | 3.75 | Fully Manifested | 3.67 | Fully Manifested |
| **Composite Assessment** | **3.55** | **Fully Manifested** | **3.80** | **Fully Manifested** | **3.68** | **Fully Manifested** |

*Legend: 3.25-4.00 Fully Manifested (FM) 2.50-3.24 Manifested (M) 1.75-2.49 Partially Manifested (PM) 1.00-1.74 Not Manifested (NM)*

These results imply that while Barangay Halang officials demonstrate strong performance in Judiciary Functions, there may still be opportunities for further refinement or enhancement in their role as mediators and conciliators. This could involve ongoing training and professional development for barangay officials to strengthen their conflict resolution and mediation skills and efforts to promote community awareness and participation in the conciliation process. By continuously improving their judicial capabilities and fostering a culture of peace and reconciliation, barangay officials can effectively address conflicts and disputes within the community, contributing to social harmony and sustainable development in Barangay Halang.

The results of the study by Dagohoy (2021) agreed with the results as it highlighted the effectiveness of the conciliation process within the Lupong Tagapamayapa in Barangay Tibal-og, underscoring the importance of decision-making quality in enhancing the efficiency of dispute resolution mechanisms. Similarly, Cruz's (2020) study on the performance of Barangay Police Security Officers (BPSOs) emphasized the crucial role of barangay officials in maintaining peace and order at the grassroots level, providing insights into the perception of constituents and officials regarding the effectiveness of BPSOs. Additionally, Caelian et al. (2020) examined the implementation of the Community Peace and Order and Public Safety (POPS) program, highlighting the significance of community participation and good governance principles in fostering peace and safety within barangays. These studies and the assessment conducted in Barangay Halang underscored the importance of judiciary functions in promoting community harmony and resolving disputes effectively, contributing to improved governance and public welfare at the barangay level.

### 3.2 Difference of the Assessments Between Participants

There is a significant difference between the assessments of the residents and barangay officials regarding the manifestation of barangay halang officials on the performance of basic deliverables, as shown in Table 4. The rejection of the null hypothesis suggests that the perceived performance of Barangay Halang officials on basic deliverables may vary significantly depending on whether the assessment is conducted by residents or barangay officials themselves. This highlights the importance of employing multiple perspectives and stakeholder feedback in evaluating local governance effectiveness. By incorporating diverse viewpoints and feedback mechanisms into governance assessments, barangay leaders can gain a more comprehensive understanding of their strengths, weaknesses, and areas for improvement.

**Table 4.** Analysis of the difference in the assessments between participants

| Variables | T-test | P value | Remarks | Decision |
|---|---|---|---|---|
| Executive Functions | 2.09* | .037 | Significant | Reject Ho |
| Legislative Functions | 2.83** | .005 | Significant | Reject Ho |
| Judiciary Functions | 3.05** | .002 | Significant | Reject Ho |

*. Correlation is significant at the 0.05 level (2-tailed).
**. Correlation is significant at the 0.01 level (2-tailed).

The literature on barangay governance capabilities and administrative challenges corroborates these findings. Basaluddin's (2021) study on administrative capability in Jolo revealed various challenges barangay governments face, including resource scarcity and inadequate training, which may influence residents' perceptions of governance performance. Additionally, Gannaban's (2023) study on Barangay Secretaries underscored the necessity for training opportunities to enhance the knowledge and skills of barangay officials, aligning with the disparities observed in assessments. Together, these studies and the test results in Barangay Halang underscore the importance of addressing administrative challenges and providing training opportunities to bridge the gap between residents' perceptions and the actual performance of barangay officials, ultimately contributing to more effective governance and community well-being.

### 3.3 Level of Seriousness of the Public Safety and Security Threats in Barangay Halang

***In terms of Health and Social Welfare Services***

As shown in Table 5, the degree of seriousness of public safety and security threats in health and social welfare services is very serious, as shown in the composite assessment of 3.71, which garnered a standard deviation of 0.34 for the barangay officials and 0.30 for the residents. Lack of organization of seminars, workshops, and information campaigns on health issues resulted in low awareness and adoption of preventive measures among community members, which yielded the highest mean score of 3.74 and was interpreted as Very Serious. On the other hand, inadequate coordination and facilitation of health campaigns, immunization drives, and wellness programs resulted in a decline in residents' health, which received the lowest mean score of responses, 3.66, and was interpreted as very serious.

The assessment findings highlight the importance of investing in capacity-building initiatives and resource allocation to strengthen the barangay's ability to address public safety and security threats in health and social welfare services. By providing barangay officials with the necessary training, resources, and support, they can better fulfill their roles in organizing and facilitating health-related activities, promoting community health awareness, and coordinating response efforts during public health emergencies.

**Table 5.** Descriptive statistics of the level of seriousness of the public safety and security threats in Barangay Halang in terms of health and social welfare services

| Indicators | Residents | | Officials | | Composite | |
|---|---|---|---|---|---|---|
| | Mean | Interpretation | Mean | Interpretation | Mean | Interpretation |
| 1. Inadequate coordination and facilitation of health campaigns, immunization drives, and wellness programs result in a decline in residents' health. | 3.57 | Very Serious | 3.75 | Very Serious | 3.66 | Very Serious |
| 2. Limited accessibility to healthcare services | 3.58 | Very Serious | 3.85 | Very Serious | 3.72 | Very Serious |
| 3. Insufficient collaboration with health centers, clinics, and hospitals has led to a shortage of medical supplies and personnel. | 3.61 | Very Serious | 3.80 | Very Serious | 3.71 | Very Serious |
| 4. Poor oversight of social welfare programs, such as livelihood assistance, educational support, and aid for vulnerable groups, contributes to increased vulnerability among older people and persons with disabilities. | 3.65 | Very Serious | 3.80 | Very Serious | 3.73 | Very Serious |
| 5. Seminars, workshops, and information campaigns on health issues are not organized, resulting in low awareness and low adoption of preventive measures among community members. | 3.58 | Very Serious | 3.90 | Very Serious | 3.74 | Very Serious |
| 6. Inadequate efforts to ensure the availability of maternal and child health services, including prenatal care, safe deliveries, and child healthcare programs, pose risks to mothers' and children's well-being in the community. | 3.59 | Very Serious | 3.80 | Very Serious | 3.70 | Very Serious |
| **Composite Assessment** | **3.60** | **Very Serious** | **3.82** | **Very Serious** | **3.71** | **Very Serious** |

*Legend: 3.25-4.00 Very Serious (VS) 2.50-3.24 Serious (S) 1.75-2.49 Slightly Serious (SS) 1.00-1.74 Not Serious (NS)*

These findings resonate with existing literature on the pivotal role of barangay officials in promoting health and social welfare services. Ramos et al. (2019) advocated for capacity-building programs tailored to barangay officials to bolster their effectiveness in delivering essential services, such as conducting health education campaigns and fostering collaboration with healthcare professionals. The disparities observed between the perceived seriousness of public safety and security threats among regular residents and barangay officials emphasize the need for targeted interventions and collaborative endeavors to address these pressing issues effectively. By aligning policy and practice with community needs and priorities, barangay officials can significantly improve health outcomes and enhance social welfare within their communities, ultimately fostering a better quality of life for all residents.

***In terms of General Hygiene and Sanitation***

As shown in Table 6, the degree of seriousness of public safety and security threats in terms of services and facilities related to general hygiene and sanitation is very serious, as shown in the composite assessment of 3.68 and garnered a standard deviation of 0.34 of the barangay officials and 0.33 of the residents. Limited efforts to provide and maintain access to clean and safe water sources by initiating water sanitation projects and collaborating with relevant agencies and a Lack of educational programs on hygiene practices emphasizing the importance of personal and environmental hygiene for community health, which both yielded the highest mean score of 3.70 and was interpreted as very serious. On the other hand, the insufficient enforcement of waste management regulations by overseeing proper waste segregation, collection, and disposal processes within the community received the lowest mean score of responses, 3.63, and was interpreted as very serious.

The assessment findings underscore the need for increased resources, capacity-building efforts, and collaborative partnerships to address the identified challenges related to general hygiene and sanitation services. By investing in infrastructure development, implementing educational campaigns, and strengthening regulatory enforcement, barangay officials can enhance their capacity to address public safety and security threats, improve access to essential services and facilities, and promote overall community well-being.

**Table 6.** Descriptive statistics of the level of seriousness of the public safety and security threats in Barangay Halang in terms of general hygiene and sanitation

| Indicators | Residents | | Officials | | Composite | |
|---|---|---|---|---|---|---|
| | Mean | Interpretation | Mean | Interpretation | Mean | Interpretation |
| 1. Insufficient enforcement of waste management regulations by overseeing proper waste segregation, collection, and disposal processes within the community. | 3.55 | Very Serious | 3.70 | Very Serious | 3.63 | Very Serious |
| 2. Limited efforts are being made to provide and maintain access to clean and safe water sources by initiating water sanitation projects and collaborating with relevant agencies. | 3.60 | Very Serious | 3.80 | Very Serious | 3.70 | Very Serious |
| 3. Ineffective measures to control vectors like mosquitoes and rodents, reducing the spread of diseases associated with poor sanitation. | 3.58 | Very Serious | 3.80 | Very Serious | 3.69 | Very Serious |
| 4. no educational programs on hygiene practices emphasize the importance of personal and environmental hygiene for community health. | 3.60 | Very Serious | 3.80 | Very Serious | 3.70 | Very Serious |
| **Composite Assessment** | **3.58** | **Very Serious** | **3.77** | **Very Serious** | **3.68** | **Very Serious** |

*Legend: 3.25-4.00 Very Serious (VS) 2.50-3.24 Serious (S) 1.75-2.49 Slightly Serious (SS) 1.00-1.74 Not Serious (NS)*

These findings are consistent with existing literature emphasizing the crucial role of barangay officials in maintaining general hygiene and sanitation standards within their communities. Tan (2021) underscored the importance of capacity-building programs to enhance waste management practices and collaboration with local environmental agencies. Moreover, studies by De Los Reyes and De Los Reyes (2019) and De Guzman and De Guzman (2019) emphasized the need for improved access to safe water, sanitation facilities, and educational programs on hygiene practices at the local level. These insights contributed to understanding current hygiene and sanitation challenges in the Philippines, informing policy and program development aimed at promoting proper hygiene practices and preventing the spread of diseases, particularly in the context of public health emergencies like the COVID-19 pandemic.

***In terms of Beautification and Solid Waste Collection***

As shown in Table 7, the degree of seriousness of public safety and security threats in beautification and solid waste collection is very serious, as shown in the composite assessment of 3.71, which garnered a standard deviation of 0.34 for barangay officials and 0.33 for residents. Inadequate oversight of beautification projects such as landscaping, park maintenance, and public space enhancement initiatives to improve the aesthetics of the barangay yielded the highest mean score of 3.74 and was interpreted as very serious. On the other hand, the inefficient and irregular collection of solid waste, organizing schedules, and collaboration with waste management agencies received the lowest mean score of responses, 3.68, and were interpreted as very serious.

**Table 7.** Descriptive statistics of the level of seriousness of the public safety and security threats in Barangay Halang in terms of beautification and solid waste collection

| Indicators | Residents | | Officials | | Composite | |
|---|---|---|---|---|---|---|
| | Mean | Interpretation | Mean | Interpretation | Mean | Interpretation |
| 1. Inadequate oversight of beautification projects, such as landscaping, park maintenance, and public space enhancement initiatives, to improve the barangay's aesthetics. | 3.57 | Very Serious | 3.90 | Very Serious | 3.74 | Very Serious |
| 2. Limited mobilization of residents to participate in regular clean-up drives, promoting community involvement in maintaining a clean environment. | 3.55 | Very Serious | 3.85 | Very Serious | 3.70 | Very Serious |
| 3. Inefficient and irregular solid waste collection, organizing schedules, and collaborating with waste management agencies. | 3.55 | Very Serious | 3.80 | Very Serious | 3.68 | Very Serious |
| 4. Insufficient initiation and support of recycling programs, encouraging residents to reduce, reuse, and recycle waste materials, and poor existence of Material Recovery Facilities | 3.55 | Very Serious | 3.85 | Very Serious | 3.70 | Very Serious |
| 5. Inadequate efforts to protect and preserve green spaces within the barangay, advocating for tree planting and environmental conservation efforts. | 3.57 | Very Serious | 3.85 | Very Serious | 3.71 | Very Serious |
| **Composite Assessment** | **3.56** | **Very Serious** | **3.85** | **Very Serious** | **3.71** | **Very Serious** |

*Legend: 3.25-4.00 Very Serious (VS) 2.50-3.24 Serious (S) 1.75-2.49 Slightly Serious (SS) 1.00-1.74 Not Serious (NS)*

The assessment results highlight the importance of proactive measures, community engagement, and resource allocation to effectively address the identified challenges related to beautification and solid waste collection. By prioritizing initiatives to enhance the barangay's aesthetic appeal, improve waste management practices, and promote environmental sustainability, barangay officials can create a cleaner, safer, and more visually appealing community for all residents.

Acosta (2020) highlighted the challenges barangay officials face in managing waste disposal due to inadequate infrastructure and limited knowledge about waste segregation techniques. Bellotindos and Camarillo (2021) stressed the need to comply with solid waste management policies, particularly regarding recycling and composting initiatives. Their study underscored the importance of establishing functional material recovery facilities and accessible drop-off locations for recyclable materials to increase resident participation in waste management efforts. Together, these insights underscore the critical role of barangay officials in implementing effective beautification and solid waste management strategies to promote community well-being and environmental sustainability.

***In terms of Maintenance of the Katarungang Pambarangay***

As shown in Table 8, the degree of seriousness of public safety and security threats in terms of maintenance of the katarungang pam barangay is very serious, as shown in the composite assessment of 3.74 and garnered a standard deviation of 0.31 of the barangay officials and 0.32 of the residents. Ineffective facilitation of dispute resolution through the Katarungang Pambarangay, mediating conflicts and promoting reconciliation among parties, and Limited education of community members about their rights and the procedures for seeking resolution through the Katarungang Pambarangay both yielded the highest mean score of 3.76 and was interpreted as Very Serious. On the other hand, the inaccurate maintenance of records of cases handled by the Katarungang Pambarangay, ensuring transparency and accountability in dispute resolution, received the lowest mean score of responses, 3.71, and was interpreted as very serious.

**Table 8.** Descriptive statistics of the level of seriousness of the public safety and security threats in Barangay Halang in terms of maintenance of the katarungang pambarangay

| Indicators | Residents | | Officials | | Composite | |
|---|---|---|---|---|---|---|
| | Mean | Interpretation | Mean | Interpretation | Mean | Interpretation |
| 1. Ineffective facilitation of dispute resolution through the Katarungang Pambarangay, mediating conflicts and promoting reconciliation among parties. | 3.61 | Very Serious | 3.90 | Very Serious | 3.76 | Very Serious |
| 2. Community members are not adequately educated about their rights and the procedures for seeking resolution through the Katarungang Pambarangay. | 3.62 | Very Serious | 3.90 | Very Serious | 3.76 | Very Serious |
| 3. Inaccurate maintenance of records of cases handled by the Katarungang Pambarangay, ensuring transparency and accountability in dispute resolution. | 3.56 | Very Serious | 3.85 | Very Serious | 3.71 | Very Serious |
| 4. More collaboration with legal institutions and authorities is needed to ensure the proper application of laws and regulations in resolving disputes. | 3.57 | Very Serious | 3.90 | Very Serious | 3.74 | Very Serious |
| 5. More support is needed for individuals seeking legal advice or assistance within the barangay jurisdiction. | 3.59 | Very Serious | 3.90 | Very Serious | 3.75 | Very Serious |
| **Composite Assessment** | **3.59** | **Very Serious** | **3.89** | **Very Serious** | **3.74** | **Very Serious** |

*Legend: 3.25-4.00 Very Serious (VS) 2.50-3.24 Serious (S) 1.75-2.49 Slightly Serious (SS) 1.00-1.74 Not Serious (NS)*

The assessment results underscore the need for barangay officials to improve the accuracy and transparency of record-keeping practices within the Katarungang Pambarangay. Inaccurate maintenance of records of cases handled by the Katarungang Pambarangay can undermine the integrity of dispute resolution processes, erode public trust, and hinder accountability. Therefore, barangay officials must implement robust record-keeping systems, ensure the transparency of case proceedings, and uphold accountability standards to instill confidence in the Katarungang Pambarangay as an effective mechanism for resolving disputes.

These findings align with existing literature emphasizing the critical role of barangay officials in facilitating the Katarungang Pambarangay and ensuring efficient conflict resolution. Diaz and Tan (2019) highlighted the reliance on barangay officials to properly function in the Katarungang Pambarangay and promote peace and order.

However, Santos and Reyes (2021) pointed out that lacking legal knowledge and training often hinders their capacity. Del Rosario and Torres (2019) shed light on the challenges faced in implementing the Katarungang Pambarangay and emphasize the importance of transitioning to an information system to enhance efficiency and effectiveness. Their insights underscored the need for training programs providing legal education and conflict resolution techniques to strengthen barangay officials' capacity to maintain the Katarungang Pambarangay efficiently. Overall, these studies contributed to understanding the complexities involved in maintaining the Katarungang Pambarangay and underscored the importance of addressing these challenges to ensure citizens have access to justice at the grassroots level.

***In terms of Maintenance of Infrastructure Facilities***

As shown in Table 9, the degree of seriousness of public safety and security threats in terms of maintenance of the Katarungang Pambarangay is very serious, as shown in the composite assessment of 3.73 and garnered a standard deviation of 0.34 of the barangay officials and 0.32 of the residents. Insufficient gathering of feedback from residents regarding infrastructure concerns and incorporating community input into planning and decision-making processes yielded the highest mean score of 3.76 and was interpreted as Very Serious. On the other hand, ineffective monitoring of repair and construction activities, ensuring compliance with quality standards, and timely completion of projects received the lowest mean score of responses, 3.71, which was interpreted as very serious.

**Table 9.** Descriptive statistics of the level of seriousness of the public safety and security threats in Barangay Halang In terms of maintenance of infrastructure facilities

| Indicators | Residents | | Officials | | Composite | |
|---|---|---|---|---|---|---|
| | Mean | Interpretation | Mean | Interpretation | Mean | Interpretation |
| 1. Inadequate supervision of maintaining roads, bridges, public buildings, and other infrastructure facilities to ensure safety and functionality. | 3.59 | Very Serious | 3.85 | Very Serious | 3.72 | Very Serious |
| 2. Limited identification and prioritization of infrastructure needs within the barangay, advocating for budget allocation and resources to address these needs. | 3.62 | Very Serious | 3.85 | Very Serious | 3.74 | Very Serious |
| 3. Poor coordination with relevant agencies for infrastructure development projects, ensuring alignment with community needs and standards. | 3.61 | Very Serious | 3.85 | Very Serious | 3.73 | Very Serious |
| 4. Ineffective monitoring of repair and construction activities, ensuring compliance with quality standards and timely completion of projects. | 3.56 | Very Serious | 3.85 | Very Serious | 3.71 | Very Serious |
| 5. Insufficient feedback gathering from residents regarding infrastructure concerns, incorporating community input into planning and decision-making processes. | 3.61 | Very Serious | 3.90 | Very Serious | 3.76 | Very Serious |
| **Composite Assessment** | **3.60** | **Very Serious** | **3.86** | **Very Serious** | **3.73** | **Very Serious** |

*Legend: 3.25-4.00 Very Serious (VS) 2.50-3.24 Serious (S) 1.75-2.49 Slightly Serious (SS) 1.00-1.74 Not Serious (NS)*

These findings resonate with existing literature, highlighting the challenges barangay officials face in infrastructure maintenance due to limited funding, technical expertise, and bureaucratic hurdles (Garcia et al., 2020). Capacity-building initiatives focusing on infrastructure management, financial planning, and collaboration with engineering professionals were essential to enhance their ability to effectively maintain and improve infrastructure facilities. Moreover, the capacity of barangay officials to provide quality services in various domains, including infrastructure maintenance, was contingent upon factors such as limited resources, inadequate training, and administrative challenges. Enhancing their capacity through targeted training and collaboration with relevant agencies can significantly improve service provision across multiple areas, contributing to overall community development (Garcia et al., 2020). Ultimately, these efforts could lead to more resilient and sustainable infrastructure systems, promoting public safety and security within the barangay.

### 3.4 Relationship Between the Level of Manifestation of Basic Deliverables and the Level of Seriousness of the Public Safety and Security Threats

There is a significant relationship between Barangay officials' level of manifestation of basic deliverables and the degree of seriousness regarding public safety and security threats in Barangay Halang. Table 10 shows that the probability values were all 0.001, which was less than the significance level of .05. Thus, the null hypothesis was rejected. The r value lies between 0.25 and 0.50, a moderately small positive correlation. It indicates a substantial link between the level of manifestation of Barangay officials on the performance of basic deliverables and the degree of seriousness of the public safety and security threats.

**Table 10.** Analysis of the relationship between the level of manifestation of basic deliverables and the level of seriousness of the public safety and security threats

| Basic Deliverables | Seriousness of Public Safety and Security Threats | r value | p-value | Remarks | Decision |
|---|---|---|---|---|---|
| Executive Functions | Health and Social Welfare Services | .369** | <.001 | Significant | Reject Ho |
| | General Hygiene and Sanitation | .296** | <.001 | Significant | Reject Ho |
| | Beautification and Solid Waste | .267** | <.001 | Significant | Reject Ho |
| | Katarungang Pambarangay | .287** | <.001 | Significant | Reject Ho |
| | Infrastructure Facilities | .266** | <.001 | Significant | Reject Ho |
| Legislative Function | Health and Social Welfare Services | .388** | <.001 | Significant | Reject Ho |
| | General Hygiene and Sanitation | .286** | <.001 | Significant | Reject Ho |
| | Beautification and Solid Waste | .250** | <.001 | Significant | Reject Ho |
| | Katarungang Pambarangay | .314** | <.001 | Significant | Reject Ho |
| | Infrastructure Facilities | .316** | <.001 | Significant | Reject Ho |
| Judiciary Functions | Health and Social Welfare Services | .392** | <.001 | Significant | Reject Ho |
| | General Hygiene and Sanitation | .302** | <.001 | Significant | Reject Ho |
| | Beautification and Solid Waste | .347** | <.001 | Significant | Reject Ho |
| | Katarungang Pambarangay | .369** | <.001 | Significant | Reject Ho |
| | Infrastructure Facilities | .354** | <.001 | Significant | Reject Ho |
| | Overall Degree of Seriousness | .418** | <.001 | Significant | Reject Ho |

*. Correlation is significant at the 0.05 level (2-tailed).
**. Correlation is significant at the 0.01 level (2-tailed).

These results underscore the interconnectedness between the actions and effectiveness of Barangay officials across all branches of governance and the severity of public safety and security threats the community faces. Effective governance practices, including policy formulation, resource allocation, dispute resolution, and infrastructure maintenance, were crucial in addressing community safety concerns. Challenges such as inadequate resources, limited training, and poor coordination with relevant agencies hindered the effectiveness of Barangay officials in fulfilling their governance roles (Gomez, 2020). Moreover, promoting good governance principles such as transparency, accountability, and community engagement can enhance the effectiveness of governance functions in addressing public safety threats and promoting community well-being (Mejica & Monocay, 2020). Barangay officials can better serve their constituents and contribute to sustainable community development by addressing these challenges and fostering good governance practices.

## 4.0 Conclusions

This study's findings significantly advance the local governance field by providing a detailed assessment of the performance of Barangay Halang officials across various functions. This research highlights strengths and areas for improvement, offering a roadmap for enhancing governance practices. The work addresses existing gaps by identifying discrepancies between residents' and officials' perceptions regarding the performance of basic deliverables, emphasizing the need for inclusive and participatory evaluation processes. This advancement in understanding underscores the critical importance of aligning governance practices with community needs and priorities.

Furthermore, the study reveals the necessity for better health and social welfare services organizations, pointing to the potential benefits of comprehensive health education and preventive initiatives. The research underscores the pivotal role of effective governance and community engagement in addressing hygiene, sanitation, waste management, and community dispute resolution issues. By prioritizing these areas, Barangay officials can significantly improve the quality of life for residents and promote sustainable development.

Proactive governance practices, such as efficient service delivery, strict regulation enforcement, and diligent maintenance of essential facilities, are highlighted as essential for ensuring community safety and security. The study's findings suggest deficiencies in these areas can increase risks, underscoring the importance of governance reforms and capacity-building initiatives. Barangay officials can mitigate safety and security threats and build a thriving community by fostering transparency, accountability, and community involvement.

The proposed capacity development plan exemplifies a forward-thinking approach to governance, emphasizing the importance of continuous learning and skill development for officials. This plan lays the groundwork for improved governance practices and enhanced service delivery, ultimately contributing to the well-being and development of Barangay Halang.

For future research, exploring the long-term impacts of implementing the suggested governance reforms and capacity-building initiatives would be valuable. Comparative studies involving other barangays could also provide broader insights into best practices and common challenges in local governance. Further investigation into the specific needs and priorities of different community groups within Barangay Halang would also help tailor governance practices to be more inclusive and effective.

## 5.0 Contributions of Authors

This paper has a single author, who confirms that the author reviewed this study.

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## 7.0 Conflict of Interests

The authors declare no conflicts of interest about the publication of this paper.

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# Lived Experience of Reformed Children in Conflict with the Law

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**Abstract.** This qualitative study explored the experiences of four reformed children in conflict with the law (CICL) in General Santos City, focusing on their journey through the case management process. The in-depth interviews were conducted with purposefully selected participants while the data were processed and analyzed thematically. The narratives revealed that these CICLs faced various factors that led them to conflict with the law. Their experiences during the diversion and rehabilitation program at Bahay Pag-Asa for Boys showed that the length of their stay depended on the nature of their case and their adherence to the program's terms. The structured daily schedule offered a variety of rehabilitative activities, and the program provided support to help them overcome the various challenges they faced through guidance, acceptance, prayer, and a personal commitment to change. However, the programs offered limited support. They primarily focused on monitoring, home visits, and financial assistance (when funds were available). The participants viewed hope as a crucial factor in their transformation. It motivated them to change, gave them the belief of living a good life, and provided a sense of purpose. The aspirations helped them realize life's meaning, and hope signifies the restoration of order. The case management process aimed to repair the harm caused, and the children's situations were addressed through reintegration (reinstituting them back into society) while ensuring fair treatment. Community-based programs offered during reintegration and aftercare further facilitated the restoration of peace, healing, and reconciliation. Ultimately, the experiences of these reformed CICLs highlight that their success hinged not only on the programs offered but also on their self-determination to make positive life choices.

**Keywords:** Reformed children; Conflict with the law; Case management process; Rehabilitation program; Self-determination.

## 1.0 Introduction

The Philippines prioritizes the well-being of children in conflict with the law (CICL) through a well-developed legal framework of the Juvenile Justice and Welfare Act of 2006 that underscores the significance of children's rights and their potential as future nation-builders. The framework is by the United Nations Convention on the Rights of the Child, which mandates that CICL is cared for with dignity and a focus on reintegration. The Supreme Court's Revised Rule on CICL (2019) further strengthens this commitment by implementing a case management approach that prioritizes restorative justice principles.

Through case management, CICLs benefit from a system that ensures their dignity and fundamental rights are respected throughout the process. It considers their age and developmental needs, aiming to reintegrate them as positive members of society. The program offers various alternatives to institutional care, such as care orders, counseling, probation, and vocational training. By prioritizing their well-being, the system also fosters a sense of community responsibility through restorative justice principles. Despite these advancements, significant challenges persist, as documented by Goldson (2011) and Dyer et al. (2021). Societal attitudes and conflicting approaches to juvenile justice, often focused on punishment rather than rehabilitation, can lead to rights violations for CICL.

According to the General Santos City Social Welfare and Development Office, there were 145 CICL cases in 2021 and 222 CICL cases in 2022. Additionally, 22 CICL cases were considered repeat offenders in 2022. The CICL had a 9.90% chance of becoming repeat offenders. The CICLs were composed of 204 males and 18 females. There were 77 CICL cases higher than the previous year. Moreover, the top five (5) CICL cases committed include theft, rape, robbery, carnapping, and frustrated murder. The 80 CICLs were below 15 years old, and 142 CICLs were above 15 years old but below 18 years old. Usually, the case status of the CICL in the city is the following: undergoing community-based intervention, endorsed to parents/guardians, the complainant is not interested in filing a case, and pending inquest proceedings before the City Prosecutor Office. Moreover, the top five (5) barangays with the highest number of CICL cases were Labangal, Mabuhay, Fatima, Apopong, and Calumpang. Based on the data, there was an increased number of CICL cases in the city each year.

There is a limited study of the lived experiences of reformed children in conflict with the law in the Philippine setting. The majority of the research studies focused more on the socioeconomic factors, legal framework, detention conditions, restorative justice, rehabilitation programs, CICL perspectives, and law enforcement practices (Bermudez et al., 2004; Irene et al., 2013; Palomares, 2018; Forones, 2017; De Pano, 2014; Cortel, 2020; Aguilar, 2016; Koller, 2015; Banzon-Librojo, 2023; Banzon-Librojo, 2024; Del Rosario, 2018; Mariano, 2019).

This research can contribute to the literature concerning the lived experiences of reformed children in conflict with the law (CICL) in the case management process. The future recommendations of this study can be campaigned to the Local Government Unit of General Santos City, the City Social Welfare and Development Office (CSWDO), and other agencies who were directly involved in handling CICL cases to enhance and strengthen the implementation of the case management in the city. Significantly, this research provides an avenue for future research in other local settings.

## 2.0 Methodology

### 2.1 Research Design

This study is qualitative research focusing on data or information generation whereby the researcher seeks out the quality of a particular phenomenon. Primarily, a case study design is used to investigate the contemporary phenomenon within its real-life context and provides a data generation method that explores and analyzes the participants' experiences. It allowed the researcher to gain insights into people's attitudes, behaviors, value systems, concerns, motivations, aspirations, contexts, and lifestyles. The qualitative research data take the following forms: interview transcripts, recordings and documentation outputs, field notes, photos, and other visual texts (Barrios, Conaco, Go, and Portus, 2018). The researcher used an in-depth interview through purposive sampling and thematic analysis to process the narratives of the reformed CICLs on the case management process from rescue to aftercare.

### 2.2 Research Locale

The study was conducted in General Santos City, South Cotabato, Region XII, Philippines. According to the General Santos City Social Welfare and Development Office, there were 145 CICL cases in 2021 and 222 CICL cases in 2022. Additionally, 22 CICL cases were considered repeat offenders in 2022. The CICL had a 9.90% chance of becoming repeat offenders. The CICLs were composed of 204 males and 18 females. There were 77 CICL cases higher than the previous year. The top five (5) CICL cases committed include theft, rape, robbery, carnapping, and frustrated murder. The 80 CICLs were below 15 years old, and 142 CICLs were above 15 years old but below 18 years old. Usually, the case status of the CICL in the city is the following: undergoing community-based intervention, endorsed to parents/guardians, the complainant is not interested in filing a case, and pending inquest proceedings before the City Prosecutor Office. The top five (5) barangays with the highest number of CICL cases were Labangal, Mabuhay, Fatima, Apopong, and Calumpang. Based on the data, there was an increased number of CICL cases in the city each year. Generally, the interviews took place in coffee shop areas for safety protocols and safe spaces where they felt comfortable throughout the conversation.

**2.3 Research Participants**
The participants of this study only included the reformed CICLs in the interview due to safety protocols and as per referral from the forensic social workers and center social workers of General Santos City. They are aged 18 to 25 years old and were previously alleged/accused/violated the law but discharged from the *Bahay Pag-Asa* for Boys, and their case status is dismissed. Only four (4) reformed CICLs residing in General Santos City voluntarily confirmed their participation in the interview. The inclusion criteria were the following: should be a resident of General Santos City; aged 18 years old and above; alleged/accused/violated a law at the age of minority; discharged from *Bahay Pag-Asa* for boys; accomplished the terms and conditions based on the contract agreement; and cases dismissed from the court. Moreover, the exclusion criteria were the following: participants with mental health concerns (including those reported for self-harm or harming others); participants with underlying health and medical conditions; participants with scheduled court hearing sessions; repeat offenders with criminal offenses aged 18 years old and above.

**2.4 Research Instrument**
This study utilized a researcher-made interview guide focusing on the experiences of the reformed CICLs throughout the case management process with three (3) different sections (before, during, and after). The General Santos City Social Welfare and Development Office (CSWDO) also checked and approved the interview guide to adhere to the policy protocols and ethical considerations in research.

**2.5 Data Gathering Procedure**
The researcher accomplished first the approval and recommendation letter, HRMDO Memo Number 05-2023-1086, from the Human Resource Management and Development Office (HRMDO) under the Local Government Unit of General Santos City to conduct the study concerning the case management of children in conflict with the law (CICL) involving the City Social Welfare and Development Office (CSWDO). Before conducting an interview, the researcher needed to wait for approval and referral from the forensic and center social workers to secure the informed consent of the reformed CICLs and their willingness to participate. The purpose of this was to consider the safety measures of the participants beforehand. Generally, the time allocated for each interview depended on the informant's capacity to share narratives and responses based on the interview guide questions.

**2.6 Ethical Considerations**
The researcher followed the Data Privacy Act of 2012. The researcher ensured that all the data and information provided by the various agencies and the reformed CICLs were secured and confidential in compliance with the law of the Philippines. The researcher gave a copy of informed consent indicating the title, principal researcher, institutional contact information, purpose of the study, subject of participation, confidentiality, and authorization of information. Moreover, the participants were informed about the importance of voluntary participation, the confidentiality of the information, and their rights. The participant responses were anonymized to ensure confidentiality. In the interview, selecting a safe place where the participants felt comfortable to be interviewed was necessary to uphold safety protocols and protection.

## 3.0 Results and Discussion

**3.1 Experiences Before Admission to Bahay Pag-Asa for Boys**

***Multidimensional Factors that Influenced the Children to Become CICLs***
The participants highlighted that the reasons why they were accused/alleged/adjudged in committing an offense were the following: the act of attempted or frustrated murder due to peer group conflicts; their engagement with negative influence peers and involvement in harmful activities; adult offender (school guard) framed the child (drug case) and the police used the child for the buy-bust operation to apprehend another offender; the family conflict that ends up to murder case and the accusation of his involvement in the incident. Moreover, the previous clients were all rescued by the police officers. The documents to prove the minority of these children were prepared and submitted.

<u>Case 1: Attempted or Frustrated murder due to peer group conflicts called "Fam Group"</u>
The participant was a member of a peer group. A group conflict happened, and he visited the other peer's territory to make amends. However, the other peer member slapped his back and threw a stone at his friend, who brought a big knife. His friends were able to escape and went back to take revenge by cutting other peer member's head

with the big knife and smashing it with wood and stone. During that time, he was still a teenager who did not think of the consequences of his actions. Thus, he became a CICL due to an attempted and frustrated murder case.

*"I went there to make amends with the other group. Still, when I arrived, they slapped me in the back. Of course, you will get angry easily and unable to think of the consequences of your actions. My friend was able to escape and run. After that, the two of us cut his (the member of other fam groups) head, smashed him with wood, smashed him with stones." –J.Y.L.*

<u>Case 2: Engagement with negative influence peers and involvement in harmful activities</u>
The participant was a member of a peer group. Based on his narratives, he did not participate in group activities like throwing stones at the cars or finding someone to make fun of. The incident happened after they attended the birthday party of one of his friends. After a few months, all the members engaged in the incident asked to surrender. If he did not surrender and at the same time turned 18 years old in a few months, a warrant of arrest would be issued. The case would be treated as a regular rather than a suspended sentence for CICLs.

*"They (friends) do bad things. Then they will encourage you to do them, too. If cars pass by, they will throw stones. However, I am not participating in their activities. If they inflict damage, I will just let them. After that, they pointed fingers at each other and blamed each other." –X.A.K.*

<u>Case 3. An adult offender (school guard) framed the child (drug case) while the police used the child for the buy-bust operation to apprehend another offender</u>
The participant was set up and framed by the adult offender (school guard) who used drugs that were supposed to be apprehended by the police officers. Also, the participant was used as bait for the buy-bust operation that the officers conducted near the area.

*"He (the school guard) framed me (during the apprehension). Before they brought me to the police station, they conducted a buy-bust and used me as bait for the apprehension of the target suspect. They instructed me what to do and explained that he (the suspect) was the influential man." –D.R.O.*

<u>Case 4. The family conflict ended up in a murder case and accusations of his involvement in attempted murder</u>
It was his grandfather's birthday party when the incident happened. His uncle and his wife have heated arguments because his uncle impregnated his wife. During the argument, his uncle stabbed his wife, and his uncle received eight (8) stabbed wounds. When the visitors (some of them were his relatives) entered the house, they saw him holding the big knife and concluded that he was part of instigating the crime scene.

*"...My uncle and his wife stabbed each other. My uncle was stabbed in the back. He stabbed back his wife. My uncle received eight (8) stab wounds in the back. It happened so fast. During that time, I was about to think negative thoughts. I was holding a big knife when the visitors came inside the house to celebrate the birthday party. Some were my relatives." –Z.M.N.*

The socialization process with the significant others (family, peers, etc.) may influence the behavior of the individuals. With this, exposure to violence can be considered a risk factor for juvenile delinquency (Sartika, 2019). Based on the narratives, socioeconomic factors were not the primary contributors to juvenile delinquency. The results contradict Bermudez et al., 2004; Irene et al., 2013; Palomares, 2018; Gupta, 2015; and Das, 2022.

### 3.2 Experiences Inside *Bahay Pag-Asa* (BPA) for Boys

The social workers conducted an admission conference to discuss the reason for admission to *Bahay Pag-Asa* for Boys and explained their rights and processes throughout the case management.

#### *The Length of Stay in BPA for Boys is Dependent on the Type of Case*

The length of stay inside Bahay Pag-Asa for Boys in the diversion and rehabilitation process depends on the type of case, accomplishment of the diversion contract's terms and conditions, change in behavior, and center social worker's monitoring, progress, and manifestation reports. In the context of this study, there are four (4) cases:

<u>Case 1. Damage to property/ physical injuries.</u> The previous client stayed inside the *Bahay Pag-Asa* for Boys for almost one (1) year.

Case 2. Drug case (9165). The previous client stayed inside Bahay Pag-Asa for over three (3) years. The process took longer due to the involvement of a private lawyer hired. The social worker encouraged and suggested having a public lawyer from the Public Attorney's Office instead of hiring a private lawyer so that the case process would move.

Case 3. Attempted murder/frustrated murder. He stayed for two (2) years inside *Bahay Pag-Asa* for Boys.

Case 4. Attempted murder/frustrated murder. He stayed for three (3) months in the same year of admission inside *Bahay Pag-Asa* for Boys.

The regional trial court implemented a speedy trial if the case is considered minor under the Branch 11 Family Court. It is part of restorative justice in the CICL's case management. All the participants experienced a speedy trial during the case conferences.

***The Structured Daily Activities Offered Various Rehabilitative Programs and Services***

The *Bahay Pag-Asa* for Boys in General Santos City offered various programs and services for CICLs, such as gardening or garden beautification contests. Also, sports or physical activities were accessible, including basketball, chess, and dama (board games). Moreover, livelihood or skills training was also available. They offered rug-making to the children. Also, educational opportunities such as Alternative Learning Systems are accessible for continuing educational learning inside the institutional facility. Religious activities, specifically Bible study and sharing, were offered. Various church institutions visited the institutional care facility, like Mount Calvary Bible Baptist Church and Catholic, and a separate session for Muslim brothers who practiced Islam faith. Counseling sessions were also available. Usually, they prioritize those who are more vulnerable and need constant counseling sessions. Also, there were donations from outside organizations or foundations. Inside the institutional facility care, there were structured daily activities that will serve as a routinary task for the children:

**Morning Time.**
1. Wakeup call
2. Arrange and clean the bed
3. Take a bath/shower
4. Prayer
5. Exercise
6. Eat breakfast
7. Clean the dishes
8. Educational activities or Alternative Learning System
9. Break time/leisure time (watch television or play)

**Lunch Time.**
10. Eat lunch
11. Clean dishes

**Afternoon Time.**
12. Nap time (if no other activities) or join activities conducted by foundations/organizations
13. Watch television or play
14. Take a bath/shower

**Evening Time.**
15. Clean dishes
16. Watch television or play
17. Journal writing
18. Sleep time

The abovementioned structured daily activities functioned as a training ground for the children to cultivate habitual routines, ultimately facilitating their successful reintegration and participation in the aftercare process. Based on the narratives, the most influential activity they experienced was religious activities such as Bible study, sharing, and praying. It influenced them to acquire good morals, values, and self-discipline.

*"Bible sharing. You will share during Bible sharing. Others will also share. Each person should share what he has learned." -J.Y.L.*

*"Religion gave me the idea that I need to keep moving forward." –X.A.K.*
*"Discipline. I applied it to my child now. He is very disciplined. It is because of the Bible. I always read the Bible because we have plenty of free time. So, we will always read the Bible." –D.R.O.*

In General Santos City, the *Bahay Pag-Asa* for Boys has enormous space for the CICL admitted to the center and offers various rehabilitation programs, contrary to the findings of Forones (2017). However, Aguilar (2016), Koller (2015), and Cortel (2020) challenged the effectiveness of rehabilitation programs in terms of positive house-parent resident relationships, incorporating Filipino values, and addressing the root causes of offending behavior.

***The Multifaceted Problems of CICL Inside the BPA for Boys were Addressed through Seeking Advice, Acceptance, Prayer, and Self-Determination to Change***

The children who stayed inside the youth care facility also faced some challenges, such as feeling lonely, longing to see their family, realizing that their parents were far away from them, stealing things from other children and storage room (clothes and food), initiation ("welcome") for newcomers, and some peers turn into foes.

*"It is painful. It is different if you are outside. Inside (Bahay Pag-Asa for Boys), you do not have anyone to talk to." –J.Y.L.*
*"I miss my family. If you eat food and your parents are not there, You want to see your parents. I will eat instead to survive. I will cry." -X.A.K.*
*"The peers inside can turn into foes. The newcomer was physically harmed by the CICLs inside the BPA." –D.R.O.*
*"It is boring inside." -Z.M.N.*

Despite facing numerous challenges, the participants developed a multifaceted coping strategy. It includes seeking guidance from their mentor, accepting responsibility for their actions, seeking solace through prayer, and reflecting on past advice from family. Additionally, they focused on rebuilding trust with social workers through helpful actions, reconciling with peers, and developing a positive self-image. Finally, they actively participated in youth activities after their case dismissal, demonstrating a commitment to positive change.

*"I became active in youth activity." –Z.M.N.*
*"I accepted it. I always pray and ask for advice. That is why I accepted why I am there (Bahay Pag-Asa for Boys). I told myself the time would come when I could get outside. Only God knows." –J.Y.L., D.R.O., X.A.K.*

### 3.3 Experiences After Discharged from BPA for Boys

***Accepted by their Family/Guardian, But the Community Perceived them Negatively Except for Religious Institutions***

All the participants affirmed that their immediate family or guardian accepted them during reintegration and aftercare. Their support, care, and love were essential to the success of reformation.

*"I asked for forgiveness for what I did and did not listen to them. I cried everything there." –X.A.K*
*"So eventually, someone accepted me, my aunt." –D.R.O*
*"During the release, my mother and father." -J.Y.L.*
*"My parents are supportive of what I am passionate about." –Z.M.N.*

Most of the participants disengaged from the negative influence of peers, gained new friends who accepted them for who they were, and provided social support.

*"I do not engage with my peers. I have my world. I want to work." –X.A.K.*

Sometimes, a CICL's status was disclosed to the educational institution. This disclosure aimed to facilitate the implementation of appropriate interventions conducive to the reintegration. While some classmates extended social support and encouragement, a subset of teachers initially harbored reservations. However, these reservations ultimately yielded to acceptance.

*"My classmates knew. All of them were visiting me in the Center. There was no problem. They encouraged me." –J.Y.L.*
*"Eventually, they say something about me and make me feel like the same person in the paper. Sometimes, I can hear them when I make a mistake. However, I disregarded it because I think I am outside the Center now." –D.R.O.*

*"They already knew because of the gossip." -Z.M.N.*

Furthermore, reintegration at the community level presents distinct challenges. Social acceptance is obstructed by informal communication channels, such as gossip, that disseminate inaccurate information about the child and generate negative commentary. Conversely, religious institutions embrace these individuals without judgment. Despite societal stigma, the program participants resolutely maintain their aspirations and establish goals for a fulfilling and virtuous life.

Korde (2023) and Attivon (2022) asserted that labeling youth as deviant can shape their identity and hinder rehabilitation. Also, parental involvement and community support are crucial for preventing delinquency and promoting reintegration (Malesa, 2024; Sartika, 2019).

***The Aftercare Programs and Services were Limited to Monitoring and Home Visitation as well as Financial Assistance Depending on the Availability of Funds***

The participants attested to the availability of reintegration and aftercare programs and services. These services primarily included monitoring, home visitations, and community-based programs. Implementing these programs is essential for generating monitoring reports, progress reports, and manifestation reports that are submitted to the court. Only two participants received cash assistance under the Assistance to Individuals in Crisis Situation (AICS) program.

*"You will be the one to visit the barangay. I need to clean the surroundings. I did not wait for them. I voluntarily did community service. Once a month only." –X.A.K.*
*"In 6 months, you cannot leave GenSan. You need to finish the observation." –D.R.O.*
*"I was given financial assistance* when *I was released (Bahay Pag-Asa for Boys). I gave it to my father to buy some rice. I was not allowed to hold the money." –J.Y.L.*
*"I received AICS. It is a financial assistance for school." –Z.M.N.*

Within the context of General Santos City, the participants emphasized the need for financial aid during the aftercare program to address necessities. They identified multifaceted challenges such as financial hardship, physical strain from demanding labor (such as carrying 50kg tanks), social stigma, and difficulties affording educational expenses (including uniforms). Despite these obstacles, participants demonstrated remarkable resilience by securing employment with income, pursuing educational opportunities through scholarships (e.g., the UNIFAST program), maintaining humility, and seeking alternative means to support their parents or guardians.

*"I am working by carrying a heavy 50 kg tank. You need to carry and maneuver it." –X.A.K.*
*"My cousins were accused by my teachers (as CICLs). They inflict negative comments." –J.Y.L.*
*"The temptation of peers is to drink alcoholic beverages. If you drink, you can do something negative again." –Z.M.N.*
*"The situation of the aunt is very challenging. Her only source of livelihood is alupi. Her income is not daily." –D.R.O.*

***Hope and Aspiration are Multifaceted Concepts***

According to the participants, hope is a multifaceted concept. They described it as a symbol of personal transformation undertaken for the benefit of their families, an ideology that motivates them to pursue a positive and fulfilling life, and a source of internal motivation that propels them forward.

*"It (hope) is like a motivation. Motivation to uplift the status of your life in terms of finances." –Z.M.N.*
*"Hope is for my partner, my mother, and my father." –X.A.K.*
*"For my family and my child." – J.Y.L.*
*"Hope is the ideology that gives me an idea of how to continue. Despite how difficult it is, hope gives you a boost to continue." –D.R.O.*

The participants' aspirations provide them with a realization that life has a purpose. They aspire to have complete and healthy family members, financial stability, review and pass the board exam in one take, apply to the government for work, and buy a house and lot for parents and family. Through this, they develop a life strategy to find a job that will suffice their basic needs.

*"I aspire to have a complete family." –X.A.K.*
*"I aspire to have provisions for the basic needs of the family." -J.Y.L.*
*"My goal this year is to decide to review for the board exam this upcoming August. Hopefully, I can reach my goal of passing the board exam. With God's grace, so that I can apply for reinforcement service." –D.R.O.*
*"If I can buy a house for my parents and a lot. Hopefully, I will be accepted into the government service this year." -.Z.M.N.*

The participants attributed their reformation and the pursuit of a meaningful life to the transformative power of their experiences. These experiences fostered a sense of responsibility towards their families, motivating them to achieve their goals and strive for personal growth. Additionally, participants drew strength from their faith and a personal conviction that life's challenges serve a purpose. The program equipped them with enduring life lessons, fostering resilience in adversity and empowering them to earn respect through their accomplishments.

*"You can accomplish your goals. You need to help your parents. You are free from the chains." –X.A.K.*
*"I have realizations. It influenced me positively and with lifelong lessons in life. Because of that, I realized that you should live better." –D.R.O.*
*"Respect from other people. You will earn respect based on your profession." –Z.M.N.*
*"If I had not experienced it, I would not have been the person I am today. I am drinking alcohol and do not have a family now. If I had not experienced it, I would not mature now. I will not learn what life is. I cannot meet other people." –J.Y.L.*

Moreover, the participants of this study have a sense of self-determination to exercise their rights in terms of decision-making and good choices in life.

*"In terms of the service DSWD could provide. They gave me the services needed for my case. If they lack services, maybe I am not free now. However, because I am here now, meaning, they were able to provide my basic needs for the diversion programs intended for me. The justice is okay. I received the justice I hoped for. If justice was not served, I am still suffering now. I am okay now." –D.R.O.*
*"I cannot say that it is okay because you should be the one who knows what mistakes you have committed. You need to adjust. It depends on your choice. For me, I want to be productive and reformed. That is my choice to reach what I have now." – Z.M.N.*
*"In my own opinion, I accepted what happened. I do not want negative comments given to me. The social workers assisted me and explained. They saved me. It is my chance now. I am free outside. I will not waste it." –X.A.K.*
*"For now, I am concerned about my family's situation. Because the person (school guard) who framed me. He was found dead maybe after three (3) days. He had a cardiac arrest. My grandmother was hoping that the karma would return to him. That is why my grandmother felt relieved." –J.Y.L.*

The findings of this study are similar to Korde (2023), Limantė (2022), and Attivon (2022) in that it is valuable to emphasize the understanding of CICL's perspectives on their own experiences and needs. Also, it is essential to examine the inner world, need for support, sense of capabilities, and concern for others (Banzon-Librojo, 2023; Banzon-Librojo, 2024).

## 4.0 Conclusion

Based on the data results, the CICLs faced various factors that led them to conflict with the law. The participants highlighted that the reasons why they were accused/alleged/adjudged in committing an offense were the following: the act of attempted or frustrated murder due to peer group conflicts; their engagement with negative influence peers and involvement in harmful activities; adult offender (school guard) framed the child (drug case) and the police used the child for the buy-bust operation to apprehend another offender; the family conflict that ends up to murder case and the accusation of his involvement in the incident.

Their experiences during the diversion and rehabilitation program at *Bahay Pag-Asa* for Boys showed that the length of their stay depended on the nature of their case and compliance with the given terms and conditions. The structured daily schedule offered a variety of rehabilitative activities. A multifaceted approach was used to address the complex challenges encountered. This approach incorporated guidance, self-acceptance, spiritual reflection, and a commitment to personal transformation.

However, the reintegration and aftercare programs offered limited support. They primarily focused on monitoring, home visits, and financial assistance (when funds were available). Moreover, the participants viewed hope as a push factor in their transformation. It motivated them to change, gave them the belief to live a good life, and provided a sense of purpose. Their aspirations helped them realize the meaning of life, and hope implied a restoration of order.

The case management process aimed to repair the harm caused, and children's situations were addressed through reintegration (reinstituting them back into society) while ensuring fair treatment. Community-based programs offered during reintegration and aftercare further facilitated the restoration of peace, healing, and reconciliation. Ultimately, the experiences of these reformed CICLs highlight that their success hinged not only on the programs offered but also on their self-determination to make positive life choices.

Moreover, based on the narratives of the reformed CICLs, the level of consciousness of their actions and decision-making in life varied on the reflective monitoring, rationalization, and motivation of their actions. They only behave according to what they know or believe concerning the outcome of the action. However, intentional acts often produced consequences for which the reformed CICLs had not originally accounted for. These unintended consequences become unacknowledged conditions of future actions. Generally, the ability to become a successful reformed individual may also depend on their self-determination to make the "right" and "good" choices in life.

Furthermore, this research suggested conducting quantitative research to establish baseline data on children in conflict with the law in General Santos City for future references and research opportunities. Also, it is recommended that the number of reformed CICL participants be increased and that a study conducted in another local setting be conducted to assess the implementation of Republic Act 9344 and the integration of restorative justice principles. In addition, it is advised to explore the lived experiences of children in conflict with the law who were committed inside the City Jail before the implementation of R.A. 9344. Lastly, to conduct a study focusing on CICL that is no longer a minor, a recidivist, and at the same time non-compliant to diversion measures.

## 5.0 Contributions of Authors

The first author, Jenena Solmayor, coordinated and processed the approval and recommendation from the Local Government Unit of General Santos City, specifically the Human Resource Management and Development Office and City Social Welfare and Development Office, gathered the data, coded and analyzed the data, accomplished the results, discussions, and conclusions of the study. The second author, Amabelle Embornas, served as the research adviser who shared her knowledge and enhanced the overall output of the research through checking, rechecking, formatting, editing, validating, and finalizing the paper.

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## 7.0 Conflict of Interests

This research publication has no conflict of interest as long as it is used for academic purposes only.

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# Academic Workplace Inclusivity Through the Prism of Microvalidations Among Male LGBTQIA+ Faculty Members

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**Abstract.** This research explored the lived experiences of male LGBTQIA+ faculty members at a local university in Cabuyao City, Laguna. It focused on understanding how inclusivity in the academic workplace, viewed through microvalidations, impacts these individuals. The study employed a qualitative research design with a phenomenological approach. Ten male LGBTQIA+ faculty members were interviewed to gather data on their experiences. Interpretative Phenomenological Analysis was used to analyze the data, resulting in thirty superordinate themes. The analysis revealed the following themes: Inclusive Environment; Restrictive Environment; Establishing Respectful Treatment and Boundaries; Discrimination Concerns; Interaction and Perception; Self-Expression Struggles; Acceptance through Positive Actions and Interactions; Colleagues as Source of Motivation and Appreciation; Students as Source of Motivation and Appreciation; Diversity, Equity, Inclusion, and Belonging; Personal Enhancements; Culture of Appreciation and Understanding; Professionalism; Personal Coping Mechanisms; Interpersonal Dynamics; Boosting One's Confidence; Fostering One's Authenticity; Valuing One's Worth; Improving One's Capability; Professional Growth and Confidence; Professional Performance; Positive Work Environment; Emotional Well-being; Job Potential Attainment; Job Satisfaction Fulfillment; Job Performance Improvement; Need for Clear Rules and Guidelines; Inclusive Facility Accommodation; Importance of Gender and Development Functions; Need for Full Acceptance. The study highlighted the crucial role of micro validations in promoting inclusivity and empowerment among male LGBTQIA+ faculty members. Affirmations significantly enhanced confidence, performance, and well-being in academic workplaces. The research emphasized the need to reassess existing norms to create fair and empowering environments for all. It called for fostering spaces where individuals feel valued, respected, and able to thrive professionally.

**Keywords:** Academic workplace; Inclusivity; LGBTQIA+; Local university; Microvalidations.

## 1.0 Introduction

Inclusivity is vital in the professional world, requiring organizations to prioritize and integrate diversity. Creating an inclusive workplace involves a deep commitment to incorporating individuals from various backgrounds and fostering a sense of visibility and belonging. The core principle is to treat everyone fairly and provide equal opportunities, contributing to a positive and productive work environment where individuals can thrive. Despite the importance of inclusivity, a study by Faber et al. (2023) revealed that 33% of participants were actively seeking new employment with companies that demonstrated greater inclusivity towards the LGBT+ community. Additionally, 40% of participants reported encountering non-inclusive behaviors at work, such as being disregarded, isolated, or harassed due to their sexual orientation or gender identity. Less than 50% of participants felt comfortable disclosing their sexual orientation or gender identity to colleagues, and 33% of those who chose not to disclose were concerned about potential differential treatment.

Matthyse (2020) noted that while the visibility of trans and gender-diverse individuals in Western media has increased globally, dominant narratives still focus on discrimination, marginalization, invisibility, violence, and erasure. This persistence is attributed to patriarchal structures that maintain gendered oppression and inequality. Matthyse's briefing examined gender inequalities in South Africa and questioned the effectiveness of Sustainable Development Goal 5 in ensuring the inclusion of trans and gender-diverse individuals. To achieve genuine equality, governments and development organizations must address the specific challenges LGBT individuals face to meet the Sustainable Development Goals (SDGs). Drake (2021) highlighted the growing scholarly attention to strategies promoting Diversity, Equity, Inclusion, and Belonging (DEIB) in higher education. The main goal of DEI initiatives is to create a more synergistic and harmonious atmosphere, ultimately significantly impacting society.

The Philippines is also actively working towards creating an inclusive workplace environment for faculty members who identify as LGBTQIA+. Luna (2021) reported on the first inclusion survey conducted by Philippine Financial and Inter-Industry Pride (PFIP), highlighting progress in enacting legislation to protect individuals from discrimination based on gender identity and sexual orientation. A study by Tajan et al. (2023) aimed to assess LGBTQ members' views on the Sexual Orientation and Gender Identity and Expression (SOGIE) Equality Bill, finding that LGBTQ individuals supported the bill as a means to reduce and eradicate discrimination in society. The Philippine Commission on Women (2019) outlined initiatives to promote SOGIE awareness and inclusion in workplaces and curricula, including training programs, policies against discrimination, support groups, and integrating SOGIE perspectives in courses. Despite these efforts, challenges in implementation and evaluation remain, underscoring the importance of continued dialogue and research with stakeholder participation.

Various governmental, non-governmental, and academic entities have increasingly recognized the need to address gender-related issues and challenges. The Commission on Higher Education (CHED) issued Memorandum Order No. 01 series of 2015 (CMO No. 1, s. 2015), mandating Higher Education Institutions (HEIs) to ensure adherence to regulations fostering parity, impartiality, and integration. Pamantasan ng Cabuyao is committed to creating an environment characterized by respect and inclusivity towards diverse gender identities. This commitment includes a comprehensive revision of the gender and development policy, focusing on diversity, equity, and inclusion, aligning with the Gender and Development Department's goal of advancing gender equality.

Addressing microaggressions within academic environments is crucial for advancing equality. Implementing microvalidations as a proactive measure can help the academic community ensure that inclusivity becomes an integral aspect of daily life. This research explored the experiences of LGBTQIA+ male professors at Pamantasan ng Cabuyao. It aims to introduce new perspectives into the ongoing discussion on LGBTQIA+ inclusivity in higher education, emphasizing the significance of micro validations in psychology.

## 2.0 Methodology

### 2.1 Research Design

This study employed a qualitative research methodology to gather and analyze non-numerical data to understand concepts, opinions, and experiences. The study adopted phenomenology as its philosophical framework, emphasizing the explicit examination and depiction of phenomena as they are consciously experienced, free from unexamined preconceptions or causal explanations. Phenomenology seeks to comprehend subjective experiences by confronting phenomena with an open mind. Specifically, the study utilized Interpretative Phenomenological Analysis (IPA) to investigate the lived experiences of male LGBTQIA+ faculty members at a local university. IPA, a qualitative methodology, explores individuals' subjective significance and interpretations within a particular context. This approach draws from the interpretive tradition, viewing the researcher as a partner in creating knowledge with the participants, thereby providing a deeper understanding of their experiences.

### 2.2 Research Participants

Ten faculty members served as informants of this study. This study focused on the male faculty members of a Philippine university in Cabuyao, Laguna, who identified as members of the LGBTQIA+ community. Due to the nature of the study, a purposeful sampling technique was employed. The researcher selected participants based on specific characteristics relevant to the study's objectives. Specifically, a homogenous sampling technique was used. According to Nikolopoulou (2022), homogenous sampling is a non-probability method in qualitative research where the researcher selects a subset of individuals or units that share certain characteristics.

In this study, the criteria applied were male faculty members from any department within the university who identified as LGBTQIA+ and had been employed for a minimum of one year, regardless of their appointment status. According to The Center (2024), the LGBTQIA+ community encompasses a diverse range of identities related to sexual orientation and gender, including lesbian, gay, bisexual, transgender, queer, intersex, asexual, and other orientations, identities, and characteristics not included in the initialism. Participants in this study met the criteria of being male faculty members who identified as LGBTQIA+ and had been with the institution for at least one year, regardless of their appointment status, from any of the university's departments.

**2.3 Research Instrument**

The study utilized semi-structured interview guide questions. Some questions asked are: "How do you observe the acceptance and understanding of the LGBTQIA+ community within the university?" "What challenges have you faced as a male LGBTQIA+ faculty member in the academic workplace?" "What examples of microvalidations have you experienced in your academic workplace?" "How do the microvalidations you experience influence your job satisfaction and performance?" and "What institutional policies or practices contribute to a more inclusive environment for LGBTQIA+ faculty members?"

Five experts selected for their expertise and experience in the field under study validated the questionnaire. These experts included a research professor, a qualitative data analyst, and three subject matter experts: two registered psychometricians, psychologists, and one licensed LGBTQIA+ academician. The semi-structured questionnaire was evaluated based on predetermined standards such as relevance to the subject matter, clarity, and conciseness.

**2.4 Data Gathering and Analysis Procedure**

The researcher conducted face-to-face interviews at times convenient for the informants, ensuring they were free from academic and administrative duties. The study's objectives, methodology, and voluntary nature were explained during the interviews, and written informed consent was obtained. Semi-structured interviews were conducted to collect in-depth qualitative data using a predetermined interview protocol with open-ended questions. Audio recordings were made with the participants' consent, and field notes were taken to capture nonverbal cues and contextual details.

The audio recordings were transcribed verbatim, and the raw interview data were converted into analyzable text for thematic analysis. Thematic analysis was performed to identify patterns and themes, and a coding framework was developed and applied to the data. Codes and themes were refined iteratively, with systematic compiling and clustering conducted using the software "Taguette." Inductive coding, where the researcher developed codes from the data itself, was employed.

The study applied four key criteria to ensure the trustworthiness of qualitative research, as outlined by the National University (2024): credibility, dependability, confirmability, and transferability. Credibility was established through prolonged engagement with participants and member checking. Dependability was ensured through transparent research procedures. Confirmability was maintained through reflexivity, peer debriefing, and external audits. Transferability was addressed by describing the research context, participants, and data collection methods. These criteria ensured the study's reliability and validity. The researcher practiced reflexivity to acknowledge personal biases and minimize their influence on the research process, ensuring that the study's findings were grounded in the participants' perspectives.

**2.5 Ethical Considerations**

The qualitative investigation was conducted with strict ethical considerations. Informed consent was requested, stressing voluntary involvement, confidentiality, and the freedom to withdraw without repercussions to protect participants' well-being. Pseudonyms were used to maintain anonymity, and all personally identifiable data were treated with the utmost caution. The participants' names were not disclosed but were referred to as Faculty 1, Faculty 2, … Faculty 10 or through their shortcodes of F1, F2, …, F10. The study secured formal approval from the university, adhering to ethical guidelines outlined in institutional policies. It also followed the LCBA Institution's Research Manual on Ethical Considerations. The emotional and psychological impact on participants was monitored throughout the research process, and adequate support was provided. The principle of reciprocity was upheld, ensuring participants had access to research findings and offering opportunities for member checking to validate interpretations. By adhering to the Data Privacy Act of 2012, the study prioritized the ethical responsibility of preserving participants' privacy rights and maintaining the integrity of their sensitive information. The study aimed to contribute to a culture of respect, understanding, and inclusivity, prioritizing ethical considerations to uphold the dignity and rights of male LGBTQIA+ faculty members.

## 3.0 Results and Discussion

The analysis resulted in thirty (30) themes that aim to understand the lived experiences of the male LGBTQIA+ faculty member-participants. The themes were developed based on their testimonies on academic workplace inclusivity through the prism of microvalidations and guided by the theories as a lens. These themes are discussed below.

### 3.1 Acceptance and Understanding Towards the LGBTQIA+ Community Within the Academic Workplace

***Inclusive Environment***

The theme of Inclusive Environment was derived through the convergence of the subthemes Respected and Acknowledged, Focus on Individual Competency, and Open Communication and Comfortability. These individuals expressed a sense of being esteemed and recognized by their peers and their students, who placed significant importance on their professional accomplishments and aptitudes rather than their gender identity or sexual orientation. Faculty 1 and 6 stated:

*"…I think they are not looking at what I look for in a day but at how I can address a specific topic or subject to the students."*
*"It is like nothing. No student disrespects us if we do our job as teachers and professors."*

An environment characterized by acknowledgment and affirmation cultivates a feeling of inclusion and tolerance, which empowers LGBTQIA+ faculty members to flourish in their positions in the collegiate body. Furthermore, the significance of assessing faculty members according to their expertise and skill sets, regardless of their LGBTQIA+ identity, is emphasized by the focus on individual competency, which promotes a merit-based approach to professional involvement. The said scenario was exemplified by the statement coming from Faculty 8:

*"When HR interviewed me, I did not feel that they were prejudiced against me because of my gender. They accepted me based on…… and assessed me based on my skills and competencies."*

These subthemes emphasize the importance of establishing inclusive environments that recognize and appreciate the talents and expertise of LGBTQIA+ individuals, thereby fostering a more equitable and affirming academic workplace.

***Restrictive Environment***

Under the overarching theme of Restrictive Environment, the subthemes of Limited Expression, Limited Acceptance, and Limited Representation clustered to highlight the common challenges experienced by male LGBTQIA+ faculty members in the academic workplace. These subthemes specifically emphasized the sad realities of being merely tolerated instead of truly accepted by students, which led to limited opportunities for actual gender expression. Faculty 7 and Faculty 8 mentioned:

*"It seems like they still do not fully accept LGBT people. It seems just being tolerated, too."*
*"Because when you say accepted, it means fully...fully...embracing. Because it is still not fully or 100% accepted by the students and maybe by some administrators."*

Faculty members feel constrained in their capacity to openly and completely express their identities due to the prevalent climate of limited acceptance, aggravated by a lack of visible representation within the academic community. As Faculty 2 puts it, *"Because there are still many LGBTQIA+ students here who are sometimes afraid to express themselves because they know there will be some discrimination."*

The subthemes under Inclusive Environment aligned closely with the principles of the theories used in the study, emphasizing the importance of creating environments that recognize individual competencies regardless of gender identity or sexual orientation. In contrast, the subthemes under Restrictive Environment highlighted the challenges faced by male LGBTQIA+ faculty members in environments characterized by limited acceptance and representation, which contradicted the principles of psychological safety and self-determination.

Concerning the impact of having inclusive and restrictive environments as the overarching themes, Bowling et al. (2019) reported the imperative of having a campus-based LGBTQ climate assessment. According to them, institutions of higher education persisted in being unwelcoming and or dangerous for LGBTQ students. Evaluating the campus environment was crucial in pinpointing specific areas of concern and focusing on how evaluations can drive transformation. Their research endorsed conducting surveys on campus climate alongside incorporating several supplementary recommendations. Individuals might find it advantageous to tailor these suggestions to suit their circumstances. Although the strategy undoubtedly demanded increased time and dedication, it can foster more profound community involvement in the transformation process and, ideally, yield enhanced results.

In addition, Cardinal (2021) stated that positive school climates were crucial for creating an optimal learning environment that ensured students felt safe, supported, and empowered to thrive academically, built strong relationships with peers and staff, and enhanced their overall social-emotional well-being. Unfortunately, LGBTQ students often face additional obstacles and encounter hostile school environments compared to their heterosexual counterparts due to the prioritization of heteronormative structures in school policies, practices, and curricula. It was imperative to actively work towards dismantling these structures through the implementation of zero-tolerance policies, LGBTQ-inclusive educational materials, mandatory professional development for educators, and the establishment of safe spaces specifically designed for LGBTQ students within educational institutions.

**3.2 Challenges Faced as a Male LGBTQIA+ Faculty Member in the Academic Workplace**

***Establishing Respectful Treatment and Boundaries***

The superordinate themes Establishing Respectful Treatment and Boundaries, Discrimination Concerns, Interaction and Perception, and Self-Expression Struggles were derived from the different subthemes coming from the participants on the challenges they faced as a male LGBTQIA+ faculty member. The superordinate theme of Establishing Respectful Treatment and Boundaries involved the difficulties experienced by male LGBTQIA+ faculty members in setting and upholding boundaries while seeking recognition and respect in the academic environment. Participants emphasized the importance of being treated with dignity, highlighting their need for acknowledgment and acceptance from both colleagues and students, as evidenced by the statements of Faculty 7 and 8,

*"Maybe it is how they will give me importance and respect."*
*"And first, sir, when I first came here, of course, I was hesitant if they would accept me if the students would understand me."*

They also dealt with the delicate task of asserting boundaries to protect their personal and professional identities, expressing concerns about potential unequal treatment based on their sexual orientation or gender identity. On setting boundaries, Faculty 7 and 10 said:

*"Yes. My challenge is the only thing I avoid; I still set boundaries with the students."*
*"Although, I know that my students also know. However, maybe not only that, I am also afraid of what... So, as long as I can, I set my boundaries."*

Despite these challenges, participants affirmed their dedication to establishing boundaries and preserving a sense of self-respect and integrity within their roles as educators, illustrating the intricate interplay between personal identity and professional expectations in the academic workplace.

***Discrimination Concerns***
Under the Discrimination Concerns theme, Gender Bias emerged as a key subtheme, shedding light on the obstacles male LGBTQIA+ faculty members encounter in academic settings. Participants highlighted situations where their LGBTQIA+ identity resulted in dismissal or disregard of their emotions by students, showing a concerning lack of respect for their authority in the classroom, as evidenced in the answer provided by Faculty 1 when asked about the question of challenges*:*

*"For the students, it is like, when their teacher is a member of the LGBT, it is like, they ignore the... they invalidate the feelings of their professor."*

Moreover, remarks pointed to a systemic bias where classes taught by LGBTQIA+ faculty received lower priority than those taught by heterosexual faculty, exposing deep-rooted discriminatory attitudes in the academe. Faculty 1 also mentioned referring to the challenge of course prioritization:

*"Ah, based on my experience, sir, it seems they did not prioritize the course I teach compared to other professors."*

These accounts underscored the pressing need for proactive steps to tackle gender bias and foster a fairer, more inclusive environment for all faculty members, regardless of sexual orientation or gender identity.

***Interaction and Perception***
Within the overarching theme of Interaction and Perception, the subtheme of Assumptions and Stereotyping has been identified as a significant challenge for male LGBTQIA+ faculty members in academic settings. Participants have reported pervasive assumptions and stereotypes related to their sexual orientation and gender identity, leading to unfair labeling and accusations based on preconceived notions. Faculty 3 pointed out as an example of the experience of the assumptions:

*"…they always assume that we are part of the LGBTQIA, so it is like that... it is like there is always assumptions like that."*

These assumptions have resulted in unfounded accusations of power-tripping and inappropriate behavior, reflecting a broader pattern of stigmatization and misunderstanding within the academic community, as shared by Faculty 5 in this statement:

*"… it is like they always have assumptions. However, that is not in my personality."*

These experiences highlighted the importance of raising awareness and providing education to challenge stereotypes and create a more inclusive and respectful environment for all faculty members, regardless of sexual orientation or gender identity.

***Self-Expression Struggles***
Within the overarching theme of Self-Expression Struggles, male LGBTQIA+ faculty members struggled with distinct subthemes, including Fear of Judgment and Freedom to Express Identity. Their apprehensions about being judged and discriminated against based on their sexual orientation or gender identity resulted in a reluctance to disclose their authentic selves within the academic environment fully. Faculty 8 shared

*"So before starting, I wonder if our classroom setting will be okay. Will they accept me, or will they discriminate against me?"*

This fear often acted as a barrier to genuine self-expression, leading them to wrestle with concerns about acceptance and discrimination from colleagues and students alike, as verified by the statement of Faculty 10 when he said

*"Yes, true self. That is my problem sometimes."*

Despite their desire for greater freedom to express themselves, lingering uncertainty about acceptance perpetuated internal conflict and inhibition, underscoring the ongoing struggle for LGBTQIA+ faculty members as they explored their identities within the academic setting.

The emerging themes exhibited connections to the theoretical frameworks employed. Intersectionality Theory showed the complex issues LGBTQIA+ faculty faced, noting how different identities affect their academic experiences. Self-determination theory revealed their drive for recognition and setting personal boundaries in biased settings. The themes aligned with Psychological Safety Theory, which stressed the need for inclusive environments that allow expression without fear, enhancing well-being and productivity in the workplace. Little (2022) reported that the workplace can be challenging for individuals who do not fit into the traditional gender binary. Transgender people had a gender identity that differed from the sex they were assigned at birth, while cisgender people identified with the sex they were assigned at birth. For those who did not identify with their assigned gender, everyday tasks like using the bathroom can cause anxiety. Trans individuals also faced high levels of discrimination and violence, impacting their access to education, housing, and healthcare, as well as their career prospects.

**3.3 Micro-validations Experienced in the Academic Workplace**

***Acceptance Through Positive Actions and Interactions***

The themes of Acceptance Through Positive Actions and Interactions, Colleagues as a Source of Motivation and Appreciation, and Students as a Source of Motivation and Appreciation were derived from the different subthemes coming from the participants on the examples of micro-validations they experienced in their academic workplace. Under the superordinate theme of Acceptance through Positive Actions and Interactions, participants highlighted various micro validations in their academic workplace, demonstrating acceptance and inclusivity. These micro-validations were manifested through positive interactions and gestures, such as hugs, smiles, and open communication, which conveyed a sense of normalcy and belonging. Participants noted that colleagues and students treated them with warmth and openness, irrespective of their gender identity or sexual orientation, fostering a supportive and inclusive environment. The answers provided by Faculty 4 and 8 best exemplified the warmth and openness experienced by the participants:

*"But people around, maybe because I am friendly. I think so. So everybody hugs me the way I am."*
"*As for the co-teachers, they accept it. They are open to talk about it."*

Moreover, students' verbal affirmations and non-verbal cues, such as gestures and respectful behavior, further reinforced their acceptance and recognition within the academic community such as when Faculty 9 stated

*"So that is where I feel, sir, that no matter what I am, even as an LGBTQ member, I am still accepted for what it is... how they accept real men and women."*

These positive actions and interactions powerfully affirm the participants' identities and contribute to their overall sense of acceptance and belonging in the workplace.

***Colleagues as a Source of Motivation and Appreciation***

Within the superordinate theme of Colleagues as a Source of Motivation and Appreciation, the subthemes Contribution Recognition and Compliments from Colleagues highlighted the significant role of peer acknowledgment in fostering a positive academic workplace environment for male LGBTQIA+ faculty members. Participants shared instances where their colleagues recognized and praised their contributions, whether regarding work performance, creative talents, or personal attributes. Concerning these types of validations, Faculty 5 and 6 shared

*"So she thanked me because… it is an innovative way for the college."*

*"So my heart is happy because they can see the potential of LGBT people to discuss that subject. They think that I have the experience or substantial experience to deliver such a subject to students."*

These micro-validations are often conveyed through verbal compliments and expressions of appreciation. They serve as sources of motivation and encouragement, uplifting their spirits and enhancing their sense of belonging within the academic community. Such affirmations validated their professional abilities and celebrated their individuality, reinforcing the importance of peer support in promoting inclusivity and appreciation in the academic workplace.

***Students as a Source of Motivation and Interaction***

Under the superordinate theme of Students as a Source of Motivation and Appreciation, the subthemes of Student Support, Positive Feedback, and Appreciative Students underscore the pivotal role of students in providing micro-validations to male LGBTQIA+ faculty members within the academic workplace. Participants recounted instances where students expressed their support, encouragement, and appreciation, serving as sources of motivation in their teaching endeavors, such as when some Faculty stated

*"They can consider you their professor and show that they are okay with you."*
*"So, some people sent messages, sir, that is okay. We accept you even if you are like that."*

Whether conveyed through verbal affirmations, written messages, or gestures of kindness, students' reassurance, motivation, and gratitude significantly fostered a supportive and inclusive learning environment. These students' gestures were very evident in the statements given by Faculty 5 and Faculty 7*:*

*"I felt very flattered when one of my students randomly messaged me out of the night, saying, Sir, I appreciate your lecture, I learned. Because you delivered it in a very light tone manner."*
*"It is like they are thanking me for that. They give me balloons, cakes, stuff like that."*

Such positive feedback and expressions of appreciation validated the participants' teaching efforts. They reaffirmed their sense of belonging and acceptance within the academic community, highlighting the importance of student-faculty relationships in promoting inclusivity and mutual respect in the academic setting. The themes, such as Acceptance Through Positive Actions, Colleagues as Motivators, and Student Support, aligned with Intersectionality, Self-Determination, and Psychological Safety theories. Positive interactions reflected Psychological Safety, peer acknowledgment aligned with Self-Determination, and student support demonstrated Intersectionality. These findings affirmed the relevance of these theories in fostering inclusivity and well-being among male LGBTQIA+ faculty.

Traliant (2022) reported on the different micro validations or micro affirmations. According to the blog, microaffirmations were a way to show recognition and validation of an individual's identity, experience, and expertise while building confidence, trust, and a sense of belonging. They can be conveyed through gestures such as nods, facial expressions, choice of words, and tone of voice that convey inclusivity, care, and active listening. Examples of micro affirmations included publicly praising a colleague for their achievements, referencing past conversations to demonstrate active listening, and simply greeting someone as they entered the workplace.

Additionally, the blog enumerated the common micro-validations encountered in the workplace. These included making a conscious effort to pronounce names correctly; respecting and using people's preferred pronouns; inviting someone to participate in a business event, committee, or project; taking the time to chat with someone in their office, socialize, and learn about their life outside of work; actively listening to individuals, paying attention to their words, and asking meaningful questions; recognizing important holidays and milestones in people's lives; giving credit to individuals for their contributions; offering support and standing up for others when they were being discredited or belittled; providing constructive feedback that helped individuals identify and enhance their strengths; acknowledging and valuing the diverse experiences of individuals by inviting them to share their opinions and expertise; using friendly facial expressions and gestures; and maintaining eye contact with others. These small acts of affirmation and recognition can greatly impact creating a positive and inclusive work environment.

### 3.4 Significance of Micro-validations on Sense of Belongingness in the Academic Workplace

***Diversity, Equity, Inclusion, and Belonging***

The overarching theme of Diversity, Equity, Inclusion, and Belonging was derived from the subthemes of the male LGBTQIA+ faculty member-participants on the significance of micro-validations on their sense of belonging in the university. Under the superordinate theme of Diversity, Equity, Inclusion, and Belonging are the subordinate themes of Self-expression, Confidence Boost and Motivation, Full Potential Unleashed, Acceptance, Collaboration, Feeling of Belonging and Camaraderie, and Familial Feeling and Happiness. The participants underscored the profound significance of micro-validations in fostering a sense of belonging within the university community. These micro-validations played a pivotal role in affirming their identities and boosting their confidence and motivation. Participants expressed that being accepted and valued for who they are, irrespective of their gender identity or sexual orientation, created a conducive environment for collaboration and camaraderie. Statements from Faculty 3 and 10 saying:

*"Besides, I am not afraid to show my true self to them."*
*"Ah, that I gradually express myself."*

Furthermore, micro-validations enabled them to unleash their full potential and feel empowered to express themselves authentically without fear of judgment or discrimination, as mentioned by Faculty 5:

*"Sir, it greatly impacts me because they are very open to my ideas. I felt appreciated and uplifted because somehow, sir, that little detail means something to them."*

They also highlighted the importance of feeling accepted and supported by colleagues and the broader university community, fostering a familial sense of belonging and happiness. Faculty 6 mentioned

*"Um, maybe the significance the school gave me is to continue in the face of adversity."*
*"…but I feel that I am one of them, not only for friends but also a family."*

Participants emphasized that micro-validations significantly contributed to their sense of belonging, empowerment, and fulfillment within the academic workplace, enabling them to thrive and excel in their roles. Micro-validations affirm identity and foster belonging, supporting psychological safety while boosting confidence and aligning with self-determination. Participants expressing full potential unleashed and familial feelings supported Intersectionality. These themes underscored the theories' relevance in promoting inclusivity and well-being among male LGBTQIA+ faculty.

Regarding the sense of belonging, Matsick et al. (2024) stated that people who identified as lesbian, gay, bisexual, transgender, queer, and other sexual and gender minorities (referred to as LGBTQ+) often faced more physical and mental health issues compared to cisgender or heterosexual individuals. This was largely due to the added stress of dealing with discrimination. While it was crucial to acknowledge the challenges LGBTQ+ individuals faced, it was also important to recognize the factors that can help them thrive. A sense of belonging is one key element that can contribute to their well-being and reduce health disparities. Their study outlined various factors from psychological, public health, and public policy studies that impacted the sense of belonging for LGBTQ+ individuals. Using a social-ecological model, they discussed the factors that can enhance or hinder belonging at the individual, interpersonal, community, and societal levels. The comprehensive approach aimed to support the well-being of LGBTQ+ individuals while addressing the systemic issues that influenced their mental and emotional health. The study was a valuable resource for researchers, healthcare professionals, and policymakers looking to understand the different aspects of belonging related to sexual orientation and gender diversity.

Relative to the main theme, Verlinden (2024) mentioned that Diversity, Equity, Inclusion, and Belonging (DEIB) were crucial in the workplace. They contributed to organizational success by increasing retention rates, boosting employee engagement, improving productivity, enhancing employer branding, raising bias awareness, and broadening the talent pool. DEIB principles were a moral imperative and a strategic advantage in today's globalized business world. In addition, Fernandes (2021) said that belonging was crucial for individual and organizational success, especially in the current climate of increased need for connection due to the pandemic. To address this, organizations should take an integrated approach to focus on belonging, combining Diversity, Equity, and Inclusion (DEI) with employee engagement. Organizations can uncover employee experience differences and identify DEI issues by examining employee engagement across demographics.

**3.5 Significance of Micro-validations on Overall Inclusivity of the Academic Workplace**

***Personal Enhancements***

The themes of Personal Enhancements and a Culture of Appreciation and Understanding were crafted from the subthemes based on the participants' significance of micro-validations on the overall inclusivity of the academic workplace. The superordinate theme of Personal Enhancements has Strengthened Self-motivation and Improved Performance and Productivity as subordinate themes. Participants highlighted the significant impact of micro-validations on their self-motivation and overall performance within the academic workplace. Faculty 2 remarked

*"Since we are talking about micro validation, even if it is just a small thing, you have been told about it, and your confidence has increased. It is like, yes, okay, let us do it. That is it, in performance."*

They emphasized that even simple compliments and expressions of validation boosted their confidence and motivation, leading to improved performance and productivity. Participants noted that when individuals feel valued and accepted, particularly within the LGBTQIA+ community, they are likelier to perform well and fulfill their roles effectively. Such statements as those coming from Faculty 3 and 4,

*"The overall performance of the faculty is that they can perform well and have no reservations in themselves."*
*"Because you know, like us, it seems we become more productive if people around us accept us and believe in what we can do exemplified that significance."*

They expressed optimism that a workplace environment characterized by micro-validations fosters happiness and enhances the overall performance of faculty members, allowing them to work more productively and contribute positively to the institution.

***Culture of Appreciation and Understanding***

Culture of Appreciation and Understanding were derived from Appreciation for Diversity and Belongingness, Reduction of Discrimination, and Breaking Barriers and Inclusivity Promotion. Micro-validations, as described by the participants, served as fundamental drivers in nurturing a culture of appreciation and understanding within the academic sphere, as exemplified in the answer provided by Faculty 9,

*"So micro validation is essential; that's when you will know if you are accepted in an organization or community. Because of the micro-validation, we can say that you belong to them. There is no discrimination."*

Participants expressed their diverse identities and experiences through these subtle yet impactful affirmations, fostering a profound sense of belongingness and acceptance. The participants vividly narrated instances where their colleagues and peers validated their identities, transcending barriers of sexual orientation and gender identity, fostering an inclusivity and diversity appreciation. This emphasis on diversity not only fosters a deeper sense of belonging but also fosters cultural understanding among faculty members, contributing to a more cohesive and supportive work milieu just when Faculty 5 answered:

*"So, that is the strongest aspect being validated right now. That is what they appreciate. So, I think it is also very important to inculcate in the minds, not just on students but also in the peers, that when the staff is validated, whether straight or not, it also creates a culture of appreciation."*

Participants emphasized the transformative power of microvalidations in dismantling discrimination within the academic workplace. By acknowledging and affirming individuals' identities, micro-validations effectively break down barriers and promote inclusivity, fostering an environment where discrimination is less pervasive. Individuals feel esteemed and valued for their authentic selves. Faculty 5 answered:

*"I do think very important, sir, because it prospers this culture of loving a fellow without actually giving importance in his sexual preference."*

The profound impact of micro-validations lies in their capacity to blur boundaries and diminish discrimination, creating an environment where faculty members feel genuinely embraced and empowered to express themselves without reservation. Micro-validations significantly impacted self-motivation, performance, and the overall workplace culture, supporting the Self-Determination Theory's emphasis on individuals' intrinsic motivation and psychological needs. Moreover, micro-validations contributed to Psychological Safety by fostering a culture of appreciation and understanding, enabling faculty members to express their authentic selves without fear of discrimination. These themes underscored the importance of recognizing diverse identities and promoting inclusivity, central views of Intersectionality Theory.

In support of the themes generated, Navarro (2023) stated in her article that embracing inclusivity through microvalidation practices was a powerful way to create a more diverse, equitable, and inclusive workplace. By acknowledging the presence of every individual, validating diverse identities, appreciating contributions, holding people to high standards, affirming leadership potential, and understanding the impact of micro-validations, one can foster a culture where everyone feels valued, respected, and included. Also, regarding total inclusivity in the workplace, Ganesh (2023) mentioned that workplace inclusion was the deliberate effort made by organizations to create an environment where every employee felt a profound sense of belonging, respect, and empowerment, regardless of their background, identity, or abilities. It involved recognizing, embracing, and valuing unique perspectives and experiences and went beyond acknowledging diversity to celebrating and integrating differences. Inclusive workplaces promote higher engagement, motivation, and commitment, lower turnover rates, higher retention of top talent, and catalyze innovation and problem-solving through diverse perspectives.

**3.6 Response to Experiences of Microinvalidations in the Academic Workplace**

The superordinate themes of professionalism, personal coping mechanisms, and interpersonal dynamics were derived from the participants' different subthemes and how they responded to the experience of micro-validations in the workplace.

***Professionalism***

The theme of professionalism with subthemes of shrugging off and setting boundaries was derived from the participant's responses or actions when experiencing microinvalidations in the workplace. When confronted with microinvalidations in the workplace, participants exhibited a strong sense of professionalism by employing strategies such as shrugging off and setting boundaries. Rather than engaging in confrontations or allowing such incidents to affect their overall performance, they shrug off the remarks, recognizing that these do not define their worth or competence. Faculty 5 completely demonstrated such an act when he answered:

*"So, I just shrugged it off, sir. It is like they do not define who I am."*

Some participants chose to ignore microinvalidations altogether, refusing to let them disrupt their mood or productivity as Faculty 9 shared about this,

*"So I just ignored that, sir, so as not to feel bad and lose my mood."*

Additionally, setting boundaries emerged as a key strategy, with participants establishing clear distinctions between professional and personal interactions, especially with students. Just as Faculty 2 and Faculty 7 mentioned,

*"My approach to my students is like, okay, we can be close, but I am still your professor."*
*"The reason why I am setting boundaries with them."*

By maintaining a professional demeanor and firmly setting boundaries, participants demonstrate their resilience and commitment to upholding professional standards despite encountering microinvalidations in the workplace.

***Personal Coping Mechanisms***
For the second theme of Personal Coping Mechanism with the subtheme of Laughing It Off, participants responded that when faced with microinvalidations in the workplace, they often resorted to employing laughter as a personal coping mechanism. Rather than allowing themselves to be deeply affected or expending energy on defending themselves, they chose to respond with humor, as showcased in the case of Faculty 3 and Faculty 5. Faculty 3 and 5 shared:

*"Maybe if they are just joking, I will return the joke to them."*
*"That is it, sir. Sometimes I laugh around, and it is better than that because, sir, sometimes it is too tiring to defend."*

Participants laughed off the microinvalidations in these situations, enjoying the remarks rather than taking them to heart. By responding with laughter, they alleviate the tension and assert their agency in controlling their emotional reactions to such instances. This approach allowed participants to maintain a sense of lightness and resilience in the face of microinvalidations, ultimately enabling them to navigate such challenges with grace and humor.

***Interpersonal Dynamics***
The superordinate theme of Interpersonal Dynamics was derived from the subthemes of Confrontation, Open Communication, and Educating Others. When confronted with microinvalidations in the workplace, participants opted for confrontation, open communication, and educating others as their chosen strategies within the realm of interpersonal dynamics. Whether in the classroom or during personal interactions, they addressed the issue head-on, expressing their discomfort or offense at the microinvalidation. Faculty 2, referring to a head-on, straight confrontation of the microinvalidations, mentioned:

"*In the classroom itself, when there is a microinvalidation, I immediately call their attention to the fact that it is offending. I am reminding them to be careful with their words next time."*

Some participants emphasized the importance of setting boundaries and expressing their disdain for bullying, particularly within the LGBTQIA+ community, just like what Faculty 2 mentioned:

"*So, in our classroom, I always remind them that I hate bullying, especially for those members of the LGBTQIA community.*"

They clarified to their students or colleagues that such behavior is unacceptable and must be addressed. Through open communication, they engaged in dialogues to educate others about the impact of their words or actions. This involved expressing how they felt hurt or offended by the microinvalidation and respectfully discussing ways to resolve the issue. This particular scenario was shown in the statement by Faculty 6:

*"So during that time, I just talked to him at the end of the class. I said, do not say such vulgar words because those are inappropriate for our class."*

By confronting the individual privately, they aimed to foster understanding and promote mutual respect, ultimately contributing to a more inclusive and respectful workplace environment. The themes revealed that participants' professionalism, personal coping mechanisms, and interpersonal dynamics aligned with the theories. Professionalism emphasized psychological safety, while Personal Coping Mechanisms demonstrated autonomy and self-determination. Interpersonal Dynamics, involving confrontation and open communication, reflected aspects of the Intersectionality Theory.

In line with the participants' experience and actions regarding microinvalidations or microaggressions, Olsen (2023) pointed out that microaggressions had a significant impact on the mental health of LGBTQ+ individuals, leading to increased stress, anxiety, and feelings of invalidation. They also perpetuated harmful stereotypes and contributed to an unsafe environment. Advocacy was important in raising awareness, challenging microaggressions, and promoting inclusive language and behavior to create a more welcoming society for LGBTQ+ individuals.

Comparable to the participants' responses when experiencing microinvalidations, Washington et al. (2020) discussed how to combat microinvalidations or microaggressions in the workplace for people of color. They offered three main ways to react to microaggressions in the workplace: letting it go, responding immediately, or responding later. Letting it go can be emotionally draining for employees and reinforce beliefs of identity devaluation. Responding immediately allowed the transgression to be called out, but the perpetrator might get defensive. Responding later involved addressing the perpetrator privately, but there was a risk of being deemed petty. It was important to discern how much investment to make in addressing the microaggression and feel empowered to respond when necessary.

Similarly, a video shared by BBC Ideas (2022) delved into microaggressions in the workplace. The video provided insights into microaggressions and emphasized tackling these subtle derogatory comments or behaviors to foster a more inclusive work environment. It also suggested strategies for handling microaggressions at work, such as explaining the impact of the behavior, providing specific examples of how it affects individuals, collaborating with colleagues for solutions, and escalating the issue to higher authorities if needed.

### 3.7 Influence of Micro-validations on Sense of Identity in the Academic Workplace

***Boosting One's Confidence***

The themes Boosting One's Confidence, Fostering One's Authenticity, Valuing One's Worth, and Improving One's Capability were derived from the shared experiences of the 10 participants on the influence of micro-validations in their sense of identity in the academic workplace. The first theme is Boosting One's Confidence. Micro-validations played a crucial role in boosting one's confidence within the academic workplace, as highlighted by participants' experiences. Whether through simple compliments or supportive gestures, these micro-validations affirm individuals' sense of identity and worth. Participants noted that such positive affirmations contributed to an increase in self-esteem and self-worth, assuring them that their efforts are recognized and valued by their peers and students, just as Faculty 4 stated in his response,

*"Self-esteem, sir. More self-esteem. I feel determined because I am supported in what I do. Even if I make a little mistake, I know they will not criticize me but rather give me constructive criticism."*

This boost in confidence translated into improved performance and a willingness to strive for excellence in their roles. Faculty Eight summarized all of these influences in his statement:

*"I think, sir, the micro-validations that I experienced here at the university with my students and coworkers, verbal and non-verbal, had a great influence on increasing my self-confidence and self-worth because I feel I belong... I feel accepted... and it also motivates me to do more. Because I think that this university is gender friendly, I think that somehow, it is like that... I cannot say 100%, but I think this university has a high level of acceptance of employees like me, so I am giving my best."*

Feeling accepted and supported by the university community motivated them to excel in their work and interactions, as they perceived the institution as gender-friendly and inclusive. Conversely, the absence of micro-validations or experiences of invalidation can have detrimental effects on an individual's morale and confidence, potentially impacting their performance and overall well-being in the workplace, as echoed by Faculty 8 in his statement,

*"I think it can break a person. It can break a person's morale and confidence, which might affect his or her performance here at the university as an employee."*

Thus, micro-validations are significant because they can uplift individuals, foster a sense of belonging, and empower them to thrive professionally within the academic setting.

***Fostering One's Authenticity***

The second theme that influences micro-validations in the participants' sense of identity is Fostering One's Authenticity. Micro-validations within the academic workplace served as catalysts for fostering one's authenticity, allowing individuals to express themselves freely without fear of judgment or discrimination. Participants expressed how these micro-validations allowed them to embrace their true identities and convey their thoughts and ideas without reservation. This was manifested in the testimonies of Faculty 4 and Faculty 5 when they said

*"Hmm... it seems it gives me more freedom to be like me. It gives me more freedom to move freely and act most of the time on those gestures. Even in speaking."*

"*Because I do not have to hide my ideas, those artsy things that I do, or who I am. Even in clinical practice, I do not have to hide who I am. In interacting with my patients, my students, my professors, and even my superiors, I do not have to act in a more socially acceptable way. Moreover, and how we say it, sir, I feel myself."*

They felt empowered to be themselves in various aspects of their work, from interactions with students to engagements with colleagues and superiors. This sense of authenticity extended beyond personal expression to encompass a broader acceptance of diversity within the university community, where individuals are valued for their contributions rather than limited by societal norms or expectations.

***Valuing One's Worth***

From the testimonies of the participants on the influence of micro-validations in their sense of identity came the third theme of Valuing One's Worth. Micro-validations within the academic workplace shape individuals' sense of worth and value. Through positive affirmations and gestures of acceptance from colleagues, department chairs, and superiors, participants have experienced a significant boost in their self-esteem and confidence. As Faculty 7 and 2 puts it in his answer,

*"It feels wonderful that your colleagues, department chair, and dean trust you."*
*"It gives me self-worth that whenever I go home, I feel accepted, and not just only at home."*

These microvalidations affirm their belongingness and acceptance within the university community, fostering a sense of worthiness and validation for their contributions. Feeling valued and respected for who they are, participants are motivated to excel in their work and interactions with students. Faculty 9's responded:

*"So, in an academic setting, sir, you have improved yourself. Because you are being appreciated, positive things come to you. So, it is heartwarming that even though I belong to the LGBTQ, what I receive from them is all okay, like respect. Those microvalidations help."*

This validation extended beyond mere acknowledgment of their identity to a deeper recognition of their worth, empowering them to embrace their authentic selves and strive for personal growth and development within the academic setting.

***Improving One's Capability***

The last theme is Improving One's Capability. Micro-validations have significantly impacted individuals' sense of identity in the academic workplace by enhancing their capabilities and fortifying their personalities. Through positive affirmations and gestures of acceptance, participants have found strength in their identities, improving their overall performance and resilience. Rather than allowing microinvalidations to undermine their morale and confidence, they have utilized these experiences as opportunities for growth and self-improvement, as showcased by the responses of Faculty 1 and Faculty 7 when they shared these answers:

*"So, it makes my personality strong in that way."*
*"Yes. I will still improve further."*

By acknowledging and valuing their worth, participants have been motivated to further excel in their roles within the university community, demonstrating a heightened determination to succeed despite any challenges they may face. Micro-validations cultivated confidence and performance by making people feel valued and welcome, supporting Psychological Safety Theory. Fostering One's Authenticity promoted self-determination and self-expression without criticism, supporting Self-determination Theory. Valuing One's Worth supported both since micro-validations boosted self-esteem and belonging.

In a study conducted by Rolón-Dow & Davison (2020), students shared anecdotes about micro-validations, which encompassed actions, verbal comments, or environmental signals that made the individual believe that their thoughts, emotions, physical sensations, and actions related to their racial identity or that of a group they were part of were acknowledged, supported, validated, or appreciated. These micro-validations recognized that an individual's identity and personal experiences offer valuable insights into interpreting events or societal norms. Similarly, Rose (2023) published an article stating the importance of validating identities by respecting pronoun choices, asking about names, and acknowledging individual experiences. It suggested openly appreciating team contributions, especially during dissent, to signal inclusivity. Furthermore, it advocated for holding all individuals to high standards without perpetuating stereotypes or biases, focusing on actual achievements rather than expected traits.

### 3.8 Influence of Microvalidations on Experience as a Faculty Member

#### *Professional Growth and Confidence*

The superordinate themes of Professional Growth and Confidence, Professional Performance, Positive Work Environment, and Emotional Well-being were crafted from the different subordinate themes. They came from the testimonies of the ten male LGBTQIA+ faculty participants on the influence of micro-validations in their experience as faculty members. The superordinate theme of Professional Growth and Confidence stemmed from the subordinate theme of the Drive to Perform Effectively and Boosted Confidence and Motivation. Micro-validations in the academic setting have significantly impacted faculty members by encouraging them to perform better and enhancing their confidence and motivation. Participants noted that these affirmations and expressions of acceptance were catalysts for their professional growth, igniting a competitive spirit and a desire to improve as educators and colleagues continually. These scenarios were accentuated by the statements shared by Faculty 1 and 6:

*"Maybe I can further develop my being competitive."*
*"Because of those experiences, I need to improve further as a teacher and coworker. "*

The positive feedback they received fueled their determination to excel, leading to a heightened sense of purpose and a positive outlook on their roles within the university community, as evidenced by the statement of Faculty 9, who shared:

*"Yes, sir. You have a positive outlook. You have the drive to do the task at university. You deliver an outstanding work output because the faculty members and the people surrounding you are okay."*

This encouragement and support from peers contributed to their individual growth and enhanced the overall output and atmosphere in the workplace as faculty members strived to meet and exceed expectations.

#### *Professional Performance*

The emergence of the theme of Professional Performance was from the subthemes of Improved Delivery and Communication and Improved Task Performance. Micro-validations in the academic setting have significantly influenced faculty members' experience by enhancing their professional performance, particularly in improved delivery, communication, and task performance. Participants noted that these affirmations and expressions of acceptance have made it easier to share their knowledge and experiences authentically, leading to more engaging and effective teaching. This was validated by the statement from Faculty 4 when he said

*"It is quite easy for me to share those... those I have read and experienced".*

They felt more comfortable expressing themselves and incorporating their unique perspectives, such as using gay lingo or sharing personal anecdotes, which enriches their delivery and fosters a stronger connection with students, as reflected in the answer of Faculty 10 when he said

*"Little by little, I was able to express myself. I sometimes use gay lingo and throw punchlines with them."*

Moreover, faculty members observed a tangible improvement in their task performance, noting the quality of their work and the results it produced, such as when Faculty 4 said, *"I think I teach much better because I can freely share experiences and have never been pretentious."*

This enhancement in performance is attributed to the confidence and motivation derived from the positive feedback received through microvalidations.

***Positive Work Environment***

The theme Positive Work Environment has a subtheme of Positive Workplace Experience. Micro-validations have greatly influenced the experience of faculty members by fostering a positive workplace environment. Participants expressed their happiness and contentment in their workplace, attributing it to feeling accepted and valued by their colleagues. Faculty 5 echoed this experience through his statement,

*"Because it's nicer to work, sir, in a place where you're accepted and appreciated for what you do."*

They noted that the absence of verbal abuse, discrimination, or mistreatment contributed to a sense of safety and belonging. Faculty 3 testified to this when he shared this:

*"I am happy in my workplace because, first, as I said, they accepted me. I did not experience any verbal abuse, verbal discrimination, vulgar or explicit discrimination from them."*

While explicit affirmations may be limited, participants acknowledged the presence of implicit affirmations that affirm their worth and contributions, just what Faculty 3 continued in his testimony:

*"I do not receive much affirmation either, but maybe a few implicit ones. So, I can say that I am happy in my workplace."*

This positive atmosphere has made their work more enjoyable and led to smoother collaboration and improved performance among colleagues.

***Emotional Well-being***

The theme of Emotional Well-Being has the subtheme of Reduced Emotional Burden. Micro-validations have greatly impacted faculty members' experience by reducing the emotional burden linked to their work environment. Participants expressed that micro-validations, such as feeling accepted and valued, had contributed to their overall happiness and well-being in their roles. Knowing that they are in an environment where their identity is respected and appreciated alleviated the emotional weight on their shoulders. Faculty 10 reflected on this when he shared

*"I am happy. No heavy feelings or grudges whatsoever".*

This sense of validation and acceptance served as a motivating factor for them to continue their teaching responsibilities within the university. It also indicated that the university fosters a gender-friendly atmosphere, further reinforcing their decision to remain in their current position. Faculty 8 verbalized his motivation to stay with the university based on his experience of micro-validations:

*"So, I will continue teaching here because of the microvalidations I experienced. This indicates that the university is gender-friendly."*

The participants experiencing micro-validations had lightened their emotional load and contributed to a more positive and fulfilling work experience. The themes aligned with Self Determination and Psychological Safety theories. Micro-validations boosted confidence and performance (Self Determination), creating a positive work environment (Psychological Safety) and enhancing emotional well-being, which is crucial for LGBTQIA+ faculty. Tenney (2023) strongly emphasized the significance of workplace diversity and inclusion in cultivating a positive employee experience. Companies can enhance employee satisfaction and engagement by nurturing a psychologically safe space where all employees feel a deep connection. Acknowledging and honoring the distinct contributions of a diverse group of team members resulted in increased retention, productivity, and sustainable profitability.

Relative to the experiences shared by the participants, Shapiro (2023) reported that microaffirmations were small gestures, comments, or behaviors that can significantly positively impact individuals in educational and workplace settings. These micro-interactions can promote well-being and create a positive work culture in fast-paced and stressful environments like healthcare. By intentionally incorporating microaffirmations that celebrate strengths and successes, organizations can foster a sense of kindness, understanding, and inclusion among team members. These actions helped to mitigate stress, reinforce strengths, and promote unity within the workplace. He also provided examples of how to incorporate microaffirmations in practical and achievable ways, such as through active listening, validation, acknowledgment, and intentional inclusion.

### 3.9 Influence of Micro-validations on Job Satisfaction and Performance

***Job Potential Attainment***

The superordinate themes, Job Potential Attainment, Job Satisfaction Fulfillment, and Job Performance Improvement, were derived from the different subordinate themes and crafted from the participants' answers on the influence of the micro-validations on their job satisfaction and performance. The overarching theme of Job Potential Attainment has subordinate themes, Fulfilling Potential and Self-Assessment. Micro-validations are essential in shaping job satisfaction and performance by enabling individuals to reach their full potential and promoting self-evaluation. Participants noted that experiencing micro-validations contributed to a sense of being at their full potential and executing their responsibilities optimally as teachers. They highlighted that these affirmations not only boosted satisfaction but also motivated them to strive for excellence in their work, as remarked by one of the participants, Faculty 3,

*"Oh, yes. I can say that I am at my full potential and am optimally and maximally executing my responsibility as a teacher."*

Moreover, microvalidations prompted self-reflection, allowing individuals to assess their performance and progress over time. When Faculty 1 and 10 refer to that self-assessment mentioned,

*"Since I am being motivated, I can reflect on whether I have improved from my previous self."*
*"Because those assessed how you performed, and even your satisfaction with yourself."*

This self-assessment process was closely intertwined with job satisfaction, as it instilled confidence and assurance in one's abilities.

***Job Satisfaction Fulfillment***

The superordinate theme of Job Satisfaction Fulfillment was derived from the subordinate themes of Job Enjoyment, Satisfaction Guaranteed, and Motivation. Micro-validations significantly influenced job satisfaction and performance by fostering enjoyment, guaranteeing satisfaction, and providing motivation. Participants expressed that the supportive environment created by micro-validations enhanced their enjoyment of their work, making tasks more manageable and fulfilling. Relative to this, Faculty 9 stated,

*"I like my job better if people are like this."*

They noted that simple compliments and acknowledgments of their efforts served as affirmations of their achievements and goals, leading to increased satisfaction with their job performance, as echoed in the answer of Faculty 1,

*"Once I receive a simple compliment, it is like a job well done because I accomplished my goal, I achieved my set goal, in that activity."*

Feeling valued and appreciated by colleagues and students contributed to a sense of fulfillment and contentment in their roles. Moreover, microvalidations were a source of motivation, encouraging individuals to continue exerting effort and striving for excellence in their work, even amidst challenges and fatigue. Faculty 6 clearly stated that point in his response, *"At work, you have motivations daily. Those praises come from the students. You are motivated to attend your classes daily... to do your best as a teacher, no matter who you are for them, and do what is best for you and your students. So, it seems that it gives me the desire to continue and strive to be the best. That is one of the things that increases my morale as a teacher."*

The positive feedback and encouragement received from others were a driving force for maintaining enthusiasm and dedication to their responsibilities as faculty members.

***Job Performance Improvement***

The overarching theme, Job Performance Improvement, was derived from the subordinate themes of Enhanced Job Performance and Drive for Better Performance. The experience of micro-validations significantly influenced job satisfaction and performance by enhancing job performance and fostering a drive for better performance among faculty members. Participants noted that the trust and confidence they received due to feeling accepted for who they are translated into a sense of ease and motivation in their work. Faculty 4 clearly stated this point in his response,

*"There seems to be no hard work given to me. It's like the trust and confidence are there because I am accepted to be me."*

This sense of acceptance and encouragement urged them to strive for excellence and bring out their best. They excelled in their tasks and responsibilities, driven to meet or exceed expectations. Moreover, the positive feedback and praise they received from students and colleagues served as motivation to continue improving and refining their teaching methods, just like what Faculty 6 stated,

*"At work, maybe you had motivations daily that would motivate you because of those praises coming from the students. You are motivated to go into the everyday tasks... to do your best as a teacher, no matter who you are for them, show who you are and do what is best for you and your students."*

This drive for better performance stemmed from fear of making mistakes and a commitment to maintaining high standards in their work. Faculty members expressed that they are inspired to enhance their job performance further, as they believed in the importance of being gender-responsive and creating a gender-friendly environment for both themselves and their students, as echoed in the response given by Faculty 8,

*"I am still improving my job performance. As a teacher and as a teacher of future teachers, I also believe that future teachers should be gender-responsive or gender-friendly. These are the issues now about gender. So, I am still improving."*

Microvalidations enabled individuals to reach their full potential, fostering job satisfaction and self-assessment (Self Determination). They promoted job enjoyment, satisfaction, and motivation, enhancing overall performance (Psychological Safety). Furthermore, they contributed to improved job performance and a drive for excellence, driven by acceptance and encouragement (Self Determination, Psychological Safety). These findings underscored microvalidations' crucial role in fostering job satisfaction, performance, and potential attainment among faculty members, aligning closely with theoretical principles.

The positive impact of microaffirmations was profound and far-reaching. Van Sambeck (2023) noted that many advantageous outcomes can manifest when individuals consistently provide their colleagues with these small gestures of affirmation. This not only enhanced the well-being of each employee but also significantly influenced the overall dynamics of the workplace. Employees experienced heightened satisfaction within their respective roles when they perceived their efforts directly contributed to the organization's success. She also pointed out that a recent finding from a McKinsey study revealed that work served as a pivotal life purpose for many individuals. However, a mere 18% felt they attained the desired level of purpose, with 62% expressing a desire for more fulfillment. Through microaffirmations, organizations can effectively communicate the value placed on their employees' perspectives and contributions, fostering a greater sense of purpose and bolstering overall contentment within the workforce. Furthermore, each individual nurtured a greater sense of confidence in executing their responsibilities when they received acknowledgment for their work. Whether it involved public recognition, attentive listening, respect for their viewpoints, or invitations to contribute, these affirmations instilled a sense of assurance in employees, empowering them to approach tasks with increased self-assurance.

**3.10 Institutional Policies or Practices for a More Inclusive Environment for LGBTQIA Faculty Members**

***Need for Clear Rules and Guidelines***

The superordinate themes of the Need for Clear Rules and Guidelines, Inclusive Facility Accommodation, the Importance of Gender and Development Functions, and the Need for Full Acceptance were derived from the different subthemes coming from the testimonies given by the 10 participants on the institutional policies or practices that contribute to a more inclusive environment for LGBTQIA+ faculty members. The first of the themes is the Need for Clear Rules and Guidelines. The participants expressed a clear need for explicit and comprehensive institutional policies or guidelines that specifically address the concerns and needs of LGBTQIA faculty members, as expressed in the statement of Faculty 4, saying

*"But if there is a clear-cut policy regarding that, maybe it will be easier for the university and us to be able to protect ourselves, to move more in line with what is expected of us."*

They highlighted the absence of written policies or practices that cater to the LGBTQIA community within their respective institutions. Faculty 3 testified on the absence of these policies, stating.

*"Sadly, I do not see anything. I don't know about others, but for me, I don't see anything. I do not read anything. I don't know if there exists."*

Faculty 6 echoed the same sentiment in his answer,

*"There seems to be none, sir. Nothing yet. I do not know of any written policies for LGBTQIA faculty."*

Faculty members felt uncertain and unprotected without clear rules and guidelines, especially regarding proper dress codes, legal rights, and inclusion. These concerns were seen in the statements provided by Faculty 2 and Faculty 8 when they said,

*"But when it comes to what is written, I can't say because I don't really see if there is a policy for the students or even for the staff regarding a proper dress code or proper guidelines for LGBTQIA+."*
*"It seems that the university is not yet very inclusive."*

They emphasized the importance of having policies explicitly tailored to address the unique challenges and requirements of LGBTQIA individuals in the workplace. Additionally, they suggested incorporating a gender-neutral approach in institutional policies, such as in forms and legal matters, to ensure inclusivity and protection for all community members, as reflected in the testimony given by Faculty 5, stating:

*"So, one great idea that can be incorporated in the current policy is the gender-neutral approach when it comes to forms, in legal matters… there is a difference between being institutionalized and just culturally acceptable only. It seems just like being common law around us and not formally instituted.*

Participants stressed the necessity of formalized policies beyond cultural acceptance and providing clear guidance and protection for LGBTQIA faculty members within academic institutions.

***Inclusive Facility Accommodation***

Focusing on the theme of Inclusive Facility Accommodation, the participants emphasized the importance of inclusive facility accommodation, particularly in restroom facilities, as a key aspect of creating a more inclusive environment for LGBTQIA faculty members. They noted the existence of gender-neutral or third-gender restrooms specifically designed for students. However, they highlighted the need for similar accommodations for faculty members as stated by Faculty 3 and Faculty 6, stating:

"*It is better to have a CR for faculty belonging to the LGBT community.*"
*"I think it is a good idea that the university put up a CR for all professors."*

They expressed appreciation for the steps taken by the university to address gender inequality in restroom facilities for students and suggested extending these efforts to provide inclusive restroom options for professors. The provision of gender-neutral or third-gender restrooms not only ensured a more comfortable and dignified experience for LGBTQIA faculty members but also signified a commitment to inclusivity and respect for diverse gender identities within the academic community.

***Importance of Gender and Development Functions***

For the theme Importance of Gender and Development Functions, the participants highlighted the importance of Gender and Development (GAD) functions in fostering a more inclusive environment for LGBTQIA faculty members within the university. They recognized the existence of a GAD division or department within the institution, which served as a platform for promoting gender equality and addressing gender-related issues. Faculty 2 mentioned the existence of the Gender and Development office in his statement.

*"We have a gender development department, and that's when I realized that I need to pay more attention to it."*

However, they expressed uncertainty about whether specific policies or programs are in place to support LGBTQIA individuals within the faculty. Some participants mentioned that while they are aware of the GAD department, they have not encountered any policies or programs tailored specifically for LGBTQIA faculty members, which was clearly stated by the answer of Faculty 3,

*"Maybe now, what I can say, I cannot feel it yet. However, even before, there was nothing. I know there is a GAD, but I don't know if they have a certain policy for LGBT."*

They emphasized the need for the GAD office to take a more proactive role in implementing clear-cut policies and programs that cater to the needs of LGBTQIA individuals, ensuring that their voices and concerns are adequately addressed. Faculty 10 categorically stated in his answer his perspective on the very existence of the GAD Department by saying.

"*There is an office, but it is like it never existed. It is like it was just put there, but as far as I know, I cannot feel its presence. I hope if there is the gender and development, I hope there is a program that is intended for LGBTQ members."*

Despite the existence of the GAD office, participants suggested that it is still in its infancy stage and called for more concrete initiatives aimed at supporting LGBTQIA faculty members and promoting a more inclusive campus environment, just as Faculty 4 stated:

*"Not really yet. It is just starting. It is in the baby stage. That is it. The way I see it, it is in the baby stage."*

***Need for Full Acceptance***

For the theme Need for Full Acceptance, the participants highlighted the ongoing need for full acceptance of LGBTQIA+ individuals within the university community. Despite acknowledging some progress in recognition and tolerance, they expressed concerns about the lack of comprehensive acceptance policies and practices. Faculty 5, airing his sentiment on the issue, noted,

*"I can see it, but without the proper implementation of appropriate policies, we cannot spread it on a university-wide scale. We should show acceptance. Right now, maybe, all we have is tolerance."*

They noted that while there may be instances of tolerance towards LGBTQIA+ faculty members, true acceptance at the institutional level was still lacking. Participants emphasized the importance of implementing appropriate policies that foster an environment of inclusivity and acceptance rather than mere tolerance, as echoed by the statement of Faculty 8,

*"Yes, I feel like it's not totally accepted yet. I feel it is just tolerated. Because of what is happening now, it is tolerated but not yet fully accepted."*

They stressed that without such policies, the university's efforts to promote LGBTQIA+ acceptance may remain limited to individual experiences rather than being reflected in broader institutional practices. Faculty 9 punctuated the issue with his final statement,

*"Ah, yes. LGBT is tolerated but not accepted in the community because there is no stated policy about these things."*

The themes generated from LGBTQIA+ faculty testimonies aligned with the theories. The Intersectionality Theory advocated tailored policies for diverse identities, the Self-Determination Theory supported autonomy, as shown in calls for gender-neutral facilities, and the Psychological Safety Theory underscored institutional support for acceptance. These aligned with inclusive workplace practices, emphasizing the need for tailored policies for LGBTQIA+ inclusion.

Jain-Link et al. (2020) pointed key points for employers, leaders, and managers to create an inclusive workplace and included the following: Highlighted the importance of diversity and inclusion for business success because, with the changing demographics, companies needed diverse leaders to connect with their evolving customer base, leading to more effective innovation; Addressed bias by actively promoting diverse candidates for leadership roles. Training supervisors to recognize and overcome biases can create a more inclusive environment where employees of color feel empowered and supported. Practiced inclusive leadership by fostering a safe space for all employees to contribute, valuing diverse perspectives, encouraging collaboration, and providing growth opportunities; and Ensured accountability by making inclusion a core organizational value, tracking progress towards diversity and inclusion goals, and holding leaders responsible for meeting these objectives, with bonuses tied to their performance in this area.

Similarly, Business & Human Rights Navigator (2021) defined discrimination in employment and occupation as mistreating someone because of characteristics that had nothing to do with their abilities or job requirements. It also cited that according to the International Labour Organization (ILO), discrimination based on race, color, sex, religion, political beliefs, national origin, or social background was prohibited. This list can also include other factors like HIV/AIDS, age, disability, family responsibilities, sexual orientation, trade union membership, or language. Companies should promote diversity and inclusion in the workplace and supply chains to combat discrimination. Recruitment, training, and advancement should be based on qualifications, skills, and experience. Businesses should have policies to prevent discrimination and protect employees from unfair treatment. Companies can also broadly support non-discrimination efforts by participating in government initiatives to promote equality for underrepresented groups in specific industries.

## 4.0 Conclusion

The study underscored the pivotal role of micro-validations in nurturing inclusivity and empowerment among male LGBTQIA+ faculty members. It highlighted the profound influence of affirmations on confidence, performance, and well-being within academic workplaces. By amplifying the voices of this demographic group, it called for a reassessment of existing norms to create fair and empowering environments. Ultimately, the research emphasized the imperative of fostering spaces where all individuals feel valued, respected, and able to thrive professionally. Additionally, this research contributes to the field of psychology by providing empirical evidence on the positive psychological impact of microvalidations on marginalized groups. It also offers valuable insights for gender and development initiatives, advocating for policies that promote inclusivity and equity in academic institutions.

## 5.0 Contributions of Authors

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# Anxiety, Depression, Coping Styles, and Perceived Social Support Among University Students: A Mediation and Moderation Analyses

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**Abstract.** This study examined the association between anxiety, depression, social support, and coping strategies, particularly among higher education students undergoing a distinct developmental transition phase and confronting substantial difficulties. A quantitative approach utilizing inquiry techniques such as surveys and experiments was used with a sample of six hundred eighty-five (685) higher education students enrolled at a State University. Based on the results, the researcher concluded that higher education students exhibited moderate levels of anxiety and depression. The study identified that these students engage moderately in problem-focused, emotion-focused, and avoidance-focused coping, showing diverse strategies to address stress. They also reported moderate perceived social support, emphasizing the importance of relationships with family, friends, and significant others. A significant positive relationship was found between elevated anxiety levels and increased depressive symptoms. Coping styles were significant in mediating the impact of anxiety on depression, with problem-focused coping being a major mediator. Emotion-focused and avoidance-focused coping also significantly mediated this relationship. Contrary to expectations, perceived social support did not significantly moderate the relationship between anxiety and depression. Family support showed a trend toward moderating the anxiety-depression relationship, suggesting a potential influence that needs further exploration. Support from friends and significant others, such as romantic partners and mentors, did not significantly affect this relationship, indicating that these types of support may not be crucial in this context.

**Keywords:** Anxiety and depression; Coping styles; Social support; University students.

## 1.0 Introduction

The foundation of overall well-being lies in mental health, which is evident in proficient life functioning. It encompasses more than the mere absence of mental disorders; it extends to the capacity for thought, learning, and comprehension of one's emotions as well as the responses of others (World Health Organization [WHO], 2018). One of the most vulnerable populations is considered to be college students (Islam et al., 2020). Students in higher education face challenges such as academic pressure, numerous obligations, a different environment, and individuation from their families (Pedrelli et al., 2015). Moreover, additional psychological, biological, social, and financial issues contribute to poor mental health among students (Ladejo, 2021).

Furthermore, following the declaration of the COVID-19 pandemic by the World Health Organization (WHO), several countries took various measures, such as social distancing and isolation, to safeguard public health. These actions had a significant role in constraining an increase in the spread of the disease (Nussbaumerstreit et al., 2020). However, based on prior pandemic situations, mental health practitioners have identified the potential significant adverse repercussions associated with these procedures (Brookes et al., 2020; Holmes et al., 2020). While such efforts may be effective in preventing the virus's physical spread, social distance and self-isolation have been associated with the occurrence and exacerbation of mental health concerns (Holmes et al., 2020).

Recently, recognition of its proliferation has grown throughout several affected countries' populations. Huang and Zhao (2020), for example, identified considerable psychopathology among their Chinese subjects, with 35.1% exhibiting signs of generalized anxiety and 20.1% exhibiting depressive symptoms. Moreover, Sigdel et al. (2020) reported similar findings in Nepal; a preprint study indicated 34% for depression, 31% for anxiety, and 23.2% for depression-anxiety comorbidity. In Germany, the prevalence of high anxiety was 44.9%, and depression symptoms were 14.3% (Bauerle et al., 2020). Moreover, based on a recent meta-analysis conducted by Salari et al. (2020), the occurrence of anxiety symptoms was found to be 31.9% in 17 research, while the prevalence of depressive symptoms was documented to be 33.7% in 14 investigations.

While the preceding studies mostly focused on the general population, new research indicates that college students, in particular, have suffered increasing anxiety and depression symptoms (Ng et al., 2020). The pandemic outbreak resulted in hitherto unanticipated changes in their lives. The rapid changes, physical separation, and concerns about their own and their loved ones' health were all issues that students had to deal with (Son et al., 2020). Additionally, students had distance learning experiences and underwent substantial study-habit adjustments, with the notable drawback of declining attention and learning abilities (Giusti et al., 2021). In this situation, dissatisfaction brought on by disruptions in daily routine, difficulties in studies, loneliness, alienation, emotional distress, anguish, or uncertainty about the present and the future are all strong indicators of difficult times for students (Woon et al., 2021). Thus, these can cause young people to experience substantial psychological concerns, profoundly impacting their lives (Pascoe et al., 2020). The health concerns of students are a risk factor for developing future psychological conditions (Borst, 2016). Additionally, the fear of COVID-19 is a significant predictor of mental health conditions in several research investigations (Son et al., 2020; Vilca et al., 2022).

Moreover, the significance of coping styles and their protective factors in the context of mental health issues has been a source of concern. According to Lazarus and Folkman (1984), coping refers to people's cognitive and behavioral strategies to manage internal and external demands in stressful situations. Furthermore, coping styles are categorized into three distinct types: problem-focused, emotion-focused, and avoidance-focused (Folkman & Lazarus, 1984; Chen, 2016). Problem-focused coping involves task-oriented strategies that actively seek to resolve or diminish the negative impact of a problem. In contrast, emotion-focused aims to reduce stressful situations by eliciting emotional reactions such as self-blame, rage, or self-preoccupation. Lastly, avoidance-focused involves intentionally evading unpleasant situations by engaging in social activities or distancing oneself instead of directly facing and dealing with them. As a result, it is crucial to understand that these coping mechanisms can manifest as either maladaptive or adaptive (Liang et al., 2020). Problem-focused coping may be more effective when stress can be regulated than emotionally-focused coping (Main et al., 2011). However, avoidance-focused coping involves thoughts, behaviors, and emotions, including distraction and diversion to escape the uncomfortable situation—usually, the immediate stress response (Endler, 1997). People often adopt avoidant coping methods in stressful situations instead of actively problem-solving and confronting the source of stress (Carver et al., 1989; Liang et al., 2020).

Students also struggle with social support, which, like coping techniques, may guard against mental health conditions. Eagle et al. (2019) define social support as encompassing both the perception and reception of support. Perceived social support refers to the subjective assessment of the availability of family, friends, and significant people to offer material, psychological, and general assistance in times of need. Received social support refers to the tangible quantity of help that an individual receives (Eagle et al., 2019). Studies indicate that social support enhances mental well-being and safeguards against adversities in life (Dollete & Phillips, 2004).

Numerous cross-sectional studies have shown that social support greatly impacts student well-being. Friedlander et al. (2007) found that students with more social support had lower stress and better college adaptability. Friends provide increasingly important social support during young adults' individuation from family (Kugbey, 2015). According to Wörfel et al. (2016), university peer social support strongly predicts feelings of depression and anxiety.

In the local context, Lim et al. (2022) investigated in the Philippines to look into the psychological effects of the COVID-19 early stages. According to the findings, 25% of the participants assessed had moderate-to-severe anxiety, while 16.7% reported moderate-to-severe depression. Moreover, the pandemic influences students' physical, mental, and academic well-being (Distor & Nicomedes, 2020). Despite the profound effects of the pandemic on students, the available literature on the topic remains limited, with only a few studies, such as those by Grubic et al. (2020), addressing the subject, and fewer still specifically considering Filipino students. Collectively, these studies underscore that college students are identified as a high-risk demographic for the manifestation of anxiety and depression symptoms.

In light of the empirical evidence mentioned previously, it is imperative to examine the association between anxiety and depression and social support and coping strategies, particularly among higher education students undergoing a distinct developmental transition phase and confronting substantial difficulties. Although prior research has examined depression, anxiety, coping strategies, and social support in a variety of contexts, none of these investigations were carried out simultaneously with the prolonged public health crisis that was COVID-19, which had far-reaching effects on both individuals and society. Furthermore, an assessment of the mediating impact of the specific coping styles and the specific moderating effects of perceived social support on the anxiety-depression relationship was not conducted. There was a notable absence of studies focusing on higher education students in the Philippines in the existing literature. Therefore, a more in-depth analysis of the relationships among these variables was imperative for developing effective health promotion initiatives to improve and enhance the mental health of university students.

## 2.0 Methodology

### 2.1 Research Design

This study employed a quantitative approach utilizing inquiry techniques such as surveys and experiments. The data were systematically collected using specified instruments to furnish statistical information (Creswell, 2018). Additionally, a correlational research design was specifically employed. This non-experimental design utilized statistical analysis to investigate the relationships between variables without exerting control or manipulation. This methodology was consistent in assessing whether significant associations existed between anxiety, coping styles, social support, and depression among college students. Moreover, a regression-based analysis was employed. The researcher utilized mediating analysis to examine whether anxiety transmitted an effect through coping styles to depression among college students. In other words, by assuming that the independent variable influenced the mediating variable, which then influenced the dependent variable, the researcher was able to test the mediation hypothesis. Furthermore, the utilization of moderating analysis served as a strategic tool to unveil the potential influence of social support on shaping the intensity and direction of the interplay between anxiety and depression. This analytical approach, geared towards enriching the comprehension of the relationship dynamics, delved into elucidating factors that could have heightened, diminished, neutralized, or otherwise altered the correlation between independent and dependent variables within the framework of this quantitative study.

### 2.2 Research Participants

The study was administered to a sample of six hundred eighty-five (685) higher education students enrolled at a State University, which is situated in the Pampanga province. The researcher ascertained the minimum number of samples necessary to examine the study's hypotheses by conducting a power analysis. In addition, the respondents were obtained through a purposive sampling technique. Participants who were self-diagnosed with anxiety or depressive disorders or who used medication for psychological purposes were excluded from the study.

### 2.3 Research Instrument

The researcher employed the subsequent questionnaires to facilitate data collection and analysis:

***Generalized Anxiety Disorder Questionnaire 7***

It is a self-administered seven-item instrument designed to gauge the severity of general anxiety symptoms (Spitzer et al., 2006). Each item employs a four-point Likert scale, with responses ranging from "never" to "nearly every day." Scores can range from 0 to 21, with higher scores indicating more pronounced anxiety symptoms.

Additionally, an optional point is considered for sensitivity (89%) and specificity (82%) (Spitzer et al., 2006). The GAD-7 exhibits a high Cronbach's alpha coefficient of 0.94 (Qi et al., 2021).

***Brief Coping Orientation to Problems Experienced Inventory***

The Brief-COPE is a self-report questionnaire designed to evaluate effective and ineffective coping strategies when confronted with a stressful life experience (Carver, 1997). Three distinct coping groups are delineated through the summation of items from the 14 subscales of the Brief-COPE, wherein higher scores denote a greater utilization of the specific coping style. These coping groups encompass problem-focused coping, emotion-focused coping, and avoidant coping. Each of the 14 subscales features two items resembling a distinct coping style. Respondents are tasked with rating each item based on the coping styles they are most likely to employ in stressful circumstances. The Brief-COPE demonstrates high internal consistency, with a Cronbach's alpha of 0.86, as evidenced by reliability analysis (Rathakrishnan et al., 2022).

***Multidimensional Scale of Perceived Social Support***

The MSPSS is a self-reported 12-item tool designed to assess social support perceived by family, friends, and significant others, capturing the multidimensional nature of perceived social support (Zimet et al., 1988). The three dimensions measuring perceived social support from family, friends, and significant others utilize a seven-point Likert scale, ranging from "very strongly disagree" to "very strongly agree." The discriminant validity of the subscales is deemed satisfactory, and the instrument exhibits robust psychometric properties concerning validity and reliability indices. Specifically, values range from 0.85 to -0.92 for all three subscales and 0.87 to 0.93 for the full scale (Budge et al., 2013). The summation of the three subscale scores results in the total score of perceived social support, where higher scores denote a higher level of perceived social support. Additionally, Cronbach's alpha coefficient ranges from 0.88 to 0.90 (Xiang et al., 2020; Laksmita et al., 2020), indicating the scale has high internal reliability.

***Patient Health Questionnaire-9***

The PHQ-9 stands out as a widely recognized, self-administered screening tool for depressive symptoms. Comprising nine items, it employs four-point Likert scales spanning from "not at all" to "nearly every day" (Kroenke & Spitzer, 2002). The total score, indicative of the degree of symptoms, is utilized to assess the presence and intensity of depressive symptoms, where higher scores correspond to more pronounced symptoms. Previous investigations have revealed that the screening tool boasts a sensitivity and specificity of 88% for detecting major depression, with a score of 10 or higher indicating the presence of depressive symptoms (Das et al., 2021; Kroenke & Spitzer, 2002). The PHQ-9 has consistently demonstrated reliability in prior studies, with Cronbach's alpha ranging from 0.86 to 0.90 (Zhang & Ye, 1998; Lu et al., 2022).

### 2.4 Data Gathering Procedure

Data collection took place in two phases. The preparation phase included securing the available measures for data gathering and obtaining permission from the school administrators at the research locale to conduct research. Furthermore, in the implementation phase, the researcher secured a letter of consent for research participation from the respondents. Upon completing the preliminary documents, the researcher administered the GAD-7, PHQ-9, Brief-COPE, and MSPSS.

### 2.5 Data Analysis Procedure

The data analysis section examined the data gathered from various measures using a thorough quantitative methodology. The analysis was performed employing SPSS, an extensively utilized statistical analysis software application. A multi-step approach incorporated descriptive statistics, inferential statistics, and the advanced Hayes (2017) PROCESS macro program for SPSS, facilitating regression-based path analysis.

***Descriptive Statistics***

Descriptive statistics are initially employed to obtain an overall grasp of the data. This required computing means and standard deviations for continuous variables and frequencies and percentages for categorical variables. The statistics assisted in succinctly summarizing and characterizing the key characteristics of the sample.

*Inferential Statistics*
The objective of this study was to evaluate the interrelationships between the variables under investigation. To accomplish this, the researcher utilized Pearson correlation coefficients, which are widely used to assess the magnitude and direction of linear associations among continuous variables. These findings yielded valuable insights regarding the preliminary correlations among anxiety, depression, perceived social support, and coping styles.

*Regression-Based Path Analysis*
The analysis involved utilizing the PROCESS macro program for SPSS to assess the mediating role of coping styles and the moderating effect of perceived social support on the association between anxiety and depression among higher education students. This comprehensive analytical approach facilitated a nuanced comprehension of the interconnections among anxiety, depression, coping styles, and perceived social support in the context of higher education. Incorporating Hayes's PROCESS macro program ensured the consideration of both the mediated and moderation effects, enhancing the sophistication of the research questions' analysis.

### 2.5 Ethical Considerations
In this study, respondents' participation was voluntary, ensuring that individuals willingly chose to engage in the research process. Before participating, every respondent was provided with a comprehensive informed consent form. This form detailed the study's aims, context, potential risks (e.g., emotional stress-inducing materials), advantages, and the explicit right to withdraw from the research at any point. To uphold the principles of confidentiality and privacy, any personally identifying information, encompassing details like names, ages, or email addresses, was meticulously anonymized and treated with the utmost confidentiality solely for research purposes. The researcher took strict precautions to protect the respondents' information and securely stored it in a locked folder accessible only to the researcher. For those interested in the study's outcomes, the researcher facilitated communication by providing contact information. Importantly, the researcher adhered to ethical standards by claiming authorship only for works in which substantial contributions were made, ensuring transparency and due credit in scholarly endeavors.

## 3.0 Results and Discussion
### 3.1 Level of Anxiety

**Table 1.** Descriptive statistics of the frequency and percentage distribution of levels of anxiety

| Range | f | Percentage | Verbal Interpretation |
|---|---|---|---|
| 0 to 4 | 120 | 17.52% | Minimal Anxiety |
| 5 to 9 | 206 | 30.07% | Mild Anxiety |
| 10 to 14 | 207 | 30.22% | Moderate Anxiety |
| 15 to 21 | 152 | 22.19% | Severe Anxiety |
| Total | 685 | 100% | Moderate Anxiety |

To address the first statement of the problem, the weighted mean, standard deviation, frequency, and cumulative frequency are calculated. As shown in Table 1, one hundred twenty (120) respondents (17.52%) are likely to have experienced minimal anxiety, two hundred six (206) respondents (30.07%) are likely to have experienced mild anxiety, two hundred seven (207) respondents (30.22%) are likely to have experienced moderate anxiety, and one hundred fifty-two (152) respondents (22.19%) are likely to have experienced severe anxiety. The overall mean level of anxiety among the respondents is ten (10), with a standard deviation of 5.36. A previous study found that anxiety hurts student motivation and academic performance (Hood et al., 2021). Anxiety levels among students have increased in response to the pandemic, as described in the literature. This rise is due to changes in learning settings, routine disturbances, and greater health concerns (Oliveira et al., 2020). The study's reported moderate anxiety levels are consistent with a larger trend of increased psychological discomfort among college students (Son et al., 2020; Woon et al., 2021).

### 3.2. Level of Depression
To address the second statement of the problem, the weighted mean, standard deviation, frequency, and cumulative frequency are calculated. As shown in Table 2, one hundred three (103) respondents (15.04%) are likely to have experienced minimal depression, one hundred sixty-five (165) respondents (24.09%) are likely to have

experienced mild depression, one hundred forty-eight (148) respondents (21.61%) are likely to have experienced moderate depression, one hundred forty-one (141) respondents (20.58%) are likely to have experienced moderately severe depression, and one hundred twenty-eight (128) respondents (18.69%) are likely to have experienced severe depression. The overall mean level of anxiety among the respondents is thirty 13, with a standard deviation of 7.18.

**Table 2.** Descriptive statistics of the frequency and percentage distribution of level depression

| Range | f | Percentage | Verbal Interpretation |
|---|---|---|---|
| 0 to 4 | 103 | 15.04% | Minimal Depression |
| 5 to 9 | 165 | 24.09% | Mild Depression |
| 10 to 14 | 148 | 21.61% | Moderate Depression |
| 15 to 19 | 141 | 20.58% | Moderately Severe Depression |
| 20 to 27 | 128 | 18.69% | Severe Depression |
| Total | 685 | 100% | Moderate |

Previous research emphasizes the vulnerability of college students to depression, with associations with physical illness, reduced physical activity, and higher rates of smoking and drug addiction (Ebert et al., 2019). In addition, the college student population has been linked to poor mental health outcomes, including aggressiveness, smartphone addiction, and suicide ideation, as well as presenting symptoms such as dread, stress, tension, and sleeplessness (Son et al., 2020).

### 3.3 Coping Styles

In terms of coping styles, the respondents demonstrate a moderate engagement in problem-focused coping with a mean of 2.53 (see Table 3), reflecting active strategies to address stressors. This corresponds with the idea that problem-focused coping is beneficial in controllable stress situations (Main et al., 2011). Additionally, the moderate inclination toward emotion-focused coping with a mean core of 2.40 suggests a tendency to vent emotions.

**Table 3.** Descriptive statistics of the mean score of coping styles

| | Mean | SD | Verbal Interpretation |
|---|---|---|---|
| Problem-Focused | 2.53 | 0.69 | Active Coping |
| Emotion-Focused | 2.40 | 0.62 | Venting |
| Avoidance-Focused | 1.83 | 0.58 | Denial |

This is consistent with the literature's understanding that emotionally-focused methods may be more effective when stress cannot be controlled (Main et al., 2011). Moreover, the moderate inclination toward avoidance-focused coping with a mean of 1.83 suggests a tendency toward denial or avoidance of stressors, consistent with the literature's notion that avoidant coping is an immediate stress response (Endler, 1997; Carver et al., 1989; Liang et al., 2020).

### 3.4. Social Support

Table 4 reports moderate levels of perceived social support, with mean ratings of 4.32 for family, 4.84 for friends, and 4.89 for significant others.

**Table 4.** Descriptive statistics of the mean scores of perceived social support

| | Mean | SD | Verbal Interpretation |
|---|---|---|---|
| **Family** | 4.32 | 1.78 | Moderate Support |
| **Friends** | 4.84 | 1.71 | Moderate Support |
| **Significant other/s** | 4.89 | 1.88 | Moderate Support |

These findings are consistent with previous research highlighting the critical function of social support in promoting students' well-being (Cao et al., 2020; Chang et al., 2020). Family support has been associated with better physical and mental health, coping skills, and less mental stress (Cao et al., 2020; Chang et al., 2020). In contrast, a lack of social support is linked to poor physical and mental health (Elmer et al., 2020). Peer support is important for college students because it provides moral and material resources, reduces stress, and fosters a feeling of belonging (Burns et al., 2020; Batchelor et al., 2020). Social support, whether emotional or via interactions, is critical in helping people cope with hardship and improve their mental health (Cao et al., 2020). The study's findings match previous research, emphasizing the need for different social support systems for students' mental health.

### 3.5. Relationship Between Anxiety and Depression

Table 5 shows the correlation between depression and anxiety, resulting in valuable findings. The research uncovers a substantial and positive association between anxiety and depression. The coefficient estimate for anxiety is 0.93, with a t-value of 25.21 and a p-value less than 0.01. This suggests that those with elevated levels of anxiety are more likely to display increased depressive symptoms. Furthermore, the intercept term is determined to be statistically significant (estimate = 3.36, t = 8.04, $p < 0.01$), indicating the presence of a fundamental level of depression even when anxiety is not present. These discoveries result in dismissing the null hypothesis, highlighting their significant relevance.

**Table 5.** Analysis of the relationship between anxiety and depression

| Depression | Estimate | Std. Error | t value | Pr(>\|t\|) | Decision | Remarks |
|---|---|---|---|---|---|---|
| (Intercept) | 3.36 | 0.42 | 8.04 | 0.00 | Reject Ho | Significant |
| Anxiety | 0.93 | 0.04 | 25.21 | 0.00 | Reject Ho | Significant |

These findings support the previous evidence that highlights the interconnectedness of anxiety and depression (Kendler et al., 2003; Wittchen et al., 2000). Besides this, anxiety and depression have a substantial impact on college students' development, compromising not just their academic achievement but also their physical well-being. They may even make people more prone to progressively unpleasant events, such as suicidal ideation or behavior (Scott et al., 2016). College students are more prone to develop anxiety, depression, and other mental health difficulties due to changes in social roles, a lack of social support, and increased stress (Auerbach et al., 2018). Comprehending this connection is essential for guiding clinical interventions, emphasizing the need to address both problems simultaneously in therapeutic settings (Cuijpers et al., 2016; Hofmann et al., 2012).

### 3.6. Mediating Role of Coping Styles

Table 6 shows the associations between depression (Y), anxiety (X), and coping methods (M), revealing numerous significant findings.

**Table 6.** Mediation analysis for the role of coping styles

| Causal Mediation Analysis | Estimate | p-value | Decision | Remarks |
|---|---|---|---|---|
| **ACME** | 0.18 | 0.00 | Reject Ho | Significant |
| **ADE** | 0.75 | 0.00 | Reject Ho | Significant |
| **Total Effect** | 0.93 | 0.00 | Reject Ho | Significant |
| **Prop.Mediated** | 0.19 | 0.00 | Reject Ho | Significant |

***Y = Depression; X = Anxiety; M = Coping Styles***

The investigation uncovers notable indirect effects via coping methods, suggesting that the association between anxiety and depression is mediated. The study reveals that the average causal mediation effects (ACME) were calculated to be 0.18 ($p < 0.01$), indicating that coping methods play a major role in mediating the impact of anxiety on depression. Furthermore, the study also reveals that the average direct effects (ADE) had a value of 0.75 ($p < 0.01$), indicating a significant and direct correlation between anxiety and depression, even when considering coping techniques. The cumulative impact of anxiety on depression, taking into account both direct and indirect routes, is calculated to be 0.93 ($p < 0.01$), signifying a substantial overall effect. In addition, the analysis determines that coping styles accounted for 0.19 of the overall effect ($p < 0.01$), providing further evidence of the mediating influence of coping styles on the connection between anxiety and depression. These findings underscore the intricate relationship between anxiety, coping strategies, and depression, underscoring the significance of incorporating coping mechanisms in interventions aimed at addressing anxiety-induced depressive symptoms.

To delve deeper into the impact of coping styles on mental health results, prior studies have examined many aspects of coping, such as problem-focused, emotion-focused, and avoidant coping strategies (Carver et al., 1989; Lazarus & Folkman, 1984). Research has shown that employing adaptive coping mechanisms, such as problem-solving and seeking social support, is linked to improved mental health outcomes. Conversely, utilizing maladaptive coping strategies, such as denial and self-blame, can worsen symptoms of anxiety and depression (Compas et al., 2001; Billings & Moos, 1981). Furthermore, research indicates that students' mental health, particularly depression and anxiety, can be alleviated or exacerbated depending on the coping techniques they use (Lu, 2022). These findings emphasize the significance of focusing on coping skills in interventions designed to decrease feelings of depression associated with anxiety.

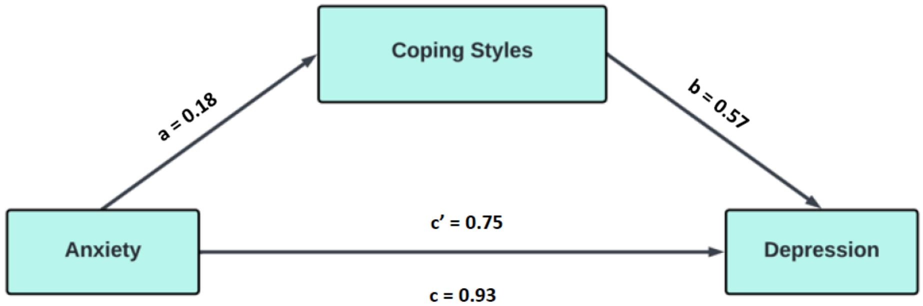


**Figure 1.** Mediation model with coping styles as a mediator

### 3.7. Mediation Role of Problem-Focused

Table 7 shows the correlation between problem-focused coping (M), anxiety (X), and depression (Y), thereby illuminating the intricate interplay among these factors. The results demonstrate a significant intermediary function of problem-focused coping in the relationship between anxiety and depression. The study reveals that problem-focused coping has a major role in mediating the impact of anxiety on depression. This indicates a substantial average causal mediation effect (ACME) of 0.05 ($p < 0.01$). The significance of problem-focused coping mechanisms in reducing the negative impact of anxiety on depressive symptoms is emphasized (Compas et al., 2017).

**Table 7.** Mediation analysis for the role of problem-focused

| Causal Mediation Analysis | Estimate | p-value | Decision | Remarks |
|---|---|---|---|---|
| **ACME** | 0.05 | 0.00 | Reject Ho | Significant |
| **ADE** | 0.88 | 0.00 | Reject Ho | Significant |
| **Total Effect** | 0.93 | 0.00 | Reject Ho | Significant |
| **Prop.Mediated** | 0.05 | 0.00 | Reject Ho | Significant |

***Y = Depression; X = Anxiety; M = Problem-focused***

In addition, even while problem-focused coping plays a mediating function, there is still a significant direct impact of anxiety on depression. This is supported by the substantial average direct effect (ADE) of 0.88 ($p < 0.01$). This emphasizes the ongoing connection between anxiety and depression, suggesting that problem-focused coping methods only partially reduce the influence of anxiety on depressive symptoms (Compas et al., 2017). The comprehensive impact of anxiety on depression, taking into account both direct and indirect routes, was calculated to be 0.93 ($p < 0.01$), demonstrating a substantial and meaningful overall influence of anxiety on depression. Furthermore, the researchers determined that problem-focused coping accounted for 0.05 of the total effect (Prop. Mediated), with a significant p-value of less than 0.01. This emphasizes the significant role of problem-focused coping in explaining the connection between anxiety and depression (Compas et al., 2017). The results highlight the significance of using problem-focused coping strategies to reduce symptoms of anxiety-related depression. Interventions that specifically address problem-focused coping strategies may be advantageous in mitigating the negative effects of anxiety on depression (Yeung & Lu, 2020). This is consistent with prior research that highlights the effectiveness of problem-focused coping in facilitating positive adaptation and psychological well-being (Skinner et al., 2003).

### 3.8. Mediation Role of Emotion-Focused

Table 8 shows the relationship between depression (Y), anxiety (X), and emotion-focused coping (M). A large amount of new information regarding the role that emotion-focused coping plays as a mediator in the relationship between anxiety and depression is revealed by the findings. The investigation highlights the strong mediation effects, with emotion-focused coping serving as a prominent mediator in the connection between anxiety and depression. In particular, the research findings demonstrate a significant average causal mediation effect (ACME) of 0.17 ($p < 0.01$), which signifies that emotion-focused coping exerts a significant influence in mediating the connection between anxiety and depression.

**Table 8.** Mediation analysis for the role of emotion-focused

| Causal Mediation Analysis | Estimate | p-value | Decision | Remarks |
|---|---|---|---|---|
| **ACME** | 0.17 | 0.00 | Reject Ho | Significant |
| **ADE** | 0.76 | 0.00 | Reject Ho | Significant |
| **Total Effect** | 0.93 | 0.00 | Reject Ho | Significant |
| **Prop.Mediated** | 0.18 | 0.00 | Reject Ho | Significant |

***Y = Depression; X = Anxiety; M = Emotion-focused***

Furthermore, even though emotion-focused coping plays a role in mediating the relationship between anxiety and depression, the study demonstrates a significant direct impact of anxiety on depression, as demonstrated by the significant average direct effect (ADE) of 0.76 ($p < 0.01$). Although emotion-focused coping might partially reduce the impact of anxiety on depression, this indicates that there is still a large direct pathway by which anxiety can affect depressive symptoms. A strong overall influence of anxiety on depression is highlighted by the fact that the total effect of anxiety on depression, which encompasses both direct and mediated pathways, is calculated to be 0.93 ($p < 0.01$). Furthermore, it determines that the proportion of the overall impact that is mediated by emotion-focused coping (Prop.Mediated) is 0.18 ($p < 0.01$). This finding highlights the significant role that emotion-focused coping plays in clarifying the connection between anxiety and depression.

The significance of emotion-focused coping methods in the alleviation of anxiety-related depressive symptoms is highlighted by these findings. It is possible that interventions that focus on emotion-focused coping could be effective in minimizing the negative impact that anxiety has on major depressive disorder. These findings are supported by previous research, highlighting the effectiveness of emotion-focused coping in managing psychological distress and the promotion of adaptive adjustment in response to stressors (Compas et al., 2017; Yeung & Lu, 2020).

### 3.9. Mediation Role of Avoidance-Focused

Table 9 shows the interaction among depression (Y), anxiety (X), and avoidance-focused coping (M). The findings reveal important insights into the moderating effect of avoidance-focused coping on the relationship between anxiety and depression. The data highlight the considerable role of avoidance-focused coping as a mediator in the connection between anxiety and depression. It reveals a significant average causal mediation effect (ACME) of 0.20 ($p < 0.01$), indicating a substantial mediating impact of avoidance-focused coping on the relationship between anxiety and depression.

**Table 9.** Mediation analysis for the role of avoidance-focused

| Causal Mediation Analysis | Estimate | p-value | Decision | Remarks |
|---|---|---|---|---|
| **ACME** | 0.20 | 0.00 | Reject Ho | Significant |
| **ADE** | 0.73 | 0.00 | Reject Ho | Significant |
| **Total Effect** | 0.93 | 0.00 | Reject Ho | Significant |
| **Prop.Mediated** | 0.22 | 0.00 | Reject Ho | Significant |

***Y = Depression; X = Anxiety; M = Avoidance-focused***

In addition, although avoidance-focused coping plays a mediating role, the analysis reveals a significant direct impact of anxiety on depression. This is supported by the substantial average direct effect (ADE) of 0.73 ($p < 0.01$). This implies that although avoidance-focused coping partially reduces the effect of anxiety on depression, there is still a large direct pathway through which anxiety affects depressive symptoms. The combined impact of anxiety on depression, including both direct and indirect factors, was calculated to be 0.93 ($p < 0.01$), indicating a substantial and statistically significant overall influence of anxiety on depression. In addition, the analysis determined that avoidance-focused coping accounted for 22 % of the total effect (Prop.Mediated) with a significant p-value of less than 0.0001. This highlights the significant role of avoidance-focused coping in explaining the connection between anxiety and depression.

These findings emphasize the need to use coping methods that focus on avoiding anxiety to reduce symptoms of depression. Interventions that specifically address avoidance-focused coping strategies may be effective in mitigating the negative effects of anxiety on depression. Prior studies provide evidence that highlights the effectiveness of avoidance-focused coping in dealing with psychological discomfort and facilitating adaptive adjustment to stressors (Aldao & Nolen-Hoeksema, 2012; Boden et al., 2012; Ehring & Watkins, 2008; Zvolensky & Eifert, 2001).

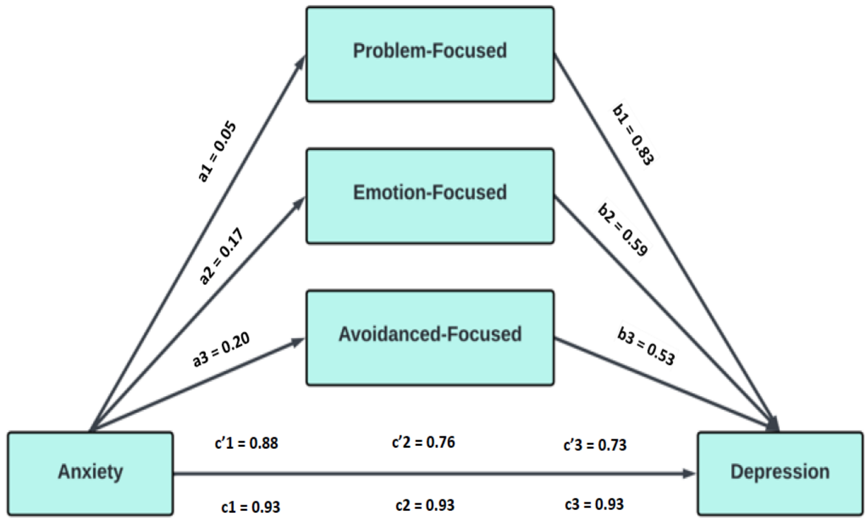


**Figure 2.** Mediation model of the dimensions of coping styles

### 3.10 Moderation Role of Perceived Social Support

Table 10 shows the moderating influence of social support on the association between anxiety and depression. The results yield useful insights into the intricate dynamics of these factors. The regression analysis demonstrates statistically significant primary effects of both anxiety and social support on depression. More precisely, the study conducted by Dai et al. (2018) reveals that anxiety has a substantial impact on the development of depression. This is supported by the positive coefficient estimate ($\beta = 0.93$, $t = 25.13$, $p < 0.01$). Similarly, the impact of social support on depression is found to be statistically insignificant, as indicated by a trivial coefficient estimate ($\beta = 0.02$, $t = 0.20$, $p = 0.84$) (Cohen et al., 2016).

**Table 10.** Moderation analysis for the role of perceived social support

| Depression | Estimate | Std. Error | t value | Pr(>\|t\|) | Decision | Remarks |
|---|---|---|---|---|---|---|
| **(Intercept)** | 12.64 | 0.20 | 63.85 | 0.00 | Reject Ho | Significant |
| **Anxietyc** | 0.93 | 0.04 | 25.13 | 0.00 | Reject Ho | Significant |
| **SocialSupportc** | 0.02 | 0.13 | 0.20 | 0.84 | Fail to Reject Ho | Not Significant |
| **Anxietyc:SocialSupportc** | -0.01 | 0.02 | -0.53 | 0.60 | Fail to Reject Ho | Not Significant |

In addition, the study incorporates the interaction term Anxietyc:SocialSupportc to investigate how social support moderates the link between anxiety and depression. The results are unexpected as the interaction term did not significantly affect depression ($\beta = -0.01$, $t = -0.53$, $p = 0.6$). This suggests that social support did not influence the relationship between anxiety and depression. Existing research reveals that greater perceived social support does not always correspond with improved mental health but rather with increased suffering (Seidman et al., 2006). Excessive help, in particular, can develop emotions of self-doubt and low self-esteem, coming from the assumption that one is incapable of self-care (Lepore et al., 2008). As a result, perceived social support may be deemed a "mixed blessing," decreasing poor results for some while causing psychological suffering for others (Gleason et al., 2008).

These data indicate that anxiety has a separate impact on depressive symptoms, whereas social support does not have a significant effect on the intensity of this connection. Although there is a theoretical basis for the idea that social support can mitigate anxiety-related depression, the current research did not find any evidence to support this theory. It is crucial to analyze these findings considering the study's constraints. Methodological considerations, such as the characteristics of the sample, the tools used for measurement, and the statistical techniques applied, may limit the results. Future research should investigate different interpretations of social support and utilize longitudinal studies to clarify the temporal patterns of these factors.

To summarize, the present study provides insight into the complex relationship between anxiety, social support, and depression. Although anxiety consistently predicts depressive symptoms, the impact of social support in mitigating this connection is still uncertain. The results of this study have important significance for comprehending and dealing with the intricate causes of depression. They emphasize the necessity for additional research into the mechanisms that influence the relationship between social support and depression associated with anxiety.

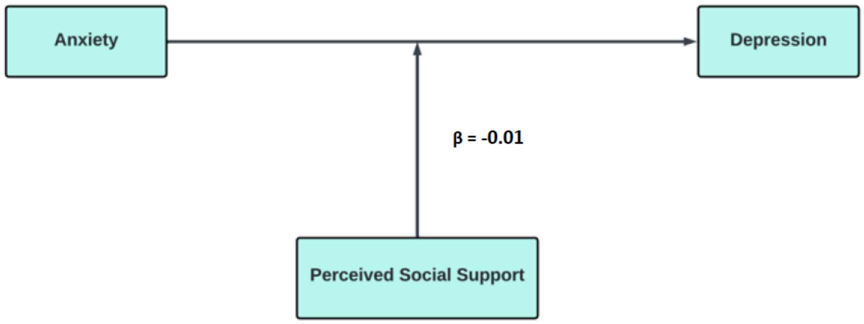


**Figure 3.** Moderation model with perceived social support as moderator

### 3.11 Moderation Role of Family Support

Table 11 shows the interaction between anxiety, family support, and depression, yielding valuable insights into these factors using moderation analysis. The results of the regression analysis show that anxiety has a significant impact on depression, suggesting that anxiety is a powerful predictor of depressive symptoms ($\beta = 0.91$, $t = 24.46$, $p < 0.01$) (Long et.al, 2024). Nevertheless, the impact of family support on depression does not achieve statistical significance ($\beta = -0.18$, $t = -1.64$, $p = 0.10$), indicating that family support alone may not have a substantial influence on depressed symptoms (Long et.al, 2024). Moreover, the inclusion of the interaction term Anxietyc:Familyc is intended to investigate the potential moderating effect of family support on the connection between anxiety and depression. Although the interaction term does not reach conventional standards of significance ($\beta = -0.04$, $t = -1.88$, $p = 0.06$), it comes close to being significant, suggesting a possible trend.

**Table 11.** Moderation analysis for the role of family support

| Depression | Estimate | Std. Error | t value | Pr(>\|t\|) | Decision | Remarks |
|---|---|---|---|---|---|---|
| **(Intercept)** | 12.6 | 0.20 | 63.5 | 0.00 | Reject Ho | Significant |
| **Anxietyc** | 0.91 | 0.04 | 24.5 | 0.00 | Reject Ho | Significant |
| **Familyc** | -0.18 | 0.11 | -1.64 | 0.10 | Fail to Reject Ho | Not Significant |
| **Anxietyc:Familyc** | -0.04 | 0.02 | -1.88 | 0.06 | Fail to Reject Ho | Not Significant |

These data indicate that anxiety has a separate influence on depressive symptoms. However, the impact of family support on this association is not statistically significant, although it may have a moderating effect. The increasing importance of family support implies that it may mitigate the influence of anxiety on depression. However, additional research using bigger sample sizes is required to validate this effect. It is important to use caution when interpreting these results, considering the study's limitations, such as the characteristics of the sample and the measurement techniques used. Future research should investigate alternate conceptualizations of family support and employ longitudinal designs to clarify the temporal dynamics of these factors.

To summarize, this study elucidates the intricate relationship between anxiety, familial assistance, and depression. The association between anxiety and depressive symptoms is well-established, but it is important to study further how family support may influence this relationship. These findings highlight the importance of familial bonds in comprehending and tackling depression symptoms, highlighting the necessity for further research in this field.

### 3.12 Moderation Role of Support from Friends

Table 12 shows the moderation analysis methodology on relationships between anxiety, friendship support, and depression, resulting in valuable insights into these concepts. The regression analysis reveals significant direct effects of anxiety on depression, indicating that anxiety is a strong predictor of depressive symptoms ($\beta = 0.93$, $t = 25.09$, $p < 0.01$) (Roberts et al., 2020; Kateri et al., 2021). In contrast, the study professes that the influence of friendship support on depression is not statistically significant ($\beta = 0.11$, $t = 0.93$, $p = 0.35$). This suggests that friendship support alone may not substantially affect depressed symptoms (Adams & Smith, 2018; Kateri et al., 2021). Additionally, the incorporation of the interaction term, Anxietyc:Friendsc, is intended to investigate if friendship support acts as a moderator in the anxiety-depression relationship. Nevertheless, the interaction term does not achieve statistically significant levels ($\beta = -0.004$, $t = -0.02$, $p = 0.81$), indicating that friendship support may not have a moderating effect on the relationship between anxiety and depression.

**Table 12.** Moderation analysis for the role of support from friends

| Depression | Estimate | Std. Error | t value | Pr(>\|t\|) | Decision | Remarks |
|---|---|---|---|---|---|---|
| **(Intercept)** | 12.64 | 0.19 | 63.82 | 0.00 | Reject Ho | Significant |
| **Anxietyc** | 0.93 | 0.04 | 25.09 | 0.00 | Reject Ho | Significant |
| **Friendsc** | 0.11 | 0.12 | 0.93 | 0.35 | Fail to Reject Ho | Not Significant |
| **Anxietyc:Friendsc** | -0.004 | 0.02 | -0.24 | 0.81 | Fail to Reject Ho | Not Significant |

These data suggest that anxiety has a separate and distinct impact on depressive symptoms. However, the level of support from friends may not substantially affect the intensity of this association. The lack of a statistically significant interaction term indicates that friendship support may not act as a protective factor against the influence of anxiety on depression in this research. It is imperative to carefully analyze these findings, considering the study's constraints, such as the features of the sample and the methods used for assessment. Future research should investigate other ways of understanding friendship support and utilize various research methods to understand better the relationship between anxiety, friendship support, and depression. Essentially, this study enhances comprehension of the intricate connections between anxiety, friendship support, and depression. Although anxiety is a strong indicator of depressive symptoms, the impact of friendship support in mitigating this connection is yet uncertain. These findings emphasize the need for ongoing research to decipher the complex mechanisms contributing to social support and its influence on mental health outcomes.

### 3.13. Moderation Role of Support from Significant Others

**Table 13.** Moderation analysis for the role of significant others

| Depression | Estimate | Std. Error | t value | Pr(>\|t\|) | Decision | Remarks |
|---|---|---|---|---|---|---|
| **(Intercept)** | 12.63 | 0.19 | 63.81 | 0.00 | Reject Ho | Significant |
| **Anxietyc** | 0.93 | 0.04 | 25.04 | 0.00 | Reject Ho | Significant |
| **SignificantOthersc** | 0.15 | 0.11 | 1.47 | 0.14 | Fail to Reject Ho | Not Significant |
| **Anxietyc:SignificantOthersc** | 0.01 | 0.02 | 0.74 | 0.46 | Fail to Reject Ho | Not Significant |

Table 13 shows the correlation between anxiety, support from significant others, and depression. The regression analysis reveals a strong positive relationship between anxiety and depressive symptoms ($\beta = 0.93$, $t = 25.04$, $p < 0.01$), which is consistent with earlier research conducted by Jacobson and Newman (2016) and Davila and Beck (2002). This highlights the significant influence of anxiety in contributing to depression. Nevertheless, the study reveals that the influence of important others' support on depression does not meet the criteria for statistical significance ($\beta = 0.15$, $t = 1.47$, $p = 0.14$). This suggests that significant others' support alone may not have a substantial effect on depressed symptoms (Jacobson & Newman, 2016). Although social support is usually regarded as advantageous for mental well-being, the precise impact of assistance from significant individuals in the context of depression can differ.

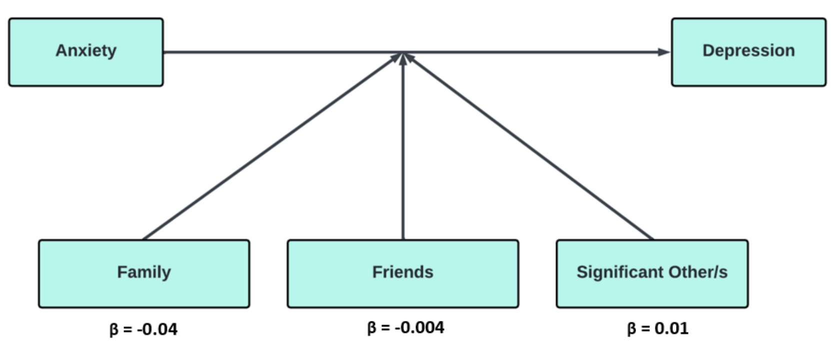


**Figure 4.** Moderation model of the dimensions of perceived social support

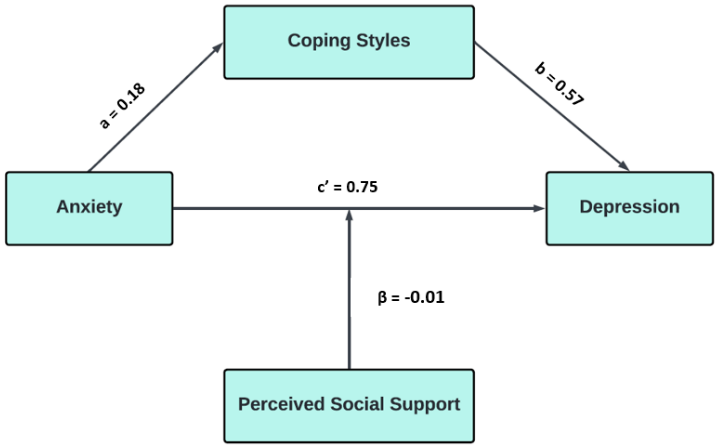


**Figure 5.** Mediation and moderation model

In addition, the correlation between anxiety and support from significant others (Anxietyc:SignificantOthersc) does not reach statistical significance ($\beta = 0.01$, $t = 0.74$, $p = 0.46$). This investigation indicates that the connection between anxiety and depression is not influenced by the level of support received from significant individuals. The results of this study are consistent with other research that suggests social anxiety does not always hinder intimate relationships (Davila & Beck, 2002). To summarize, this study finds that anxiety strongly predicts depressive symptoms, while the impact of support from significant others on depression is uncertain. These findings emphasize the intricate interaction among anxiety, social support, and depression, emphasizing the necessity for additional research to clarify the processes that underlie these interactions.

## 4.0 Conclusion

Based on the results, the researcher concluded that higher education students exhibited moderate levels of anxiety and depression. The study identified that these students engage moderately in problem-focused, emotion-focused, and avoidance-focused coping, showing diverse strategies to address stress. They also reported moderate perceived social support, emphasizing the importance of relationships with family, friends, and significant others. A significant positive relationship was found between elevated anxiety levels and increased depressive symptoms. Coping styles were significant in mediating the impact of anxiety on depression, with problem-focused coping being a major mediator—emotion-focused and avoidance-focused coping also significantly mediated this relationship. Contrary to expectations, perceived social support did not significantly moderate the relationship between anxiety and depression. Family support showed a trend toward moderating the anxiety-depression relationship, suggesting a potential influence that needs further exploration. Support from friends and significant others did not significantly affect this relationship, indicating that these types of support may not play a crucial role in this context.

## 5.0 Contributions of Authors

The sole author conceptualized and implemented the study.

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## 7.0 Conflict of Interests

The author declares no conflicts of interest about the publication of this paper.

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# Perceived Level of Effects of Gamification and Student Engagement of Senior High School Students

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**Abstract.** This study investigated the impact of gamification on student engagement and learning outcomes among grade 11 students. Specifically, it examined the relationship between the perceived effects of gamification and student engagement. A non-experimental quantitative research design with a descriptive correlational method was employed, involving 76 senior high school students from a medical school in Davao City. Data were collected using modified versions of the "Gamification and Learning Engagement Questionnaire" (GLEQ) and the "Student Course Engagement Questionnaire" (SCEQ). Results indicated high mean scores for both the effects of gamification and student engagement, with a significant positive correlation between the two variables. This suggests that gamification can significantly enhance learning outcomes by creating an engaging and dynamic learning environment. The study highlights the potential of gamification to foster student engagement, encouraging instructors to integrate game-like elements and activities into their teaching. Teachers can increase student interest and improve classroom performance by adopting various gamified strategies.

**Keywords:** Gamification; Student engagement; Senior high school.

## 1.0 Introduction

Gamification has drawn significant interest and attention from researchers and educators worldwide. The use of game-like elements in education was adopted in different institutions worldwide. Although gamification has been utilized in fields such as business, fitness, and health, the study of gamification in education is still in its early phases (Bullock, 2023). The application of gamification has garnered significant attention among instructors as a method to enhance student engagement and learning outcomes. According to Betts et al. (2021), gamification involves using game design elements and principles in non-gaming contexts. Gamification in education has become a trend in the 21st century (Glowacki et al., 2018). Gamification in classrooms can potentiate student motivation and engagement in the learning process (Huseman, 2023). The usefulness of awards and scores, developing a sense of community, and immersive learning environments will all contribute to raising student engagement.

In the research conducted by Pin et al. (2023) and Costa (2023), both found that gamification can improve an individual interest, leading to increased engagement in various settings. In the Philippines, gamification has been recognized in the educational sector as one of the supplementary tools in accommodating the diverse learning demands of Filipino learners, bringing up an array of ways for students to engage and interact with the evolving world. Gamification provides a unique alternative to raise and improve the learners' engagement, productivity, competence, enthusiasm, personality, and diverse learning outcomes (Delizo et al., 2019). A gamified learning environment improves students' achievement, motivation, and satisfaction (Zainuddin et al., 2020). The effect of gamification varies according to the type of learning environment, the material covered, the teacher, the gamification technique employed, and the gamified designs used (Alsawaier, 2018).

The gamified elements of learning experiences have shown promising results in enhancing student engagement and promoting collaborative learning, ultimately leading to more effective learning outcomes. Mindanao, specifically in Butuan, provides substantial evidence supporting the benefits of gamification. The study's data revealed a noteworthy improvement in students' academic performance, with scores indicating a "high" level after the introduction of gamification interventions (Pelegro, 2022).

On the other hand, critics contend that gamification fails to account for some learners' pedagogical needs and distracts students from their learning with pointless activities. Despite a growing number of empirical studies and literature reviews that may shed light on this debate, the value of gamification in education is still up for debate (Rabah et al., 2018).

Student engagement is the behavioral, cognitive, and emotional facets of a student's academic experience in teaching, learning, and research through interaction with other students, teachers, and the community (Kassab et al., 2021). The concept of "student engagement" is often founded on the notion that learning tends to benefit when students are curious, interested, or inspired and that learning tends to suffer when students are bored, disinterested, disillusioned, or otherwise "disengaged."

Gamification revolutionizes the learning experience by infusing it with excitement and motivation. When engaging in gamified learning, students find it enjoyable and become more deeply involved in their lessons. The heightened engagement translates into increased active participation, making learning a dynamic and fulfilling endeavor (Helvacilar, 2023). Recent studies by Mazarakis (2021) and Kleszczyński (2019) have highlighted the significant impact of gamification on student active participation in the learning process. Both studies found that by integrating gamification techniques into education, students exhibited heightened degrees of engagement, enthusiasm, and involvement. Gamification made learning fun and inspired students to actively participate in discussions, group projects, and other classroom tasks.

This study was anchored on the Theory of Gamified Learning by Zaric (2021). Individuals enjoy and retain educational competency when they engage with game-like elements. Since game components frequently offer immediate feedback, educators can monitor their progress and spot learning gaps without waiting for final exams or quizzes. Following Astin's (1984) theory of Student Involvement, student involvement leads to several positive outcomes, including increased academic achievement, greater satisfaction, and higher retention and graduation rates. Relating gamification to student engagement, specifically in the field of learning, employed these methods, making this theory ideal for the study.

Despite the potential benefits suggested by existing research in other fields, there is a lack of comprehensive examination within the field of education. By examining whether gamification concepts can influence or correspond to student engagement and interest in learning, this study aimed to close this knowledge gap and provide significant insights into both the disciplines of gamification and student engagement in the educational sector.

## 2.0 Methodology

### 2.1 Research Design

This study employed a quantitative research design that utilized descriptive correlation. Bhat (2018) stated that descriptive-correlational research tried to explain the link between two or more variables without establishing a cause-and-effect relationship. Additionally, Canonizado (2020) cited that the descriptive-correlational method aimed to understand and assess the statistical relationship between the two variables. The main goal of this research design was to give a comprehensive account of the variables and how they related without changing them or assuming that one thing caused another. This approach was helpful in the study since it attempted to explain the relationship between gamification and student engagement among Leininger and Peplau students.

**2.2 Research Locale**

The study was conducted in one of the medical schools in Davao City, from the province of Davao Del Sur, Region XI. The school, located at General Malvar Street, has operated for 45 years since 1975. Among many academic institutions in Davao, this school was known for producing top notchers from different courses, especially from the medical field, exhibiting high-quality education and a sense of value for its associates. The school's medical nature makes it a suitable setting for examining the correlation between gamification and student engagement. Furthermore, the research data collected came from senior high school students. These were in line with the type of data the researchers were trying to collect and analyze, thus making it the ideal research locale for descriptive correlational research about gamification.

**2.3 Research Respondents**

The researchers employed the Purposive Sampling technique to identify the research respondents for the study. Foley (2018) defined purposive sampling as a form of non-probability sampling in which the researchers relied on their judgment when choosing participants to partake in the study. This sampling method was employed to assess a particular subset of people, where all the study's participants were selected because they fit the specific criteria. The respondents were 37 students from grade 11 Leininger and 39 from grade 11 Peplau, forming 76 grade 11 students. The respondents met the eligibility criteria for the study because these students from section Peplau and Leininger were grade 11 students from one of the medical schools in Davao with prior knowledge and experience regarding gamifying elements inside the classroom settings. Moreover, the survey responses were tallied and tabulated using appropriate statistical tools.

**2.4 Research Instrument**

To gather accurate data on the independent variable, which was the effects of gamification, the researchers adapted the Gamification and Learning Engagement Questionnaire (GLEQ). This survey questionnaire was employed to measure the effects of Gamification on the student's learning experience. In assessing the impacts of gamification on student engagement, the respondents used the following in answering the questionnaire: 5 for strongly Agree, 4 for Agree, 3 for Neither, 2 for Disagree, and 1 for strongly Disagree.

Furthermore, the researchers adapted the Student Course Engagement Questionnaire (SCEQ) to obtain accurate data on student engagement. This survey questionnaire, used to measure student engagement, was based on the Gamification Acceptance Model (GAM). In evaluating student engagement, the respondents answered the questionnaire: 5 for Always, 4 for Often, 3 for Sometimes, 2 for Rarely, and 1 for Never.

In summary, the research instrument consisted of 40 items. The independent variable had four indicators, each with five questions, for 20 items, and the dependent variable also had four indicators, each with five questions, for 20 items.

**2.5 Data Gathering Procedure**

This study employed a systematic approach to data collection. Before the researchers began collecting data, they sought permission from the head of the institution where the study was conducted. After receiving approval, they began accumulating the data. The primary means of gathering data for this study was through online surveys. In selecting respondents, the researchers used purposive sampling to acquire relevant results. This study involved the participation of 79 Grade 11 students studying at one of Davao's medical schools. Initially, subject teachers applied game-like features to their lessons, which served as the stimulus before administering the survey questionnaires. The researchers adapted the following survey questionnaires to measure the level of the variables: Gamification and Learning Engagement Questionnaire (GLEQ) by Cahyani (2016) for the perceived effects of gamification and Student Course Engagement Questionnaire (SCEQ) by Handelsman et al. (2005) to measure the student engagement. Afterward, respondents were approached individually, and informed consent was obtained before proceeding with the data-collecting process. Data collection sessions were held in each of the respondents' perspective places. Throughout the data-collecting process, regular monitoring was performed to maintain data quality and validity.

**2.6 Data Analysis**

To analyze the study's results, the researchers used several statistical tools. First, they calculated the Mean, which represents the central value of a set of numbers and indicates the average for a group of responses. This was done by summing all the values in the data set and dividing by the total number of values. Next, they used Pearson's Product Moment Correlation Coefficient to measure the linear relationship between two variables on interval or ratio scales. This coefficient, denoted by r, ranges from -1 to 1 and shows the strength and direction of the relationship between the variables. Finally, they calculated the Standard Deviation to assess how much individual responses varied from the mean, providing insight into the variation or dispersion within the data set.

**2.7 Ethical Considerations**

The research study followed ethical guidelines to uphold its credibility and objectivity. It aimed to enhance education by exploring the effectiveness of game-like elements in high school learning, potentially improving teaching methods and student engagement. The study acknowledged risks such as technical disruptions during online data collection and prioritized safeguarding participant confidentiality and privacy through robust data protection measures and informed consent procedures. Participants were assured of voluntary participation without repercussions, and their rights were upheld throughout the study. Methodologically, the study utilized statistical tools like Mean, Pearson Product Moment Correlation Coefficient, and Standard deviation to ensure data validity while strictly adhering to the Data Privacy Act of 2012 for data confidentiality. The researchers maintained transparency regarding conflicts of interest, providing impartiality in their findings and fostering trust by communicating results honestly.

## 3.0 Results and Discussion

**3.1 Impact of Gamification on Grade 11 Students**

As presented in Table 1, the level of effects of Gamification among grade 11 students obtained an overall mean of 4.18 (SD = 0.62), indicating a high positive impact.

**Table 1.** Descriptive statistics of the perceived level of effects of gamification on Grade 11 students

| Effects of Gamification | Mean | SD | Interpretation |
|---|---|---|---|
| Academic Achievement | 4.22 | 0.69 | High |
| Motivation | 4.19 | 0.70 | High |
| Retention and Recall | 4.04 | 0.67 | High |
| Enjoyment and Contentment | 4.29 | 0.69 | High |
| **Overall** | **4.18** | **0.62** | **High** |

**Legend:** 4.50 – 5.00 = Very High, 3.50 – 4.49 = High, 2.50 – 3.49 = Moderate, 1.50 – 2.29 = Low, 1.00 – 1.49 = Very Low

This aligned with findings from other studies that demonstrated the potential of gamification in enhancing students' academic achievement, motivation, and engagement (Kalogiannakis et al., 2021; Zainuddin et al., 2020). Our research further supported the notion that gamification elements could make learning fun, motivating, and meaningful, leading to better academic outcomes for all students. In line with this, Delizo et al. (2019) highlighted gamification as a unique alternative to raise and improve the learners' engagement, productivity, competence and enthusiasm, and their personality and diverse learning outcomes. These resonated with our findings, suggesting that gamification could have a holistic impact on students' development, fostering various skills and attributes.

Specifically, among the four effects of gamification on grade 11 students, the mean score for enjoyment and contentment was 4.29 (SD = 0.69), making it the highest of all the indicators. This finding suggested that the students found the gamification experience highly engaging and enjoyable. This finding was significant because students who enjoyed learning were more likely to be motivated to learn. Gamification elements such as points, badges, and leaderboards could make learning fun and rewarding. Additionally, gamification could create a sense of community and collaboration among students, further enhancing the enjoyment of learning. This finding substantiated the ideas of Mosallanejad and Mansouri (2023), who posited that gamification positively impacted student enjoyment and consent, thus enhancing their learning capacity and satisfaction. This alignment with existing research further strengthened our argument for gamification's potential as a powerful tool in fostering student enjoyment and contentment within educational settings. When thoughtfully implemented and strategically designed, gamification could transform the learning environment into a more engaging and supportive space.

To further describe the results, the second-highest indicator was the academic achievement of grade 11 students, with a mean score of 4.22 (SD = 0.69), which is characterized as high. These results indicated that the gamified learning experience effectively enhanced student learning outcomes. Students who participated in the gamified activities demonstrated better understanding and knowledge retention than those who did not. There were several possible explanations for this finding. First, as stated by Betts et al. (2021), gamification elements such as points, badges, and leaderboards could motivate students to complete tasks and learn new material. Second, gamification could make learning more engaging and enjoyable, leading to better retention of information. Finally, gamification could help create a more active and meaningful learning experience, potentially leading to improved academic achievement.

The third highest indicator was motivation, with a mean score of 4.19 (SD = 0.70) or described as high. These results suggested that the gamification elements used in the study effectively boosted student motivation. This increase was likely because gamification could make learning more fun and engaging. Students are more likely to be motivated to learn when they enjoy themselves and find the learning process challenging and rewarding. This finding aligned with the study by Nadeem et al. (2023), which highlighted students' natural affinity for games and demonstrated how this tendency can be leveraged to create a more engaging and motivating learning environment. As Nadeem et al. (2023) stated, by incorporating game elements such as points, badges, and leaderboards, we could tap into this intrinsic motivation and encourage students to engage actively in learning activities. The combined insights from this study, alongside our findings, provided strong evidence that gamification could be a powerful tool for optimizing the learning experience for students. By capitalizing on their natural affinity for games and the inherent motivational properties of gamified elements, educators could create a more engaging and stimulating learning environment that fostered deeper understanding, knowledge retention, and academic success.

The mean score for the fourth indicator, retention and recall, was 4.04 (SD = 0.67), which was ranked as high. This suggested that gamification could help students to remember information better. This might be because gamification elements could help create a more active and meaningful learning experience. For example, gamification elements such as quizzes, challenges, and puzzles could require students to recall and apply information to achieve success actively. This could help to strengthen the neural pathways associated with the information, making it more likely that students will be able to remember it in the future. Additionally, gamification could make learning more engaging and enjoyable, leading to better retention of information. Students were more likely to remember information they were interested in and that they had learned in a positive and supportive environment.

### 3.2 Student Engagement in Gamified Learning Environment

As shown in Table 2, the overall mean rating of the level of student engagement among grade 11 students was 4.21 (SD = 0.57), which was labeled as high.

**Table 2.** Descriptive statistics of the level of engagement of Grade 11 students in a gamified learning environment

| Student Engagement | Mean | SD | Interpretation |
|---|---|---|---|
| Attendance and Punctuality | 4.37 | 0.64 | High |
| Active Participation (Responsiveness) | 4.05 | 0.66 | High |
| Peer Interaction and Collaboration Progress | 4.27 | 0.69 | High |
| Feedback and Communication | 4.15 | 0.72 | High |
| **Overall Assessment** | **4.21** | **0.57** | **High** |

This result indicated that when exposed to gamifying elements, the students displayed high levels of engagement when analyzed in terms of attendance and punctuality, active participation, peer interaction, and feedback communication. This positive relationship between the use of gamification and its effects on student engagement is in line with the findings from the study by Kassab et al. (2021), which stated that engagement depends on the student's academic experience in learning and interaction with peers. This research further supported the concept that learning benefits when students are curious, inspired, and interested.

Among the four indicators under the variable of student engagement, attendance, and punctuality achieved the highest mean range, which was 4.37 (SD = 0.64). From this result, the students find gamification helpful in increasing interest in attending classes and avoiding absences and tardiness. Through the proper use of gamifying elements, students viewed classes more positively, which contributed to a higher attendance rate. This was a crucial factor that plays a vital part in student development because perfect attendance reflects the student's enthusiasm and persistence in learning. This substantiated the idea presented by Kasinathan et al. (2019), who stated that gamification involves nurturing and developing students through their attendance and interactions with lecturers.

To further analyze the results, peer interaction and collaboration progress was the second highest indicator with a mean score of 4.27 (SD = 0.69) or described as high. This suggested that engagement had positively influenced the interaction and group collaboration between students through gamified learning activities. Gamifying elements that include team-based challenges and leaderboard setups provide a social feature that encourages students to work together to solve problems and achieve objectives. This requires combined efforts, promoting collaboration and community as students rely on each other's strengths and skills to navigate various tasks. Multiplayer-based gamified learning also promotes strategizing, sharing of ideas, and critical thinking, regardless of whether it is cooperative or competitive. This further contributed to the importance of gamifying elements because when learners actively communicate and interact with peers, they attain collaborative engagement and cohesion. This complemented the study from Dindar et al. (2021), which stated that gamification could support individuals to make social connections, establish social bonds, and cultivate social relatedness (e.g., via features that connect users, motivate common goals, allow for communication, or that establish otherwise common ground between its participants). The study also revealed that group cohesion was higher in a gamified scenario compared to a non-magnified group setting. Further, team leaderboards motivated group cohesion, indicating that cohesion is achieved if a cooperating group competes with another group. This suggested that the concept of competitiveness adds excitement and fuels motivation among the students, enhancing their focus and cooperation.

The third highest indicator was feedback and communication, with a mean score of 4.15 (SD = 0.72), which was indicated as high. With this, students showed classroom feedback and communication because they were engaged and interested in the learning setup. The students displayed high levels of engagement with the class by effectively communicating with the instructors and peers. This also encouraged them to ask questions that they feel are necessary to enhance their learning experience. Furthermore, the results indicated that students efficiently responded to inquiries and completed tasks because of high engagement and focus levels. According to Spates (2020), student feedback revealed high satisfaction with gamification strategies and an increased grasp of the material. This finding aligned with the study's results as students are engaged in a gamified discussion, providing and receiving feedback, leading to a better grasp and understanding of the material. When students were actively committed to class discussions and activities, they willingly asked for clarifications and input. This indicates that intrinsic motivation, driven by personal interest and curiosity, is propelled by a high capacity of student engagement.

The lowest indicator, although still described as high, was active participation, with a mean score of 4.05 (SD = 0.66). This suggested that high student engagement positively influences active participation. When students are engaged, they are more likely to approach learning with enthusiasm and curiosity. This positive mindset contributes to this indicator as students see learning as an enjoyable and rewarding experience. Engaged students often feel a sense of ownership over their learning experience. When students believe they have a stake in their education, they are more inclined to participate in class activities, take responsibility for their learning, and contribute to discussions. Recent studies by Mazarakis (2021) and Kleszczyński (2019) have highlighted the significant impact of gamification on student active participation in the learning process. Both studies found that students exhibited improved engagement, enthusiasm, and involvement when this technique was introduced into education. Gamification made learning fun and inspired students to actively participate in discussions, group projects, and other classroom tasks. The findings of these studies agree with our research since, as mentioned, engaged classrooms often incorporate varied learning styles and activities. These may include interactive discussions, group projects, hands-on activities, and gamified elements. Offering diverse ways to engage with the material encourages students to participate according to their preferred learning styles. The indicator failed to garner a very high mean score due to other possible reasons. Students may feel motivated on a certain level from gamifying elements and group collaborations, but this may be limited and insufficient to make the students actively participate in class on an excellent level. Students may also dislike specific learning elements that do not align with their personality traits and behaviors.

### 3.3 Relationship Between Impact and Student Engagement in Gamified Learning Environment

Table 3 revealed the relationship between the Perceived Level of Effects of Gamification and Student Engagement of Grade 11 Students. The Pearson Product Moment Correlation was used to test the relationship at a 0.05 significance level.

**Table 3.** Analysis of the relationship between impact and student engagement in a gamified learning environment

| Variables | Mean | SD | R | $R^2$ | Degree of Relationship | p-value | Decision @ a 0.05 Level |
|---|---|---|---|---|---|---|---|
| Impact of Gamification | 4.18 | 0.62 | 0.72 | 0.518 | High | 0.00 | Significant (Reject Ho) |
| Student Engagement | 4.21 | 0.57 | | | | | |

The results showed a significantly High Relationship (R: 0.72, $p<0.05$) between the Perceived Level of Effects of Gamification and Student Engagement of Grade 11 Students at a 0.05 significance level. Thus, the null hypothesis stated that "There is no significant relationship between the Perceived Level of Effects of Gamification and Student Engagement of Grade 11 Students at a 0.05 level of significance" was rejected. The results implied that the Perceived Effect of Gamification contributed to developing Student Engagement among Grade 11 Students. Moreover, the results showed that 51.8% (R2: 0.518) of the variances or changes in student engagement among Grade 11 students can be accounted for or related to their gamification.

Several previous studies supported the findings of this study. According to Khaleel et al. (2020), gamification could be a compelling approach to increasing student engagement in learning. The study found that applying game elements such as achievement points, virtual gifts, reward schedules, leaderboards, and status to the main page of their website can lead to enhanced engagement and motivation for learning. The findings showed that all game elements affected engagement in the experimental group and had high acceptance based on evaluations. Therefore, gamification can be an effective strategy to enhance student engagement in learning. The outcomes of this research provide a more comprehensive picture of what happens when gamification is implemented, particularly in student motivation, engagement, and learning outcomes, even though there is little study on gamification in education.

## 4.0 Conclusion

The study's findings demonstrated that gamification has a relatively high perceived effect on student engagement. When researchers analyzed gamification in terms of academic achievement, they found that learning outcomes improved, making learning more engaging for students and ultimately strengthening their capacity to retain and recall knowledge successfully. Furthermore, the level of student engagement positively influences students' attendance and punctuality. It appeared that students would attend classes more on time. As students actively participate in class activities, their responses are influenced. It also affects communication, feedback, peer interaction, and collaboration progress. In conclusion, findings suggest that among students in grade 11, the Perceived Effect of Gamification plays a role in fostering a sense of student engagement. Furthermore, the findings demonstrate that gamification can explain or relate to variations in Grade 11 students' Student Engagement.

## 5.0 Contributions of Authors

C.N.N. Casia: intro, lit review, database search
C.J.O. Angga: lit review, data collection, results & discussion, ethics, revisions
L.C.B. Bayron: data collection, conclusions, reference accuracy
A.N.A. Caralos: data gathering, methodology, conclusions
E.J.S. Guinto: results & discussion, research comparison, conclusions
J.S.Z. Iligan: methodology, results & and discussion, data interpretation, lit review, revisions
K.B. Lunasin: sentence clarity, grammar, coherence
I.T. Palacio: lit selection, data collection, revisions, methodology
S.M. Tampus: lit review, instrument development, results & discussion, revisions
M.V. Goc-Ong: topic suggestion, grammar, proofreading, reference editing

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The authors have disclosed that there are no conflicts of interest regarding the publication of this paper.

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# Satisfaction Survey of a State University among its Clients

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**Abstract.** This study aimed to determine the customer satisfaction of a state university in a highly urbanized city. Specifically, it aimed to answer the level of customer satisfaction when grouped according to tangible reliability, responsiveness, and empathy. When grouped according to age, sex, types of participants, and types of services availed. The research utilized the descriptive design. The study's participants were the local clients of a state university in a highly urbanized city. A researcher-made survey questionnaire was used to collect information, and the answers to these questions constitute the data and information collected from 384 participants. The researchers used stratified random sampling to identify 310 student clients and quota convenience sampling to identify 74 clients other than the students who had received services from the state university. The statistical tools used to treat and analyze the gathered data were the frequency count, mean, Kruskal Wallis, and Mann-Whitney U test. The study result showed that the customers were very satisfied with the state university's services in terms of tangible, reliable, responsive, and empathetic services. Student customers were very satisfied with the BSMA, BSA, BSOA, AEP programs, and BSE and BSBA programs. Customers other than students like alumni, faculty, SK, and Barangay officials, as were the parents, were very satisfied. Age and sex do not influence customer satisfaction, while the type of participants and services availed influence customer satisfaction.

**Keywords:** Customer satisfaction; Service quality; State university; Highly urbanized city; Descriptive design.

## 1.0 Introduction

The United Nations approved the Sustainable Development Goals (SDGs) in 2015, referred to as the Global Goals, as a global call to action to end poverty, safeguard the environment, and guarantee that by 2030 all people live in peace and prosperity. 17 SDGs are interconnected, and decisions made in one area will impact others. Nations pledged to give the least developed nations' development the highest priority while striking a balance between environmental, social, and economic sustainability. Among the seventeen SDGs, the Quality Education Goal increases customer satisfaction (Sustainable Development Goals, 2024)

Customer satisfaction deals with the perception of customers regarding services that meet their expectations (Ferreira et al., 2021). With this, higher education institutions engage with various stakeholder groups, such as students, faculty, alumni, and external partners, to ensure that their needs are met and that they are satisfied with the services provided (Buditjahjanto, 2020). Students interact with the educational institution throughout the application, registration, and education processes, making it crucial for the institute to monitor and assess its service quality to ensure student satisfaction and identify areas for improvement (Kobero & Swallehe, 2022).

According to Ferreira et al. (2021), service quality positively and significantly influences stakeholder satisfaction, highlighting the need for higher education institutions to regularly monitor service quality to maintain students' and other stakeholders' satisfaction. Customer Satisfaction Surveys (CSS) are useful tools for gauging service quality, measuring consistent satisfaction levels, determining the significance of different service features, and analyzing gaps between anticipated and actual service quality. They have become essential for acquiring insights into customer contentment and the importance of service attributes (Silveira et al., 2020).

Furthermore, the International Organization for Standardization (ISO) requires organizations to screen data relating to client feedback to evaluate whether the organization has met client necessities. This can be utilized as a viable quality indicator of quality administration and management, although confronted with the challenge of formulating a standardized questionnaire for the state university's clients' satisfaction level. Thus, this customer satisfaction study was conceived and executed with a commitment to quality.

## 2.0 Methodology

### 2.1 Research Design

The study utilized a descriptive research design. According to Pawar (2020), a descriptive research design includes the phenomena being researched and the characteristics of the population. It is used for data statistics, averages, and frequencies. The descriptive research design is considered an appropriate method because this study only intends to determine customer satisfaction with the state university.

### 2.2 Research Participants

The study participants were students and other stakeholders of the state university, such as alumni, parents, faculty, Sangguniang Kabataan barangay officials, and barangay officials. An adopted survey questionnaire was used to collect information from 384 participants. The researchers used stratified sampling to identify student clients 310 and quota convenience sampling to find clients other than students 74 who had received personnel services from the state university.

### 2.3 Research Instrument

This researcher adopted the institutional questionnaire the student affairs and services office used according to the study's needs to determine the clients' satisfaction level. The questionnaire has two parts. Part I contains the profile of the participants. Part II contains the study's specific questions. It was designed to measure the client's level of satisfaction, particularly in the following service quality areas: tangible, reliability, responsiveness, and empathy. The primary aim of using a questionnaire is to gather pertinent data as dependably and credibly as possible; therefore, ensuring the precision and uniformity of the survey or questionnaire is a crucial component of research methodology, referred to as validity and reliability (Taherdoost, 2016). The researcher adopted the institutional Customer Satisfaction Survey (CSS) form, which had undergone and passed the validity and reliability tests.

### 2.4 Data Gathering Procedure

Since the adopted instrument's validity and reliability are accepted, the researchers disseminated the questionnaire to the study's participants via a self-administered approach and an online platform, specifically Google Forms. The data collected were meticulously encoded, systematically recorded, and thoughtfully categorized. Subsequently, the results underwent a thorough analysis and interpretation, which was in alignment with the study's objectives and facilitated by the expertise of a statistician. In the treatment and analysis of the gathered data, the following statistical tools were used: for problem 1, which sought to determine the level of customer satisfaction with the state university in terms of tangible, reliability, responsiveness, and empathy as a whole and when grouped according to age, sex, types of participants, and types of services availed, frequency and mean were used; and for problem 2, which sought to determine the significant difference in the level of customer satisfaction with the state university when grouped according to age and sex, Mann-Whitney U test was used, and when grouped according to type of participants and types of services availed, Kruskal Wallis test was used.

### 2.5 Ethical Considerations

This research study followed ethical guidelines. The research and its methodology placed Significant emphasis on upholding ethical considerations. Before obtaining the research questionnaire from participants, they were assured that their personal information would be treated with utmost confidentiality. Clear explanations about the purpose of the research, the data collection process, and the intended use up to the disposal of the data were provided to them to ensure transparency and informed consent. Data Privacy Act of 2012 (Republic Act No. 10173) was complied with in this research context, which sets forth important provisions and guidelines for protecting individuals' personal data and privacy rights in the Philippines. Hence, the researchers conducted this study and handled the participants' information in strict adherence to data privacy principles of transparency, legitimate purpose, and proportionality.

## 3.0 Results and Discussion

### 3.1 Customer Satisfaction in terms of Tangible, Reliability, Responsiveness, and Empathy

Table 1 indicated that customers are generally very satisfied (M=4.54, SD=0.58) across all measured aspects of service, which includes Tangible (M=4.52, SD=0.60), Reliability (M=4.54, SD=0.65), Responsiveness (M=4.52, SD=0.63), and Empathy (M=4.56, SD=0.60). Based on the results, the highest mean score was stated as attending staff employee displays kindness, politeness, and willingness to help throughout the service (M=4.61, SD=0.60), and the item's lowest mean score was stated as customers' expectation/s is/are met during the delivery of service (M=4.49, SD=0.75).

**Table 1.** Level of customer satisfaction in terms of tangible, reliability, responsiveness, and empathy

| Variables | Mean | Interpretation | SD |
|---|---|---|---|
| **Tangible** | | | |
| A queuing facility with adequate provisions of chairs and signage is available. | 4.52 | Very satisfied | 0.68 |
| An express lane for PWD/Pregnant Women/Senior Citizens is provided. | 4.51 | Very satisfied | 0.72 |
| The instructions posted are clear, concise, and specific. | 4.53 | Very satisfied | 0.68 |
| Payment options are provided. (if applicable) | 4.53 | Very satisfied | 0.69 |
| The payment fee for the service requested is reasonable. (if applicable) | 4.53 | Very satisfied | 0.70 |
| **Mean** | **4.52** | **Very satisfied** | **0.60** |
| **Reliability** | | | |
| The feedback mechanism is available. | 4.53 | Very satisfied | 0.73 |
| Attendant exhibit knowledge and accountability of his/her duties and functions. | 4.56 | Very satisfied | 0.66 |
| **Mean** | **4.54** | **Very satisfied** | **0.65** |
| **Responsiveness** | | | |
| Attending to staff employees prompts the processing of requests. | 4.54 | Very satisfied | 0.61 |
| Customers expectation/s is/are met during the delivery of service. | 4.49 | Very satisfied | 0.75 |
| **Mean** | **4.52** | **Satisfied** | **0.63** |
| **Empathy** | | | |
| Attendant display kindness, politeness, and willingness to help throughout the service. | 4.61 | Very satisfied | 0.60 |
| A "First come, first serve" basis policy is observed. | 4.51 | Very satisfied | 0.73 |
| **Mean** | **4.56** | **Very satisfied** | **0.60** |
| **Overall Assessment** | **4.54** | **Very satisfied** | **0.58** |

This suggested a strong customer satisfaction profile for the university, and this very high level of satisfaction is consistent across various service dimensions of tangible, reliability, responsiveness, and empathy. The applaudable aspect of service was the Empathy dimension, where staff or program members' kindness and helpfulness indicate that the customers particularly appreciate interpersonal skills and customer care. Customers value not just the functional quality of the service but also the emotional support and personal attention they receive. However, meeting customer expectations suggested room for improvement, which could lead to potential dissatisfaction if not addressed in a timely manner.

The study by Buditjahjanto (2020) supported the findings that service quality, including Tangible, Reliability, Responsiveness, and Empathy, can be applied to determine user satisfaction in a State University. Service quality positively and significantly influences customer satisfaction (Ferreira et al., 2021). Customer satisfaction primarily hinged on the quality of service provided and customers' overall experience with that service (Vo-Thanh et al., 2024). Service experience contributed to sustainable customer engagement by mediating green perceived value and customer satisfaction (Yan et al., 2024). Agile methodologies, characterized by their adaptability to changing requirements, contributed to enhancing customer satisfaction (Ogundipe et al., 2024). Service quality affects customer satisfaction (Arevin et al., 2024; Halawa et al., 2024; Hariyanto et al., 2024; Wardana, 2024).

***Customer Satisfaction in terms of Tangible, Reliability, Responsiveness, and Empathy by Age Group***

Table 2 indicated that customer satisfaction levels are very high across both 18-22 years (m=4.52, sd=0.57) and 23-62 years (m=4.55, sd=0.59) age groups for the aspects of tangible (m=4.51 for 18-22 years old; m=4.55 for 23-62 years old), reliability (m=4.53 for 18-22 years old; m=4.56 for 23-62 years old), responsiveness (m=4.51 for 18-22 years old; m=4.52 for 23-62 years old), and empathy (m=4.54 for 18-22 years old; m=4.58 for 23-62 years old).

**Table 2.** Level of customer satisfaction in terms of tangible, reliability, responsiveness, and empathy when grouped as to age

| Age Group | | Customer Satisfaction | Tangible | Reliability | Responsiveness | Empathy |
|---|---|---|---|---|---|---|
| 18-22 years old | Mean | 4.52 | 4.51 | 4.53 | 4.51 | 4.54 |
| | N | 235 | 235 | 235 | 235 | 235 |
| | SD | 0.57 | 0.58 | 0.65 | 0.61 | 0.61 |
| 23-62 years old | Mean | 4.55 | 4.55 | 4.56 | 4.52 | 4.58 |
| | N | 149 | 149 | 149 | 149 | 149 |
| | SD | 0.59 | 0.63 | 0.66 | 0.66 | 0.60 |
| **Total** | **Mean** | **4.54** | **4.52** | **4.54** | **4.52** | **4.56** |

The result suggested that the mean scores are well within the range of “very satisfied,” indicating that the customers, regardless of age, perceive the service quality positively. It is also worth noting that the total mean scores across all age groups are consistent, reinforcing the service provider’s success in maintaining high customer satisfaction, tangible, reliable, responsive, or empathetic. The above corroborated the findings that age significantly moderated the relationship between responsiveness and customer satisfaction (Joshi & Dabas, 2022).

***Customer Satisfaction in terms of Tangible, Reliability, Responsiveness, and Empathy by Sex Group***

Table 3 indicated that customer satisfaction levels are very high across both male (M=4.55, SD=0.63) and female (M=4.55, SD=0.59) sex groups for the aspects of tangible (M=4.53 for male; M=4.52 for female), reliability (M=4.54 for male; M=4.55 for female), responsiveness (M=4.54 for male; M=4.51 for female), and empathy (M=4.59 for male; M=4.55 for female).

**Table 3.** Level of customer satisfaction in terms of tangible, reliability, responsiveness and empathy when grouped as to sex

| Sex | | Customer Satisfaction | Tangible | Reliability | Responsiveness | Empathy |
|---|---|---|---|---|---|---|
| Male | Mean | 4.55 | 4.53 | 4.54 | 4.54 | 4.59 |
| | N | 84 | 84 | 84 | 84 | 84 |
| | SD | 0.63 | 0.61 | 0.73 | 0.69 | 0.63 |
| Female | Mean | 4.53 | 4.52 | 4.55 | 4.51 | 4.55 |
| | N | 300 | 300 | 300 | 300 | 300 |
| | SD | 0.56 | 0.60 | 0.63 | 0.61 | 0.60 |
| **Total** | **Mean** | **4.54** | **4.52** | **4.54** | **4.52** | **4.56** |

The result suggested that the mean scores are well within the range of “Very Satisfied,” indicating that the customers, regardless of sex, perceive the service quality positively. It is also worth noting that the total mean scores across all sex groups are consistent, reinforcing that the service provided meets or exceeds the expectations of customers of both genders, be it Tangible, Reliable, Responsive, or Empathy. The findings above contradicted the study of Shamsi et al. (2023), explaining that sex does not moderate the effect of services on customer satisfaction.

***Customer Satisfaction in terms of Tangible, Reliability, Responsiveness, and Empathy by Participant Type Group***

Table 4 indicated that customer satisfaction levels for student-customers were very satisfied for programs of BSMA (M=4.56, SD=0.61), BSA (M=4.89, SD=0.26), BSOA (M=4.57, SD=0.47), and AEP (M=4.64, SD=0.45) and were satisfied for programs of BSE (M=4.23, SD=0.63), and BSBA (M=4.43, SD=0.52). In contrast, customers other than students were very satisfied, like Alumni (M=4.54, SD=0.75), Faculty (M=4.68, SD=0.46), and SK and Barangay Officials (M=4.52, SD=0.64), and were satisfied like the Parents (M=4.45, SD=0.80).

**Table 4.** Level of customer satisfaction in terms of tangible, reliability, responsiveness, and empathy when grouped as to participant types

| Types of Participants | | Customer Satisfaction | Tangible | Reliability | Responsiveness | Empathy |
|---|---|---|---|---|---|---|
| BSE students | Mean | 4.23 | 4.31 | 4.16 | 4.18 | 4.28 |
| | N | 40 | 40 | 40 | 40 | 40 |
| | SD | 0.63 | 0.59 | 0.80 | 0.68 | 0.68 |
| BSMA students | Mean | 4.56 | 4.51 | 4.62 | 4.55 | 4.57 |
| | N | 95 | 95 | 95 | 95 | 95 |
| | SD | 0.61 | 0.61 | 0.65 | 0.68 | 0.63 |
| BSA students | Mean | 4.89 | 4.89 | 4.90 | 4.87 | 4.91 |
| | N | 35 | 35 | 35 | 35 | 35 |
| | SD | 0.26 | 0.26 | 0.27 | 0.31 | 0.26 |
| BSOA students | Mean | 4.57 | 4.59 | 4.57 | 4.52 | 4.62 |
| | N | 46 | 46 | 46 | 46 | 46 |
| | SD | 0.47 | 0.46 | 0.49 | 0.54 | 0.47 |
| BSBA students | Mean | 4.43 | 4.42 | 4.45 | 4.43 | 4.41 |
| | N | 73 | 73 | 73 | 73 | 73 |
| | SD | 0.52 | 0.56 | 0.58 | 0.57 | 0.59 |
| AEP students | Mean | 4.64 | 4.65 | 4.71 | 4.67 | 4.55 |
| | N | 21 | 21 | 21 | 21 | 21 |
| | SD | 0.45 | 0.43 | 0.37 | 0.46 | 0.59 |
| Parents | Mean | 4.45 | 4.34 | 4.33 | 4.45 | 4.70 |
| | N | 20 | 20 | 20 | 20 | 20 |
| | SD | 0.80 | 1.08 | 1.10 | 0.72 | 0.50 |
| SK and Barangay officials | Mean | 4.52 | 4.56 | 4.57 | 4.46 | 4.46 |
| | N | 14 | 14 | 14 | 14 | 14 |
| | SD | 0.64 | 0.59 | 0.68 | 0.63 | 0.93 |
| Faculty | Mean | 4.68 | 4.58 | 4.68 | 4.70 | 4.75 |
| | N | 20 | 20 | 20 | 20 | 20 |
| | SD | 0.40 | 0.63 | 0.47 | 0.55 | 0.48 |
| Alumni | Mean | 4.54 | 4.60 | 4.50 | 4.48 | 4.54 |
| | N | 20 | 20 | 20 | 20 | 20 |
| | SD | 0.75 | 0.66 | 0.79 | 0.87 | 0.71 |
| **Total** | **Mean** | **4.54** | **4.52** | **4.54** | **4.52** | **4.56** |

The result implied a comprehensive view of how different participant groups perceive various aspects of service quality. The implications of this data are multifaceted, which aid in understanding where there is greater variability in satisfaction and can help target improvements to ensure a more consistent service experience. Overall, the goal would be to maintain high satisfaction for all academic programs while ensuring that all customers feel their needs are understood and met effectively. This could lead to increased loyalty, positive word-of-mouth, and a stronger reputation for the university inside and out. This supported Gwelo (2019) that students, like other stakeholders, anticipate receiving services tailored to their specific needs and preferences.

***Customer Satisfaction in terms of Tangible, Reliability, Responsiveness, and Empathy by Service Type Group***

The data presented in Table 5 offered a plain view of customer satisfaction across different types of services availed, such as Consultation (M=4.75, SD=0.38) and Others (M=4.62, SD=0.57), both interpreted as Very Satisfied and Enrolment (M=4.41, SD=0.64) and Evaluation (M=4.45, SD=0.60) both interpreted as Satisfied. The mean scores indicate a generally very high level of satisfaction, with the highest scores observed in the Reliability under Consultation (M=4.79, SD=0.40) category and the lowest scores observed in both Reliability under Enrolment (M=4.39, SD=0.79) and Responsiveness under Evaluation (M=4.39, SD=0.67) category.

The above results suggested that customers feel the most positive about their reliable experiences during the consultation process. They feel positive about their reliable experiences during enrolment and the evaluator's responsive experience during evaluation. These could be due to individual differences in expectations or the subjective nature of consultations compared to more procedural interactions like enrolment and evaluation. Although stated negatively, students who experienced a deficiency in autonomy felt that the faculty's empowerment was lacking, which affected their contentment with enrolment, evaluation, and consultation services (Arif & Ilyas, 2011) supported this study.

**Table 5.** Level of customer satisfaction in terms of tangible, reliability, responsiveness and empathy when grouped as to service type

| Types of Services Availed | | Customer Satisfaction | Tangible | Reliability | Responsiveness | Empathy |
|---|---|---|---|---|---|---|
| Enrolment | Mean | 4.41 | 4.40 | 4.39 | 4.41 | 4.45 |
| | N | 136 | 136 | 136 | 136 | 136 |
| | SD | 0.64 | 0.69 | 0.79 | 0.66 | 0.64 |
| Consultation | Mean | 4.75 | 4.72 | 4.79 | 4.74 | 4.76 |
| | N | 101 | 101 | 101 | 101 | 101 |
| | SD | 0.38 | 0.44 | 0.40 | 0.43 | 0.43 |
| Evaluation | Mean | 4.45 | 4.46 | 4.45 | 4.39 | 4.49 |
| | N | 103 | 103 | 103 | 103 | 103 |
| | SD | 0.60 | 0.58 | 0.60 | 0.67 | 0.62 |
| Others | Mean | 4.62 | 4.60 | 4.68 | 4.60 | 4.59 |
| | N | 44 | 44 | 44 | 44 | 44 |
| | SD | 0.57 | 0.55 | 0.58 | 0.66 | 0.70 |
| **Total** | **Mean** | **4.54** | **4.52** | **4.54** | **4.52** | **4.56** |

### 3.2 Difference in the Level of Customer Satisfaction

***When Grouped as to Age***

Table 6 examined customer satisfaction according to age. The result revealed no significant difference (Mann-Whitney U=-1.734; p=.083) in how different age groups perceive customer satisfaction. The result indicated that regardless of age, participants appear to have the same level of satisfaction.

**Table 6.** Analysis of the difference in the level of customer satisfaction when grouped as to age

| | Customer Satisfaction |
|---|---|
| Mann-Whitney U | 15,732 |
| Wilcoxon W | 43,462 |
| Z | -1.734 |
| Asymp. Sig. (2-tailed) | 0.083 |

The implications of these findings were quite important for service providers. While the results do not show a clear-cut significant difference in satisfaction levels across age groups, the trend suggests that age may still affect how customers perceive their experiences. This could mean that younger and older customers have different expectations or preferences regarding service quality. Higher education institutions might consider tailoring their customer service strategies to cater better to the specific needs of different age demographics and enhance overall satisfaction. This is negated by the study of Hayat et al. (2020), which found that the customer's age positively influenced his/her satisfaction.

***When Grouped as to Sex***

Table 7 examined the difference in customer satisfaction according to sex. The result revealed no significant difference (Mann-Whitney U=-0.656; p=.512) in how different sex groups perceive customer satisfaction. The result indicated that regardless of sex, participants appear to have the same level of satisfaction, which could be due to random variation rather than a systematic difference between the sexes.

**Table 7.** Analysis of the difference in the level of customer satisfaction when grouped as to sex

| | Customer Satisfaction |
|---|---|
| Mann-Whitney U | 12,030 |
| Wilcoxon W | 57,180 |
| Z | -0.656 |
| Asymp. Sig. (2-tailed) | 0.512 |

The implications of these findings were quite important for service providers. It can be suggested that customer satisfaction strategies do not need to be differentiated based on sex, as both male and female customers have similar satisfaction levels. Instead, resources can be better utilized by focusing on factors that impact all customers regardless of sex, which is broadly beneficial. This is negated by a study by Hayat et al. (2020) that customer gender positively influenced his/her satisfaction.

***When Grouped as to Types of Participants***

Table 8 examined the difference in customer satisfaction regarding the types of participants. The result revealed a significant difference (Kruskal Wallis=42.051; p=.000), indicating that the types of participants have a statistically significant impact on customer satisfaction levels.

**Table 8.** Analysis of the difference in the level of customer satisfaction when grouped as to types of participants

| | Customer Satisfaction |
|---|---|
| Chi-Square | 42.051 |
| Df | 9 |
| Asymp. Sig. | 0.000 |

This finding had important implications for higher educational institutions in understanding service quality and improving customer satisfaction. It indicated that different participant groups, including customers from different demographics or with varying service usage patterns, experience and rate their satisfaction with services differently. Implementing a a value-adding system that includes services can significantly enhance the satisfaction and loyalty of students, their guardians, and stakeholders, thereby enriching the overall educational experience and leading to satisfaction within the school community (Mumthaza et al., 2020).

***When Grouped as to Types of Services Availed***

Table 9 examined the difference in customer satisfaction according to the types of services availed. The result revealed a significant difference (Kruskal Wallis=20.285; p=.000), indicating that the types of services availed have a statistically significant impact on customer satisfaction levels.

**Table 9.** Analysis of the difference in the level of customer satisfaction when grouped as to types of services availed

| | Customer Satisfaction |
|---|---|
| Chi-Square | 20.285 |
| Df | 3 |
| Asymp. Sig. | 0.000 |

The implications of this finding indicated that customers perceive different services, whether they be enrolment, consultation, evaluation, or services other than enrolment, consultation, and evaluation, differently in terms of satisfaction. Optimizing services meant realigning quality with customer expectations and preferences and allocating resources for improvement. For example, suppose consultation services are rated higher in satisfaction than enrolment services. In that case, it may be beneficial to analyze what aspects of consultation led to higher satisfaction and apply similar strategies to enrolment services. Be it enrolment, consultation, evaluation, or other services; management has the crucial responsibility of methodically assessing students' needs and prioritizing them effectively to optimize satisfaction levels (Gwelo, 2019).

## 4.0 Conclusion

A customer satisfaction survey is essential because it offers direct insights into customer experiences and expectations to improve service quality. Customers were overall very satisfied with the state university's services in terms of tangible aspects, reliability, responsiveness, and empathy. Student customers were very satisfied with the BSMA, BSA, BSOA, AEP programs, and BSE and BSBA programs. Non-student customers like alumni, faculty, SK, and Barangay officials were very satisfied, while parents were satisfied. In addition, age and sex did not influence customer satisfaction, but the type of participant and services availed did.

Based on the result of the study, the following recommendation was made:

a) To further enhance customer satisfaction, given that the type of participants and services availed influence customer satisfaction, the state university should consider tailoring services more closely to the specific needs of different participant groups, especially parents, that contribute to their satisfaction.
b) The varying satisfaction levels across academic programs suggest a need for program-specific support strategies. For programs like BSE and BSBA, where satisfaction was lower than others, targeted interventions such as additional resources, personalized academic advising, or enhanced industry

exposure could be introduced to elevate the satisfaction levels to match those of the BSMA, BSA, BSOA, and AEP programs.

## 5.0 Contributions of Authors

Stanley T. Sabuya and Jonah J. Perulino made significant contributions to this study. Mr. Sabuya was responsible for encoding data, conducting the survey, editing the manuscript, writing major portions of the text, and performing data analysis. Ms. Perulino assisted with conducting the survey, writing minor portions of the text, and providing supervision throughout the research process. The authors' complementary roles and collaborative efforts were crucial in successfully carrying out this customer satisfaction study at a state university in a highly urbanized city during the 2023-2024 academic year.

## 6.0 Funding

The university strategically employed cost-effective methods for distributing the satisfaction survey. Leveraging an online platform and university-wide announcements, the state university ensured widespread participation while minimizing expenses and optimizing available funds.

## 7.0 Conflict of Interests

The state university's research on customer satisfaction exemplified unwavering integrity and objectivity. Researchers diligently prioritized the well-being of participants, students, and the institution. Any potential conflicts of interest were meticulously managed, ensuring the credibility and validity of the findings.

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# Stolen Youth: Case Study on Psychological Effects of Parental Separation

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**Abstract.** Family is the cradle of every person. It builds a foundation or core principles that a person carries throughout life. This study focuses on an in-depth investigation of the parent-child relationship, mental health, and academic life of a student with separated parents. This qualitative research was approached using a case study model and purposive sampling technique with one subject, after which semi-structured interviews were conducted through Google Meet, and then finally, results were analyzed thematically. Results revealed seven main themes with corresponding subthemes, such as, but not limited to, early independence, loss of a mother figure, and personal and academic life overlap. The parental separation negatively affected the subject, shown through depression, anxiety, abandonment and trust issues, exclusion, emotional isolation, self-harm attempts, and suicidal ideations. Negative impacts were also placed on the subject's interest in building a future family, affecting academic life, as the subject unhealthily copes with being dismissive of emotions. The subject lost contact with their mother, leaving the residential father as the only parent figure; hence, he needs a genuine and comfortable environment, especially family-wise. Nonetheless, the subject could use the circumstances as fuel to succeed. The findings provide grounds for further research on the psychological effects of parental separation on students while emphasizing the importance of giving undivided attention to children during such a challenging time.

**Keywords:** Parental separation; Familial relationship; Academic life; Mental health; Mental health problems.

## 1.0 Introduction

A family acts as the primary environment to build character and personality, and having a broken family hinders one's mental and emotional development, proving to be a significant threat to one's well-being. Families with strong bonds have respect for their communication and always have quality time. They are the ones who were active in participating in community activities that strengthened their bond (Sanguiliano et al., 2019). Healthy families often exchange sincere compliments and words of encouragement, developing goodwill and encouraging people to assert gratitude for their cordiality, which fosters love and healthy relationships (Carroll, 2020). Moreover, interparental relationships significantly influence children's and adolescents' psychopathology. If in conflict, children's future interpersonal relationships can be resentful (Harold, 2018). Frequent interparental conflict can harm interfamilial communication (Hess, 2022). Further, children may perceive their loyalty to their parents as torn (Johnsen et al., 2018). Philippine statistics regarding 86.33 million people aged ten years and over in 2020 showed that 1.9% are divorced, separated, or annulled. Of these, 655.48 thousand (1.5%) are male, and 988.94 thousand (2.3%) are female, accounting for a total of 1.6 million people (Philippine Statistics Authority, 2023).

Domestic violence is a social issue that destroys familial relationships. UNICEF's Global Statistics shows that six out of ten children from ages two to fourteen experience frequent physical, emotional, and mental punishments by their guardians or family relatives. This abuse can harm their cognitive functions, particularly language, influencing their behavior and key cognitive processes (Cobos-Cali et al., 2018). Another major familial issue and common cause of separation is infidelity. It leads to months and years of agony, misery, and mistrust. Moreover, it was evident that parental infidelity had significant psychological effects on the child, including academic abandonment, the development of mistrust, and commitment issues (Siguan et al., 2021). According to statistics, mental health problems affect approximately 10-20% of adolescents ages 10-19 (Chaulagain et al., 2019). However, what is even more threatening is that among Filipino students whose ages are 13 to 17, around 16.8% have attempted to take their own lives at least once (Concepcion et al., 2020; Malolos et al., 2021).

The parent-child relationship significantly impacts a child's academic success (Rathee & Kumari, 2022). Some struggles that students face due to parental separation include enforced independence, academic pressure, mental health problems, and family conflicts. Unfortunately, family conflicts leading to separation are becoming more common, and society's acceptance of these issues as "normal" blurs the ideal of family relationships (Grotan et al., 2019). Given that the Philippines has a substantial population with disabilities, notably mental illness ranking third, this study aimed to address a persistent issue in the country—mental health stigma, a major barrier to mental health service utilization among Filipinos. The study examined the impact of family dynamics and issues on mental health and academic life, aligning with Erik Erikson's Stage Theory on Psychosocial Development, which underscores the role of social dynamics and environment in an individual's psychosocial development. The research focuses on the perceptions, conditions, thoughts, feelings, and experiences of a student with separated parents. The researchers anticipate that this study sheds light on the experiences of those students and the importance of warmth and validation they may lack.

## 2.0. Methodology

### 2.1. Research Design

The qualitative case study allowed in-depth investigation of the complex experiences of a certain subject (Rashid, 2019). The researchers conducted a case study that focused on one participant. Using this design allowed the researchers to conduct a participant-centered examination. The study set the scene for an extensive exploration of experiences, thoughts, feelings, behaviors, conditions, and perceptions through semi-structured interviews. Moreover, this allowed the researchers to delve deeper into the mental health, academic life, and parent-child relationship of a student with separated parents.

### 2.2. Research Participants

The study was conducted at Central Luzon State University (CLSU), Science City of Muñoz, Nueva Ecija, Philippines, and through Google Meet for the formal interviews. The researchers selected the subjects purposively regarding their availability, suitability, and relevance. The participant was considered if the student, during the interview period, lived with separated parents for at least five years, experienced parental infidelity, was at least 18 years old, was open to sharing their experiences, and had granted interview permission to be recorded.

### 2.3. Research Instrument

This study collected data using semi-structured interview sessions. The researchers prepared fifty-five (55) questions as interview guides during formal interviews. Formal interviews were documented through privately recorded audio with the participant's consent.

### 2.4. Data Gathering Procedures and Analysis

The formal interview sessions with the research participant were conducted weekly for one (1) month. Interviewers incorporated the prepared questions into the interviews. For confidentiality, these interviews were conducted through a private session in Google Meet. The Data accumulated were evaluated using an inductive approach of reflexive thematic analysis (TA). The researchers started the data collection by transcribing audio recordings per part. The subject's responses influenced the interpretation of data and allowed the themes to be determined.

**2.5. Ethical Consideration**

This research study followed ethical guidelines and practices as reviewed and approved by the Ethics Research Committee (ERC) of Central Luzon State University (CLSU) with code 2023-170. The participant provided their informed consent to participate in this study.

## 3.0. Results and Discussion

**3.1. Early Independence**

The subject expressed that they felt immensely negative towards their older brother. The destructive relationship of sibling conflict consists of major indifference and emotional detachment (Davies et al., 2019). The subject's negative emotions culminated firstly when they left their father for their mother once they got their financial support for high school from their father. Secondly, when the father made false promises about providing for the subject once he got a job. Initially, the subject had three family members who gave them financial aid–their father, mother, and older brother. As time went by, it went down to just their father as the other two started reproaching the subject for the expenses they willingly gave in the first place. Further, the mother did not want to perform her maternal responsibilities and duties on the subject's younger brother.

*"What happened to me also happened to my younger brother."*

Furthermore, as a solution to this dilemma, the subject made great efforts to become a parental figure for their brother. They helped him with school and provided him with time, money, and food even when they did not have much in the first place. A study by Borchet et al. (2020) suggested that having a quality relationship with your sibling may alleviate the negative effects of being a parental figure. All of these, along with parental separation, prompted the subject's early independence. When everything went too heavy, there were times when the subject would express solemnly.

*"Do I not deserve to be happy?"*

Borchet et al. (2021) stated that children get overwhelmed when acting as a parental figure to another family member, making it difficult to perform developmental tasks.

**3.2. Loss of a Mother Figure**

Unresentful the subject may be, years of abusive relationships led them to cut ties with their mother completely. Eventually, the subject expressed no longer seeing their mother as a parent. This post-separation response reflected the poor relationship of the subject with their mother before the separation.

*"... It is not to the point of abhorrence, but I hold a grudge so deep I cannot bring myself to consider her my mother…"*

Parental estrangement after parental separation affects the child's overall well-being (Almansa et al., 2022). Years of neglect led the subject to deny their mother as their parent. With the father's presence, the subject tries to fill the empty feeling left by their mother's absence.

***Intrafamilial Conflicts***

The subject encountered parental alienation from many of their maternal relatives against the subject's father. The subject emphasized that they are displeased with their relatives' false accusations against their father during reunions—from being the sole reason for the separation to being the strict parent beyond the normal level of restrictiveness. As a result, the subject no longer continued communicating with their maternal relatives.

*"I no longer respect them, and because I am not comfortable anymore, I stopped going to my mother's side…"*

Parental alienation generally occurs among children in high-conflict parental divorce (Mercer, 2019).

*Father as the only Parent Figure*
Despite their busy schedules, they still find time to sustain communication and an emotional bond with their father. The subject did not feel any form of distance in their relationship.

*"...we still talk sometimes, and he still invites me outside; we still have bonding moments…"*

However, the father is neither vocal nor expressive whenever the subject achieves triumphs in academics. Although frequently celebrated during the subject's primary school, these achievements were no longer celebrated at the beginning of high school. This led to the subject feeling unappreciated. In turn, the subject became distant when showing their vulnerable side to their father. Also, influenced by financial guilt, the subject refrained from asking for material things outside their necessities. On rare occasions, however, when the subject receives gifts from their father, they feel extremely grateful and satisfied.

**3.3. Broken Connections within Family Relatives**
The subject now resides under the father's roof and guidance, far from the mother's side of relatives, and only interacts with them during family reunions.

*"...I no longer talk to my mother, but in the pandemic, we could talk, although it was very seldom."*

Supported by a study analyzed by Oren and Hadomi (2019), it reflected the parental separation's effect on children's possible loss of relationships or downgrade of relationship intensity with some family members, and often a significant diversion. Moreover, the subjects refused to maintain their relationships in various aspects (especially in finance) as a response to the false promises and financial support complaints they received from them; thus, they developed ill feelings and lost sibling connection. Kamarudin (2022) names the child's deprivation of maintenance from the other parent as one of the problems generated by sole custody. Meanwhile, the family relatives (mother's side) shared continuous 'made-up,' 'blaming,' and 'bad-mouthing' stories against the father, which clouded the subject's view growing up. Due to frustration, the subject learned how to confront the relatives as a defense; confrontation voices out the subject's bottled emotions and thoughts. As Caksen (2021) mentioned, a conflicting or unstable connection between parents greatly influences the child's adaptation to family changes.

*Connection Re-establishment*
After discovering the other side of the story and leaning on the father's explanation, the subject develops urges to re-establish the connection between fatherly and brotherly (with half-brother on mother). Moreover, the subject consistently builds a familial bond with the younger brother. Further insights are provided by Vrolijk and Keizer (2021); children (from divorce) who have several conflicts with their parents develop loyalty conflicts where they feel they have to 'choose' or 'side' between their parents, which is associated with low-quality parent-child relationships.

*Sibling Separation*
Parental separation also affects children's connection with each other. The subject revealed that while growing up in a fragmented family, the older brother isolated himself and hardly initiated any communication with the subject. Additionally, the mother's younger brother does not live with the subject, thus allowing minimal time for them to bond.

*"... I am unable to talk with my older brother anymore. No matter how I reach out, he does not give me any attention. I also cannot talk to my younger brother because he is with my grandmother; I and her are not on good terms."*

**3.4. Acceptance of the Separation**
Shortly after the separation, the subject denied the impact of parental separation on their mental health, trying to convince themselves that their mother's absence did not affect them. Many unsuccessful attempts to persuade them led them to realize that their mother and maternal family's absence left a space their father tried to fill. Later on, they learned to accept that there was no hope for their broken family to repair its severed union and that the separation was for their family's good.

*"...Even me, I do not want my parents to get back together because they will only pull each other down; there is no chance to bring our old family back…"*

McGhee (2022) stated that children of divorce usually go through denial before learning to accept it.

***Social Exclusion***

Because of having separated parents, the subject had to live with the burden of feeling denied a warm and loving family. When going out in public and seeing other families have a joyous time with each other, the subject cannot avoid feeling abandoned and deprived of a genuine relationship with their family. As a result, the subject frequently asks the reason behind their fallen familial bond. Furthermore, a study on the effects of parental divorce suggested that having separated parents left a traumatic burden on a child in terms of emotional health and socialization (Finkenauer et al., 2019).

***Infidelity and Domestic Violence***

Infidelity stood as a major cause of parental separation. The subject expressed that this started successive parental conflicts that led to the separation. During their childhood, the subject was denied answers regarding the reason behind such daily fights. As a result, the distressed subject blamed their mother as the sole reason for the separation. A study on the impacts of parental infidelity on a child revealed that a lack of acknowledgment of the suffering of a child can lead to negative consequences on the parent-child relationship and the child's perspective of parental separation (Chaudry & Salih, 2021). However, it was also revealed that the father committed domestic violence against the subject's mother. This negatively affected the subject's mental health. This is also interpreted as a contributing factor to parental separation.

*"My father responded with violence towards my mother's infidelity; it is wrong of him to hit a woman…"*

***Emotional Isolation***

After the parental separation, the subject experiences anxiety attacks almost every night. Moreover, developing long-lasting relationships with others became difficult for the subject, as trust and abandonment always troubled their minds during socialization. Also, the subject indicated that their denial of the burden of coming from a broken family could be their form of trauma response.

*"...I cannot tell if I was too traumatized or I just was not aware; maybe that is my trauma response as well…"*

Furthermore, it was revealed that intraparental conflicts cause attachment-related anxiety and avoidance of the child (Adler-Baeder et al., 2020). The subject felt that they were the center of the situation. Hearing contradicting stories of both paternal and maternal relatives took its emotional toll on the subject. As a result, the subjects felt lonely in their struggles as the only receiving end to both sides' perceptions of the separation. The subject attempted to run away from home because of uneasy feelings towards their maternal relatives, who used to reside near the subject and their father's house.

***Mental Health Problems***

Although barely affected during their childhood, the subject's mental health went downhill after gaining a more profound understanding of the separation. Beginning at the age of sixteen, the subject's mental health deteriorated. Self-harm attempts accompanied this. Despite claiming that their mental health started to become more stable, there were unavoidable occasions when the subject experienced a decline in mental state after a short-lived improvement.

During the pandemic, where isolation and distance prevailed, the subject's loneliness and depression worsened. There were several times when the subject resorted to self-harm in the hopes of coping with their seemingly unceasing pain and suffering. The subject also exhibited suicidal ideation. There came a time when the subject saw death as the only solution to their pain. For them, ending their life may be the only way to end the fight among their families. The subject had no will to live. Also, in research conducted by Auersperg (2019), adolescents manifested suicidal ideation because of experienced parental separation.

### 3.5. Absence of Interest in Future Family Building

Having no interest in raising a child, the subject expressed no plans to build a future family or imagine themselves as a spouse. Consequently, the subjects want to feel their success first through self-spoiling, taken from childhood.

*"...I want to enjoy my life first…You want to heal yourself first before you acknowledge other responsibilities."*

According to Aprianti (2023), adolescents from divorce develop a trauma that serves as a deciding factor in not getting married and building their own families.

### 3.6. Genuine and Comfortable Environment Necessity (Including a Peaceful Household and Good Familial Interaction)

The subject defined family.

*"...Not only when you live under the same roof…They are your support system; you still have somewhere to go when everyone else leaves you. You still have people who accept you."*

Additionally, their ideal home is one where they can bond with family members other than their father. Both are far from their present situation; jealousy is a prominent emotion the subject feels whenever they see students their age with their parents. Nonetheless, they added that a complete family does not automatically mean they are problem-free. The subject wishes for a better childhood and reiterated that being non-traumatic would mean a clearer mind and more stable mental health. The subject accidentally displays moodiness as a defense mechanism, mainly towards their father. They shared that this stemmed from their negative thoughts. Aside from garnering strong negative effects on the mental health of children due to separation from divorced parents, childhood trauma victims depict low self-esteem, depression, and anxiety due to feelings of being inadequate (Wang et al., 2021; Downey & Crummy, 2022).

*"... I am not that confident…I am scared that I will be compared to my mother…it affects my confidence sometimes."*

Further, a study by Tahirović and Demir (2018) relayed that there is a significant gap in the anxiety levels of adolescents from separated and intact families. In contrast, the subject has a positive outlook toward their future despite their father's hindrance towards their career choice; they expressed that they could see themself being successful one day. The subject's thoughts about marriage and parental responsibilities are fearfulness and hesitance. D'Rozario and Pilkington (2022) conducted a study wherein they suggested that parental separation accounts for anxious and avoidant attachment styles in the offspring. In line with this, Smith-Etxeberria et al. (2020) concluded that interparental conflict is strongly associated with avoidant attachment styles and romantic relationship expectations. The subject further expounded that after their first romantic relationship failed, they were scared of entering another one, factoring that what happened to their parents might also happen to their own family.

#### *Home as Ideal Environment for Academics*

The current house of the subject was deemed to be better than the previous one. This is quieter, so the subject can work and study better. Their father also usually does not bother them in their academics, which works better in their favor. Related to this is a similar study conducted by Ramli et al. (2021), wherein infrastructures, environmental health, and hazards significantly impacted students' academic lives so that students could reach their highest potential academically.

### 3.7. Personal and Academic Life Overlap

The parental separation caused the subject to have intrapersonal issues and other problems, which sometimes overlap with academic responsibilities. These events caused a disturbance to the academic life of the subject. However, as the subjects grew older, they learned to cope by dismissing their emotions. This coping mechanism, although it may cause negative effects on a person's mental health in the future, causes the subject to be able to concentrate better on their academics.

*"I became dismissive of my own emotions, so even if I had problems with my personal life, I did not mind them much as long as I got to study."*

***Hindrance to Career Choice***

Due to conflicts with parental preferences, the subject is having difficulty choosing their career. The subject's preference is nursing, which is similar to their mother's course (the reason they are restricted from that course), and due to this, the subject might choose to become an accountant instead. Nevertheless, the subject stated they could see themselves succeeding by that time.

***Determination to Succeed***

In times of immense pressure from academic responsibilities, the subject often experiences burnout and mental fatigue. However, due to the familial state of affairs, the subjects strongly want to prove themselves to their family. The familial issues between the two sides of the family trees motivate the subject to achieve and succeed, yet despite this, the subject cannot hide the fact that the road is steep and emotional breakdowns are bound to happen. According to a study by Widyastuti (2018), family-related issues can increase the motivation and resilience of students and families if the individual exposed to the stressors coped with the problem actively.

## 4.0. Conclusion

The semi-structured interview gave an in-depth understanding of the subject's mental health, academic life, and parent-child relationship. Results indicated that parental separation negatively affected the subject in the forms of depression, anxiety, abandonment and trust issues, exclusion, emotional isolation, self-harm attempts, and suicidal ideations. Additionally, it negatively impacted the subject's interest in building a future family. Unfortunately, this series of events affected the subject's academic life as the subject learned to cope unhealthily by being emotionally dismissive. Their familial issues also hindered the subject's career choice. Fortunately, the subject could use this as fuel for their drive to succeed. Regarding the parent-child relationship, the subject lost contact with their mother, leaving the subject's residential father as the only parent figure. From the data gathered, the subject needs a genuine and comfortable environment, especially family-wise.

## 5.0. Contributions of Authors

**KEMCollantes**-Conceptualization of the Study, Literature Review, Research Design, Gathering of Data, Data Interpretation, Writing and Editing, Formatting; **DJBAurelia**-Conceptualization of the Study, Literature Review, Gathering of Data, Data Interpretation, Writing and Editing, Formatting; **JJDCastillo**- Literature Review, Gathering of Data, Data Interpretation, Writing and Editing, Formatting; **GFPMangalindan**-Conceptualization of the Study, Literature Review, Gathering of Data, Data Interpretation, Writing and Editing, Formatting; **DVDNicolas**-Conceptualization of the Study, Literature Review, Development of Guide Questions, Gathering of Data, Data Interpretation, Writing and Editing, Formatting; **JAVillarama**-Conceptualization of the Study, Literature Review, Research Design, Development of Guide Questions, Writing and Editing, Formatting.

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## 7.0 Conflict of Interests

All authors declare that they have no conflicts of interest.

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# Good Teacher Profile: Comparing Biobío's Excellent Teachers' Perspectives and Practices with the Ministry of Education Criteria

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**Abstract.** This study aimed to compare the perceptions and practices of excellent teachers in a city in Chile and the Framework for Good Teaching (GTF) established by the Ministry of Education and Chilean teacher evaluation. The central objective was to compare the criteria for good teaching established by the Ministry of Education with the perceptions and practices of excellent teachers from a Chilean city, describing similarities and convergences. A qualitative descriptive methodology used a content analysis approach to describe teachers' understanding supported by topic frequencies. Six criteria were selected as essentials for the Praxis: 1. Proficient in the national curriculum 2. Students' characteristics 3. Students' integral development; 4. Positive learning environment 5. Learning process evaluation, and 6. reflection on their practices. The findings showed several similarities, principally about the importance of curriculum management, preparing classes to plan, learning process evaluation, and integrating students' interests. Further, it underscores the necessity to use different teaching strategies and technological resources to improve the learning process and as keys to educational success. At the same time, divergences address the need to consider integral students' development, the learning environment, the teacher's use of the school coexistence plan, collaborative reflection about the practice, and teachers' commitment to the students beyond academics. Theoretical and practical implications highlight the necessity to consider teachers' opinions, especially those who excel in their teaching practices, in creating prescribed ministerial frameworks. For teaching practices, teachers advocate for real collaboration time to improve their reflection and collaboration, positively impacting students learning.

**Keywords:** Good teacher profile; Quality education; Teaching practices; Teacher training.

## 1.0 Introduction

Since the return to democracy in 1990, education in Chile has undergone profound transformations. In the first years, the focus was literacy coverage, with the slogan education for all; in 2011, the coverage rates for school education reached 91% (Alarcón et al., 2020; Donoso, 2012). This coverage did not translate into real quality learning for children. According to Blanco et al. (2007), coverage and quality of learning are two aspects that should be developed together since they maintain a close relationship. Thus, the motto that has moved education in the last decade is improving the quality and equity of education; for this purpose, teachers are the first variable that positively affects the results of students (Bolivar, 2010; Hrabowski et al., 1999b; Lucas & Villegas, 2010). In Chile, attempts have been made to strengthen the role of teachers through mentoring programs and teacher professional development as measures to motivate, incentivize, and recognize their work (Alarcón et al., 2020). One of the most relevant measures adopted is Chilean teacher evaluation. This evaluation is based on three modules and five tasks, including a knowledge test. The assessment is based on the Framework for Good Teaching (GTF).

There is a large body of literature about Chilean teacher assessment results, variables that influence a good teacher, and the characteristics of a good teacher. (Hrabowski et al., 1999a, 1999b; Sun, 2022; Tuytens et al., 2020). However, there is a lack of studies from the perspective of teachers. The relevance of this study lies in determining whether there is a concordance between what the Ministry of Education requests and the characteristics highlighted for Chilean teachers, specifically excellent teachers —with high-level evaluation in teacher assessment — working in public schools.

**1.1 Evolution of the Teachers' Trajectories from 1990**

With the return to democracy in 1990, several reforms emerged in Chile. Firstly, school coverage should be ensured, and education for all should be guaranteed. In this regard, Article 1 of Act N° 18.956, which restructured the Ministry of Education, states the necessity to "promote the development of education at all levels ensuring access to basic education for the entire population; to stimulate scientific and technological research and artistic creation, and to protect and increase the cultural Heritage of the nation" (Gobierno de Chile, 1990).

In 1994, during President Frei's government, the Commission for the Modernization of Education was created, which could diagnose the state of the educational system and propose forms of action. This Commission suggested a central action "strengthening the teaching profession and a common program of training that reached all Chileans and provided them with a solid moral and intellectual formation" (Rebolledo Castillo, 2020).

Ten years later, under law 19.961, the first teacher assessment emerged. This evaluation would measure teachers' performance by considering complex criteria and indicators. An instrument was created to guide this purpose: the Framework for Good Teaching (GTF). This assessment was understood as a system that recognized the perfectibility of teachers' performance. (Biblioteca del Congreso Nacional de Chile, 2004; Marco para la Buena Enseñanza, 2004)The GTF becomes the map document to guide teachers' practices in their classrooms. To improve the performance of future teachers, in 2008, Pedagogy students took a new test called Inicia (or test initial) to improve training for future teachers. (Bastías-Bastías & Iturra-Herrera, 2022; Centro de Perfeccionamiento experimentación e Investigaciones Pedagógicas [CPEIP], 2023).

**1.2 Theoretical Framework**

The theoretical framework was created from three relevant documents that guide teachers' work: first, the orientation standards for future teachers (Gobierno de Chile, 2011; CPEIP, 2023), the Framework for Good Teaching (Marco para la Buena Enseñanza, 2004), and Chilean teacher evaluation, which put into action the theory of GTF (Biblioteca del Congreso Nacional de Chile, 2004) Providing tools for effective teaching and strengthening professional development by enhancing social and pedagogical skills. Based on the common topics and descriptors among these documents, a profile of good teachers was created because they frame the responsibilities that each teacher must appropriate for the exercise of the profession.

***Competency Standards for Teaching Program Graduates***

These standards were created to support initial teacher training and to contribute to the preparation of excellent teachers, both in terms of subject content and teaching methodologies, to support effective learning. The Chilean Ministry of Education considered it essential to provide training institutions with clear and precise guidelines about what every teacher is expected to know and do at the end of their basic or initial training (Gobierno de Chile, 2011; CPEIP, 2023) Future teachers are expected to address the moral dimension of their profession (Fink, 2019), through the commitment to teach, to learn continuously, and to know how school culture is transformed and prepared to promote the personal and social development of students (Marco para la Buena Enseñanza, 2021; Ministerio de Educación, 2020).

***Framework for Good Teaching***

Teacher performance is the variable with the greatest impact on student achievement (Sanzana & Mendoza, 2023). This is why GTF has become an essential tool for teachers and future teachers; its domains and descriptors establish what every teacher must know, how to do it, and how to evaluate (and self-evaluate). The GTF was created in 2003 by a tripartite reflection among the technical teams of the Ministry of Education, the Chilean Association of Municipalities, and the Teachers Association. This study considered the national and international experience criteria regarding professional teaching performance in different school systems.

GTF has four domains, each involving central aspects of teaching: a. Teaching preparation, b. creating a learning environment, c. teaching for every student's learning, and d. professional responsibility (CPEIP, 2008). This framework serves as a guide for newly graduated teachers, and it helps experienced teachers be more effective in their classes, enhancing their professional skills and, at the same time, improving the quality of education.

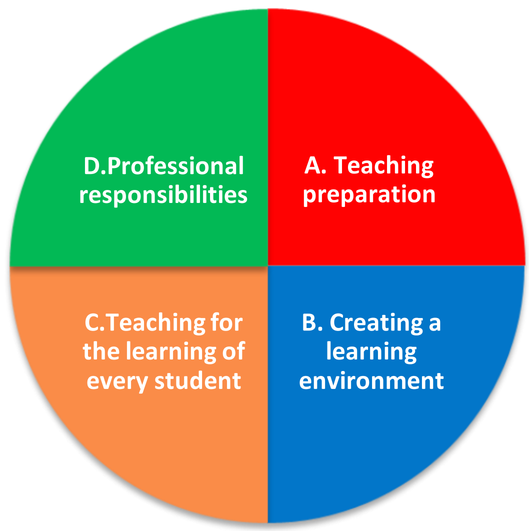


**Figure 1**. Macro Organization GTF

### 1.3 Chilean National Teacher Evaluation System

The Chilean National Evaluation System of Teacher Performance. This program has assessed primary and high school teachers' performance since 2003. The teachers' evaluation system assesses the educators in public schools in the country based on the criteria established by the GTF (Biblioteca del Congreso Nacional de Chile, 2004; Tuytens et al., 2020), becoming one of the first pioneering countries in this type of program (Sun, 2022). The teacher evaluation program is a training process that seeks to strengthen professional performance, acting from the perspective of self-reflection to establish strengths and weaknesses to achieve better student learning. This evaluation system is articulated based on a series of rubrics divided into performance levels:

- Outstanding performance: indicates a professional performance that stands out concerning what is expected in the evaluated indicator.
- Competent performance: indicates adequate performance that meets the expected professional requirements for the teaching role.
- Basic performance indicates a professional performance that meets expectations but in an irregular way.
- Unsatisfactory performance indicates performance with clear weaknesses that significantly affect teaching work. Teachers at this level and those who refuse to be evaluated can access free professional development plans. Those with outstanding or competent performance can opt for an individual performance variable assignment through a knowledge test (Maldonado & Chávez, 2020; Ministerio de Educación, 2016).

### 1.4 What are the Pillars of Pedagogical Excellence?

For this study, the team generated a profile of a good teacher based on the essential criteria from the GTF, the orientation standards, and Chilean teachers´ evaluation (Gobierno de Chile, 2011; Marco para la Buena Enseñanza, 2004; Ministerio de Educación, 2016). These documents delimit the responsibilities that every teacher must have in the daily practice of the profession. Six essential criteria for a good teacher profile were chosen, and each criterion had four to five descriptors from the GTF to amplify their understanding.

**a. Teachers must be proficient in the national curriculum and develop strategies according to the student's needs. In addition, different methodologies are used according to the learning objectives.**

Descriptors:

i. The teacher knows the relationship between the central concepts of the discipline they teach and those of related disciplines, generating bridges that allow students to understand a phenomenon from different points of view.

ii. The teacher knows the learning ideal from the national curriculum, which focuses on competencies, knowledge, abilities, and attitudes.

iii. The teacher knows diverse types of learning resources suitable for developing activities depending on the topic they are working on with their students and their characteristics.

iv. The teacher knows the current curriculum, and it can identify the emphases and orientations of the subjects.

v. The teacher communicates to the students the content to be developed in class and connects the content with the learning objectives to be developed.

**b. Every teacher must know their students' characteristics and learning styles.**

Descriptors:

i. The teacher knows the most relevant aspects of the family context of their students.

ii. The teacher knows the way that each student learns, as well as the teaching strategies that allow them to address the different rhythms, which are the learning styles of their students that everyone can learn.

iii. The teacher knows diverse learning resources suitable for different activities depending on the topic they are working on with their students.

iv. Teachers select learning activities appropriate to the age and interest of their students.

**c. Every teacher must promote the integral development of their students in the value and social fields.**

Descriptors:

i. The teacher has general knowledge about the progression in the development of students from the cognitive, physical, and social affective fields.

ii. The teacher generates relationships of respect with the students by listening to them, commenting on their contributions, and enriching the discussion in the classroom.

iii. Teachers can handle conflicts, bullying, and disqualifications among students. The educator guides adequate resolution.

iv. Teachers promote respect for individual differences among students.

**d. Teachers must create a learning environment, establish clear rules, optimize, and respect the time to develop activities.**

Descriptors:

i. The teacher generates a learning environment. The rules of coexistence are clear to all students.

ii. The teacher organizes time efficiently without wasting it 'on actions unrelated to the activities or the proposed content.' In addition, the teacher has the flexibility to incorporate student input and interest into the class's development.

iii. The organization of the class. This parameter is based on the type of activity proposed. Coherence is observed between the proposed activity and the use of space.

iv. The teacher develops a defined class structure that allows differentiation between various stages regardless of the strategy developed.

**e. Every teacher must evaluate the student's learning process and give relevant feedback at various times in class.**

Descriptors:

i. The teacher knows which assessment strategies are most appropriate for the objectives and content of the subject taught.

ii. The teacher can develop evaluation strategies that assess the student’s knowledge, skills, and competencies.
iii. The teacher systematically evaluates and monitors the degree of learning the students achieve at various times of the class. Hence, the educator has a clear idea about the classroom level.
iv. The teacher provides the students with feedback on the work results.
v. The teacher collected evidence of the student's learning based on the products of their work and specific evaluation procedures, which allowed us to establish the level of achievement of the expected learning.

**f. Teachers must reflect on their practices and develop collaborative relationships with the school community.**

Descriptors:
i. The teacher critically analyzes their practices' strengths and weaknesses and their effects on the students’ learning. Thus, they will reformulate their practices to make them more effective and relevant.
ii. Bassett, teachers systematically seek to identify their needs for updating and professional development when evaluating their practices.
iii. Teachers collaborate with their colleagues to integrate and maintain spaces for reflection and systematic exchange of practices. Additionally, teachers look for enriching practices through literature.
iv. The teacher attends meetings and training planned for the school.
v. The teacher informs parents and guardians about the objectives, contents, and learning the students are expected to achieve. Additionally, the teacher informs students how to develop strategies in their class to achieve them.

Based on the background and criteria presented, reflecting on the teaching profession's skills, competencies, attitudes, tools, methodologies, and daily exercises is necessary. In this way, questions arise, such as the responsibilities and competencies attributed to teachers in their pedagogical practice. What are the teachers' purposes regarding the limitations of teaching at the Ministry of Education? What are the practices used by teachers from the GTF? What practices are important for excellent teachers and are not considered in the GTF?

This study aimed to compare the profile of good teachers from the perspective of excellent teachers and the profile proposed by the Ministry of Education through the Standards for Pedagogy students, the framework for good teachers, and their descriptors, considering those relevant for Chilean evaluation.

## 2.0 Methodology

### 2.1 Research Design

The focus of this study is qualitative, relying on the collection of rich descriptive data through semi-structured interviews, observations, and content analysis, rather than standardized data. The method chosen in this study is content analysis since “Qualitative deductive content analysis defines itself within this framework as an ethical approach of methodologically controlled analysis of text following analytical rules of content and step by step models without quantification In between” (Cáceres, 2008; Creswell & Creswell, 2018; Elo & Kyngäs, 2008) This study used frequency counts to reinforce the content descriptors with graded affinity among teachers. The research design is descriptive. This design helped to describe excellent teachers’ perceptions and practices about the profile of a good teacher, describing the common and dissimilar from their point of view (Creswell & Creswell, 2018; Hernández-Sampieri & Mendoza, 2020)

### 2.2 Research Participants

For this study, purposively selected participants. (Bhattacharya, 2017) were chosen because they met the following crucial criteria: excellent results in Chilean teacher assessment, two or more years of teaching, working in a public school in a district in the Biobío Region, and due to their relevant experience with the research topic, a total of 15 participants had two to 20 years of teaching. These teachers were interviewed for two hours or more and observed at least two times teaching in their classroom.

### 2.3 Research Instrument

The central instrument was a semi-structured interview with six criteria defined from the theoretical framework and three questions to indagate the descriptors; in some cases, the questions were aggregated to clarify the participants' answers. The second instrument included one or two non-participant observations of the excellent teachers to determine how the descriptors can be implemented for the teachers, in contrast to the GTF.

**2.4 Ethical Considerations**

All the participants were teachers, so they were adults. They were previously contacted and informed about the use of the information. The teachers who willingly participated were assured of the confidentiality of the information. The participant list was held for the principal researcher in a private folder. The 15 participants read and signed the informed consent form.

**2.5 Data Analysis**

The recommendations for the content analysis start with participant selection and the definition of categories (in this case, criteria and descriptors). Then, the categories were analyzed and coded by extracting the answers from the transcriptions. Additionally, the frequency of the appearance of answers and the actions were con. Finally, the analysis and comparison of the six criteria and descriptors were performed for the final description of each one, supported by frequency, and finalized with relevant information from the decimal.

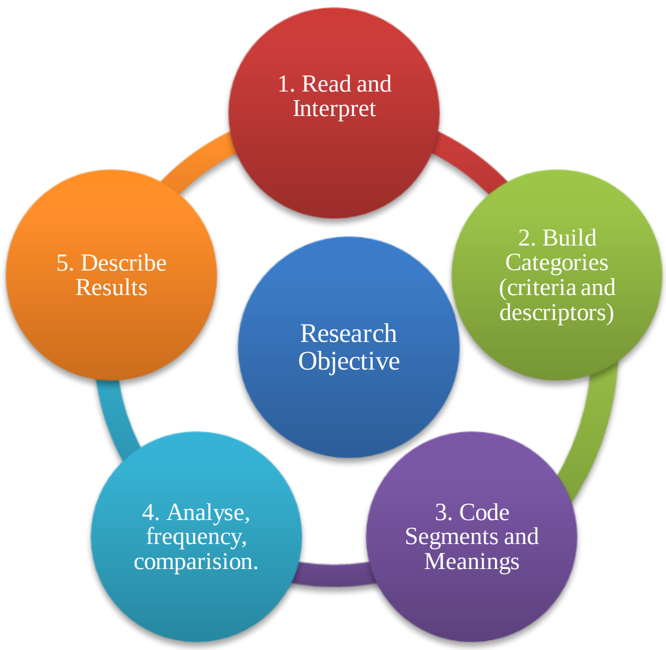


**Figure 2**. The study analysis content diagram (adapted from Cáceres, 2008)

## 3.0 Results and Discussion

These results are organized into the six criteria defined in the theoretical framework and the description product of content analysis, the data from non-participant observation, and team notes. For each one, are presented the descriptors mentioned with major frequency for the teachers and finally are present the relevant dissimilarities result from this study.

**Criterion 1. National Curriculum Domain**

The study teachers describe this criterion as how excellent teachers guide their practice by the current curriculum. Additionally, they mention the preparation or planning of learning based on the characteristics of their students and the importance of communicating the learning objective/s to the students. In addition, they established that a teacher should have the complete domain of the subject being taught because developing knowledge, competencies, and abilities with their students is not possible without discipline knowledge. Additionally, teachers must be able to apply different teaching strategies according to their students' needs and interests. They highlight how a teacher should use all the available resources, such as concrete material, the students' text, information, and Communication Technology (ICT). Further, they emphasize student learning by discovery.

This criterion has the greatest agreement about GTF, teacher perceptions, and practices. Table 1 shows the teachers' high-frequency descriptors about planning, the development of competencies, and the use of objectives and activities for the class.

**Table 1.** High-frequency descriptors in curriculum management

| Teacher Key Responsibilities | Frequency |
|---|---|
| 1. Preparing and designing classes according to the study programs, class by class, monthly and annually. | 5 |
| 2. Promoting the development of lower and higher-level cognitive skills | 3 |
| 3. Presenting the objective and activities to their students | 3 |

**Criterion 2. Students' Characteristics and Learning Strategies**

Excellent teachers must have a high level of knowledge about their students. They seek information and data about students´ families, interests, motivations, and attitudes. For instance, they look to identify how their students learn to develop different teaching strategies and teaching resources. Table 2 shows the topics highlighted for the teachers: a complete initial evaluation and different teaching resources and activities are fundamental for them.

**Table 2.** High-frequency descriptors about student characteristics and learning strategies

| Teacher Key Responsibilities | Frequency |
|---|---|
| 1. Applying a comprehensive evaluation to know about individual characteristics of earning style and social context | 8 |
| 2. Different resources should be used according to the manner of learning. | 4 |
| 3. Creating activities according to the physiological characteristics of the students | 3 |

**Criterion 3. Integral Student Development**

This criterion is understood from the content of interviews and observations of teachers as follows: inquire about general knowledge about the development stage of the students, in the cognitive, physical, and emotional. It is also associated with teachers being able to generate learning activities appropriate to each stage of the students. Additionally, they must generate respectful relationships with the students, handle conflicts properly in the classroom, and ensure that individual differences are respected. Table 3 highlights a single descriptor with different evidence that hit the highest number mentioned in the study.

**Table 3**. High-frequency descriptors of integral student development

| A Teacher must | Frequency |
|---|---|
| 1. Established in respect, of course, in the classroom, and with each course:<br>• Agreement about the rooms with Students.<br>• Starting the class, remember the rules in the classroom.<br>• Reminding the rules during the class. | 10 |

**Criterion 4. Creating a Learning Environment**

These teachers try to generate a positive learning classroom climate with clear rules. Further, they prepare class plans with time according to the activities to be working. For this reason, it is possible to differentiate three distinctive moments in their classes: starting, developing, and class closing. Each moment in a class is linked with a type of teaching or learning strategy. The descriptors presented in Tables 3 and 4 are remarkably similar, probably because of their connection to creating a learning environment for integral students' development.

**Table 4.** High-frequency descriptors about the learning environment

| An Excellent Teacher is able | Frequency |
|---|---|
| 1. To generate a climate of student respect, tolerance, acceptance, and trust.<br>• Promoting respect with and among the students.<br>• Generating basic rules of communication.<br>• Developing and listening to all the opinions.<br>• Encouraging responsibility in students. | 10 |
| 2. Developing motivational and didactic classes according to the interests of the children. | 7 |
| 3. Finding and adapting the activities to the student's interests and using information technology. | 4 |

**Criterion 5. Students´ learning evaluation process.**

According to the group of teachers, the purpose of the evaluation is to inquire about the student's knowledge, abilities, attitudes, and competencies. The evaluation helps to identify the level reached at different moments of the learning process. For them, the evaluation objective is to generate a feedback process that enriches the learning process or makes decisions to improve the practices. Additionally, excellent teachers are concerned about evaluating knowledge relevant to the subject. Regarding Table 5, it is interesting that the idea of evaluating during each class and the use of different evaluation tools are highly frequent. However, feedback about the weaknesses and strengths of the student learning process is not often used in the classroom.

**Table 5.** High-frequency descriptors used in the evaluation process

| Evaluation Includes | Frequency |
|---|---|
| 1. Evaluate each process using different tools according to the activities. | 6 |
| 2. Provide continuous feedback about students' learning strengths and weaknesses. | 2 |

**Criterion 6. Reflection on the Praxis**

Teachers connect individual reflection about Praxis with the ability to critically analyze their strengths and weaknesses during the teaching process. They must make their practices more effective, or they can improve professionally through a professional update. Further, they indicate the importance of working in collaborative reflection about Praxis with their colleagues. Collaborative teacher work implies attending meetings, participating in group reflection, and participating in school training programs.

When teachers reflect on their practices and can provide information to parents and guardians about the strategies developing in their classes and the objectives that they intend to achieve with their students, however, in the content, the teachers underscore the lack of space and time for collaborative reflection in the school. The participants list activities related to collaborative reflection, as shown in Table 5.

**Table 6.** High-frequency descriptors about reflection on the Praxis

| When a teacher reflects on the Praxis can | Frequency |
|---|---|
| 1. Sharing experiences and spaces for reflection and self-evaluation about the practice. | 6 |
| 2. Teaching for the learning of all students. | 4 |
| 3. Continuous training. | 4 |
| 4. Constantly change the pedagogical task. | 3 |
| 5. Creating plan classes with teachers. | 3 |

**Main divergences**

There are several similarities between the profile extracted from the GTF and the content and practices of the excellent teachers. However, there are relevant divergent points from the teachers' perceptions and practices. Starting with criterion three, students' integral development: Teachers emphasize the importance of involving families in students' learning process more than the GTF, as they communicate continuously in both directions. Teachers of excellence also emphasize the importance of internalizing the effective needs that their students may have.

On the other hand, the GTF indicates to the management of conflicts that the teacher must demonstrate the competencies and capacity to handle them. However, teachers indicate that some conflicts are not resolved for them; in some situations, they follow the school coexistence plan, which delegates the resolution responsibility to inspectors, councilors, and multidisciplinary teams, as well as assigning student mediators from the school. Thus, they indicate that the GTF does not consider this option.

According to the excellent teachers' view, another divergence is present in a positive learning environment criterion: the satisfaction of students´ basic needs as a sine qua non-requirement for learning. They work in public schools with culturally vulnerable groups of students; some of them need breakfast, clothes, or other basic needs. These teachers try to help with these necessities because, in their words, learning is not possible for a starving student. Further, for them, a good teacher ensures the minimum conditions, thus, when the school's infrastructure is not adequate, when the weather is very cold or when the families cannot meet basic conditions. It is the duty or responsibility of the teacher to provide some solution, even in extreme cases where they provide breakfast or wood for the school stove.

The last dissimilar point is for the teachers. It is about promoting dialogue with peers around pedagogical and didactic aspects; they recognize the importance of collaborative reflection. However, they often do not have enough time to dedicate to this task. On this day, the collaboration among teachers is just a conversation in the hallway or at lunchtime, which is insufficient to achieve a true teacher reflection or a collaborative relationship.

## 4.0 Conclusion

The main objective of this study was to compare the Ministry of Education's criteria for good teaching with the perceptions and practices of a group of excellent teachers. The results regarding the convergence and divergence between the prescribed profile and the teachers' perceptions and practices can be synthesized in two large groups.

The convergence criteria are focused on curriculum management and learning evaluation; there are no significant differences between the Ministry profile and excellent teachers' perceptions and practices. Convergences include knowledge about the national curriculum, the crucial aspects of lesson planning, and strategies for teaching and learning (Ávalos, 2006; Hung, 2020). Also, they underscore the importance of considering student characteristics and evaluation for learning. Other authors, such as Ávalos (2006), Bolivar (2010), and Hung (2020)have confirmed that central pedagogical teachers' knowledge includes content, practices, and strategies for student learning. Most of these descriptions were supported by the frequency of topics. However, evaluation feedback during the learning process was less frequent, and the results from the evaluation confirmed that the coherence between activities with the correct evaluation is a challenging point for teachers (Gajardo Ibáñez et al., 2020; Sun, 2022; Tuytens et al., 2020), including excellent teachers.

The divergences are centered on evaluating the learning process, the integral students' development, the learning environment, and the reflection on the Praxis. The findings suggest some discrepancies that should be considered because public school teachers are the principal factor in the results of students. The divergences in the learning environment indicate a weakness in the GTF, which does not consider the school coexistence plan or regulations in public schools (Andrades-Moya et al., 2020; JUNAEB, 2013). Additionally, all public teachers are conscious of students' contexts, characteristics, interests, and social necessities; teachers attach importance to human relationships as a central part of teacher identity (Ávalos et al., 2010); they commit to their students, and they act beyond the curriculum because of their vocation (Mendoza Mardones, 2022).

The theoretical implications of this study include the importance of considering the perceptions and opinions of excellent teachers in different educational policies, which can enrich and complement the guidelines established by the Ministry of Education. From a practical approach, improving important aspects of good teaching, such as being timeless for collaborative work between teachers and taking advantage of how well teachers understand and use coexistence rules for learning environments in schools.

The size and location of the sample limit this study. In addition, all qualitative research may present biases in interpreting the data, which we try to correct by triangulating the data and strengthening the theoretical framework that guides the study. Based on this study, this research can continue to expand the sample to include teachers from different departments, not only the public. Furthermore, other regions of the country should be considered from a broader perspective. An analogous way to expand the sample to other participants with the same role importance can be included, such as students and their families or tutors (Andrades-Moya et al., 2020).

## 5.0 Contributions of Authors

The authors confirm the equal contribution of each part of this work. All authors reviewed and approved the definitive version of this work.


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## 7.0 Conflict of Interests

All authors declare that they have no conflicts of interest.


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# Exploring Key Drivers Influencing Customer Experience: Evidence from Telecom Companies in the Philippines

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**Abstract.** This study explores the impact of brand image, price, and service quality on customer experience in telecom companies within Clark Freeport Zone, Philippines. Using a stratified sample of 125 respondents, the research employs descriptive statistics, weighted average means, and multiple linear regression for data analysis. The study aims to fill a research gap by examining how these factors affect customer experience, offering unique insights specific to this zone. Findings from Spearman's rho correlation and regression analysis show significant positive relationships between brand image, price, service quality, and customer experience. These factors are confirmed as significant predictors, positively influencing customer experience. The results provide valuable insights for telecom companies in Clark Freeport Zone to enhance customer experience strategies and improve customer satisfaction, loyalty, and acquisition. Addressing these aspects can boost brand perception, reduce customer churn, and promote sustainable business growth.

**Keywords:** Brand image; Price; Service quality; Customer experience; Telecom

## 1.0 Introduction

In today's rapidly evolving world, characterized by digitalization and technological advancement, integrating technology with human needs and desires is increasingly evident. Technology has become an undeniable force, transforming every aspect of human existence and driving the creation of our modern world. The introduction of the internet has fundamentally changed how we live, behave, and function, making our lives simpler, more productive, and more interconnected. It has introduced numerous positive changes, from enhancing communication with others to integrating advanced tools such as virtual reality and artificial intelligence (Simplilearn, 2024). Consequently, our needs, expectations, and demands constantly expand, pushing the boundaries of technology and its impact on us.

Internet connectivity has become a cornerstone of modern life, particularly in business, where it is the primary means of communication with customers and partners. Its impact has been transformative, reshaping the operational landscape of various industries. The Internet is a distributed system that connects millions of computers all over the globe by connecting smaller computer networks to one global network. The connection consists of routers mostly connected by copper wires, glass fibers, and radio waves. Due to its redundant network structure, some devices can fail without affecting the overall system. (Babari & Heilscher, 2023).Traditional modes of customer assistance and in-person meetings have given way to digital platforms, virtual collaborations, and remote interactions, all facilitated by seamless connectivity. This digital transformation has revolutionized business operations and significantly raised customer expectations, particularly regarding the overall customer experience.

Iyob (2023) emphasizes that technology has empowered customers significantly. Providing an exceptional customer experience is now essential for business success. With access to various options and information, customers expect seamless, efficient, and cost-effective company interactions. Technology and internet connectivity have reshaped customer experience (CX) across industries, transforming it from a static, one-size-fits-all interaction into a dynamic, personalized journey. This digital revolution, fueled by the explosion of e-commerce, online services, and social media, has made a strong online presence essential. Customer experience now encompasses every touchpoint a customer has with a brand, from pre-purchase browsing to after-sales support. As a result, companies excelling at customer experience gain a competitive edge and see tangible financial rewards (Tyrväinen et al., 2020).

Customer experience has emerged as a critical differentiator for businesses across industries. It encompasses every customer interaction with a company, from the first contact to post-purchase support. It has become a key battleground for attracting and retaining customers. Customer experience, defined as customers' internal and subjective response to interactions, whether direct or indirect, within a company, is crucial in determining a company's performance in today's dynamic market, particularly in the telecommunications industry. It influences customer satisfaction, loyalty, and revenue growth (Tyrväinen et al., 2020).

As defined by Chai and Lazar (2023), exchanging information via electronic methods over long distances is called telecommunications or telecom. This includes all forms of voice, data, and video transmission. This general phrase covers a broad spectrum of communications infrastructures and information-transmitting technologies. Wired phones, mobile phones, satellites, microwave communications, fiber optics, radio and television broadcasts, the internet, and telegraphs are a few examples. The telecommunications industry is a bustling ecosystem where cutting-edge technologies and infrastructures converge to keep the world connected (Grijpink et al.,2020). From deploying 5G networks to expanding broadband services, every telecom project is a strategic endeavor that demands meticulous planning and execution (Badawy et al.,2023).

In the Philippines, the total revenue from telecom and pay TV services reached $8.2 billion in 2022, per the Philippines Telecom Operators Country Intelligence Report (2023). This revenue is expected to grow at a compound annual growth rate (CAGR) of over 2% between 2022 and 2027, driven mainly by fixed broadband and mobile data services. The government's commitment to improving broadband connectivity in underserved areas will also contribute to this growth. Traditionally dominated by PLDT Inc. and Globe Telecom, which offer a wide range of services such as fixed-line networks, fixed broadband, and mobile services, the entry of new players like Dito Telecommunity and the expansion of Converge ICT is expected to intensify competition. Telecom companies focus on rebranding efforts, affordability, and improving service quality to stand out (Global Data, 2023).

The Philippines' telecommunication sector is crucial in transforming how customers connect with advanced technology. With the advent of 5G technology and innovative telecommunications services, customers are experiencing a new level of connectivity, reshaping how they interact with businesses and the world around them. As smartphones, social media, and digital platforms grow, customer expectations rise. The intensifying competition and evolving customer expectations create a sense of uncertainty and pressure for telco companies. Consequently, there is a growing need for these companies to redefine their business and operating models to remain competitive and meet market demands (Manrique, 2023).

Clark Freeport Zone is quickly becoming a hub for investment in the telecommunications industry in the Philippines. Its location and government support make it an attractive area for these companies to grow. Many local and foreign investors are interested in Clark because of its growing market and business-friendly environment. In this dynamic environment, characterized by many industries and companies, telecom companies in Clark are intensifying their efforts to enhance customer experience and profoundly influence the overall customer journey. This strategic focus aims to secure a significant market share and drive revenue growth (Inquirer, 2023).

Several studies have highlighted the impact of various factors on customer experience, with brand image, price, and service quality emerging as key influencers. Crandell (2024) suggests a strong brand image can significantly raise customer expectations. It is essential to consider a wide range of factors when defining "experience," including the customer experience within the overall brand experience. A well-established brand represents dependability and trust, encompassing a business's image, brand identity, and consumer perceptions. A positive brand image, developed through social responsibility, innovative products, and effective communication, can stimulate customer preference and loyalty (Qualtrics AU, 2023). Research by Kuswati et al. (2021) and Mukminin & Latifah (2020) indicates that brand image significantly influences brand loyalty. A positive brand image increases consumer belief in a brand, enhancing brand loyalty. Consumers with a positive brand image are likelier to purchase and exhibit brand loyalty. Companies find attracting and retaining customers challenging without a strong and positive brand image (Riyanto & Nasir, 2023). A study conducted by Dam and Dam (2021) in the service industry reveals that the relationship between service quality, brand image, and customer satisfaction positively influences customer loyalty.

Price remains a crucial factor for many customers, with telecom companies offering a variety of plans and packages to cater to different needs and budgets (Cspo, 2024). Balancing affordability with perceived value is critical. Competitive pricing strategies can attract customers, but excessively low prices may raise concerns about service quality. Contrary to popular belief, customers are not always focused on finding the lowest price. Many are willing to pay a premium for a better customer experience (Fauziyah & Tjahjaningsih, 2021). Price perception, or how customers perceive prices as high, low, or reasonable, strongly influences purchase intentions and satisfaction (Losung et al., 2022). According to Witama and Keni (2019), the relationship between brand image, perceived price, and service quality significantly impacts customer satisfaction. Consumers compare prices with the value or benefits they expect to receive, indicating that price perception is a crucial factor that must be managed systematically (Frydom et al., 2020).

Service quality is crucial in companies' building long-term consumer relationships and attracting new customers. Companies must ensure easy access to product information, exchange policies, and spare parts. Customer satisfaction often stems from service quality meeting or exceeding expectations. High service quality reduces the likelihood of customers switching to other services (Tjahjaningsih et al., 2020). Zahari, Mahmood, and Benjamin (2019) found that in Kuala Terengganu, the price and service quality telecommunication companies offer significantly impact customer experience. Additionally, their research revealed that price is the most critical factor for consumers when choosing cellular mobile services from these companies.

The relationship between brand image, price, and service quality and their influence on customer experience within the telecommunications sector in the Philippines, particularly in the Clark Freeport Zone, remains largely unexplored in existing literature. This study fills this research gap by investigating how these factors influence customer experience. Focusing on this zone uncovers unique insights that may differ from other areas and industries. Specifically, the researcher will address the following hypotheses:

H1. Brand Image significantly and positively influences the customer experience.
H2. Price significantly and positively influences the customer experience.
H3. Service Quality significantly and positively influences customer experience.

The results of this research provide telecom companies operating in Clark with valuable information to enhance their customer experience strategies, leading to improved customer satisfaction, loyalty, and acquisition. Addressing these aspects enhances brand perception and reputation, reduces customer churn, and fosters sustainable business growth.

## 2.0 Methodology

### 2.1 Research Design

This paper employed a quantitative research design, specifically a combination of descriptive and predictive methodologies, to address the problem statement and hypothesis. Descriptive research aims to determine the characteristics of a population or phenomenon, allowing researchers to identify patterns and provide a comprehensive understanding of the subject without explaining causality. It is exploratory and can be conducted through surveys, observational studies, and case studies (Dovetail, 2023). This method is valuable for generating hypotheses and theories for further investigation.

As Wollman (2023) described, predictive research focuses on forecasting potential outcomes, repercussions, costs, or effects. It goes beyond studying current events or existing phenomena, aiming to extrapolate and project the implications of novel ideas, untested approaches, or unprecedented proposals. Predictive research is essential for identifying key indicators influencing brand image, price, and service quality and predicting their impact on customer experience. This approach enables telecom companies to anticipate consumer preferences, tailor strategies, and enhance customer interactions. Additionally, predictive research helps preemptively address potential issues, mitigate risks, and capitalize on opportunities, fostering long-term customer loyalty, acquisition, and sustainable growth.

**2.2 Research Participants**

This study was conducted in the Clark Freeport Zone, Philippines, recognized as a central hub for growth and the primary catalyst for Pampanga's rapid development. Clark is considered one of the fastest-progressing provinces in Luzon, outside of Metro Manila. According to the latest data from the Clark Development Corporation, as of December 31, 2023, there were 1,187 registered locators across various industries.

A sample size of 119 participants was determined using Multiple Linear Regression, with the minimum required sample size calculated using G*Power software, but was able to gather 125 respondents. The researcher employed a stratified sampling technique to ensure accuracy, reduce bias, and gain a comprehensive understanding of the subgroups, particularly given that respondents came from various industries within the zone. The study's participants included small, medium, and large enterprises that subscribe to major telecom providers in the area, such as PLDT/Smart, Globe, Dito, and Converge. Respondents were Managers, IT professionals, and individuals in C-suite positions who rely heavily on connectivity and telecommunication services for their operations. The researcher selected these individuals because of their extensive experience and knowledge in the field, which is expected to provide valuable insights.

**2.3 Research Instrument**

The study employed survey questionnaires as the primary research instrument. The demographic section includes questions about the respondent’s industry, organization size, current internet service provider, subscription plan, and speed plan. A modified instrument measured three independent variables (brand image, price, and service quality) and one dependent variable (customer experience). The constructs for brand image, price, and service quality were adapted from Nazelina et al. (2020), while the construct for customer experience was adapted from Zaid and Patwayati (2021). A pilot test was conducted with 30 respondents to assess the consistency of the modified instrument. The reliability results for the constructs were as follows: Brand Image (0.916), Price (0.910), and Service Quality (0.921). These values indicate excellent reliability, confirming the consistency of the constructs.

**2.4 Data Gathering Procedure and Analysis**

The participants received an orientation about the study, conducted either in person, via email, or over the phone. This step ensured that participants understood the purpose of the study and their role in it. Informed consent was obtained, ensuring that participants were fully aware of their rights and the study's nature before completing the survey. The consent form included detailed information about the study's purpose, procedures, potential risks, and benefits.

The survey was administered through a secure online data collection platform. Consent forms and questionnaires were distributed via Google Forms, and all data were recorded using Google Forms or a similar tool. Participants were assured of the confidentiality of their responses and the protection of their privacy. The online data collection platform was secured, with only the researcher accessing the data. Participants were informed that they could withdraw from the study without negative consequences, ensuring a safe and respectful environment for both participants and the researcher.

The research analysis was conducted using JAMOVI 7.0 software. Descriptive statistics were employed to examine the frequency distribution of the demographic profile. For the variables of brand image, price, service quality, and customer experience, the average weighted mean was calculated to understand their central tendencies comprehensively. Multiple Linear Regression was utilized to validate the relationships between brand image, price, service quality, and their combined influence on customer experience. The normality test used the Shapiro-Wilk test to determine if a sample comes from a Gaussian distribution. To check the correlation of the constructs to customer experience, the researcher used the Spearman rank-order correlation.

### 2.5 Ethical Considerations

Approval from the HAU-Institutional Review Board (HAU-IRB) was sought before data collection. The HAU-IRB reviewed the study to ensure it met ethical standards and protected participant rights and welfare. Data gathering was only conducted upon HAU-IRB approval, ensuring adherence to the highest ethical and professional behavior standards.

Informed consent was obtained from all participants before data collection. The consent form included detailed information about the study's purpose, procedures, potential risks, and benefits. Participants were informed of their right to refuse participation or withdraw at any time without any consequences. Any potential conflicts of interest, including sponsorship or funding sources, were disclosed to ensure objectivity and integrity throughout the study. Participation was voluntary, and no benefits, gifts, or monetary compensation were offered.

The study acknowledged potential stress from survey questions regarding customer dissatisfaction. To minimize this, participants were thoroughly informed about the nature of the questions and their right to withdraw from the study without penalty. The potential benefits of the study significantly outweighed the minimal risks, as participants had the opportunity to share their experiences and concerns, which could lead to improvements in customer service practices within the telecommunications industry.

All collected data were treated with strict confidentiality. By Republic Act 10173, or the Data Privacy Act of 2012, including its implementing rules and regulations, all personal information was securely stored and accessible only to the researcher. Identifiable data were anonymized to protect participant privacy.

A declaration of interest was submitted to acknowledge any potential conflict due to the researcher's current employment in a telecommunications company. This research was conducted independently and did not receive any form of sponsorship or external funding. The design, execution, analysis, and reporting of this research were solely the researcher's work. All findings and interpretations are the researcher's responsibility and are free from external influence.

## 3.0 Results and Discussion

### 3.1 Profile of Respondents

Table 1 reflects the distribution of respondents' organization by industry type as follows: 4.0% from the aviation sector, 25.6% engaged in commercial activities, 4.0% as developers, 13.6% from the ICT sector, including BPOs, POGOs, and contact centers, 12.0% from the industrial sector, 4.0% from institutional organizations, 3.2% in logistics, 24.8% in services, 7.2% in tourism, and 1.6% from the utility sector.

**Table 1.** Distribution of participants by industry type

| Industry Type | Frequency | Percentage |
|---|---|---|
| Aviation Related | 5 | 4.00 % |
| Commercial | 32 | 25.6 % |
| Developer | 5 | 4.00 % |
| ICT (BPOs, POGOs, Contact Centers) | 17 | 13.6 % |
| Industrial | 15 | 12.0 % |
| Institutional | 5 | 4.00 % |
| Logistics | 4 | 3.20 % |
| Services | 31 | 24.8 % |
| Tourism | 9 | 7.20 % |
| Utility | 2 | 1.60 % |

Table 2 displays the analysis of the respondents' organizations by employee size, revealing the following distribution: 48.8% of respondents were from organizations with 1-100 employees, 37.6% were from organizations with 101-1000 employees, and 13.6% were from organizations with more than 1000 employees.

**Table 2.** Distribution of company by employee size

| Employee Size | Frequency | Percentage |
|---|---|---|
| 1-100 employees | 61 | 48.8 % |
| 101-1000 employees | 47 | 37.6 % |
| More than 1000 employees | 17 | 13.6 % |

The distribution of respondents based on their current internet service providers revealed several trends (see Table 3).

**Table 3.** Distribution of participants' current Internet service provider

| Internet Service Provider | Frequency | Percentage |
|---|---|---|
| Converge | 18 | 14.4 % |
| Converge, Dito Telecommunity | 2 | 1.6 % |
| Converge, Others | 1 | 0.8 % |
| Globe | 2 | 1.6 % |
| Globe, Converge | 4 | 3.2 % |
| Others | 2 | 1.6 % |
| PLDT/SMART | 31 | 24.8 % |
| PLDT/SMART, Converge | 30 | 24.0 % |
| PLDT/SMART, Converge, Dito Telecommunity | 1 | 0.8 % |
| PLDT/SMART, Converge, Others | 7 | 5.6 % |
| PLDT/SMART, Globe | 4 | 9.6 % |
| PLDT/SMART, Globe, Converge | 12 | 0.8 % |
| PLDT/SMART, Globe, Converge, Dito Telecommunity | 1 | 2.4 % |
| PLDT/SMART, Globe, Converge, Others | 3 | 0.8 % |
| PLDT/SMART, Globe, Dito Telecommunity | 1 | 0.8 % |
| PLDT/SMART, Globe, Others | 1 | 4.0 % |
| PLDT/SMART, Others | 5 | 9.6 % |

For the frequencies in the subscription plan, as displayed in Table 4, results indicate that 48.0% of respondents utilize both fixed and wireless internet services, while 40.8% use fixed internet services exclusively. Additionally, 11.2% of respondents rely solely on wireless internet services.

**Table 4.** Distribution of participants' subscription plan

| Subscription Plan | Frequency | Percentage |
|---|---|---|
| Both | 60 | 48.0 % |
| Fixed | 51 | 40.8 % |
| Wireless | 14 | 11.2 % |

Table 5 reflects the analysis of internet speed plans among respondents and shows a varied preference for different bandwidths. The 201-500 Mbps speed plan emerged as the most popular, with 44 respondents (35.2%) opting for this range. Following closely, 22 respondents (17.6%) selected 501-1,000 Mbps plans. Meanwhile, 18 respondents (14.4%) reported using speed plans of 51-200 Mbps, and 17 (13.6%) chose plans ranging from 26-50 Mbps. The least common option was the 10-25 Mbps plan, reported by 11 respondents (8.8%). Additionally, 13 respondents (10.4%) indicated they have plans offering more than 1,000 Mbps.

**Table 5.** Distribution of participants' plan speed

| Subscription Plan | Frequency | Percentage |
|---|---|---|
| 10-25 Mbps | 11 | 8.8 % |
| 201-500 Mbps | 44 | 35.2 % |
| 26-50 Mbps | 17 | 13.6 % |
| 501-1,000 Mbps | 22 | 17.6 % |
| 51-200 Mbps | 18 | 14.4 % |
| More than 1,000 Mbps | 13 | 10.4 % |

### 3.2 Customers' Perception of Brand Image, Price, Service Quality, and Experience

Mean ratings and standard deviations were computed for each construct to assess the respondents' perceptions of brand image, price, service quality, and customer experience in the telecommunications sector in Clark Freeport Zone, Pampanga.

*Brand Image*

Table 6 demonstrates a strong positive perception of the brand across several dimensions. Respondents strongly agree that the brand is trustworthy and reliable (mean = 3.76, SD = 0.447), consistent across touchpoints (mean = 3.64, SD = 0.498), and committed to CSR and sustainability (mean = 3.61, SD = 0.537). Loyalty and willingness to recommend the brand are also strongly affirmed (mean = 3.60, SD = 0.554). The brand perception is highly positive, with an overall mean score of 3.65 and a low standard deviation of 0.415, indicating strong agreement and uniformity among respondents.

**Table 6.** Descriptive statistics of respondents' level of assessment on brand image

| Indicator | Mean | SD | Interpretation |
|---|---|---|---|
| 1. Perceived Brand Trust and Reliability (Brand Personality) | 3.76 | 0.447 | Strongly Agree |
| 2. Brand Consistency across different touchpoints (Brand Identity) | 3.64 | 0.498 | Strongly Agree |
| 3. Commitment to Corporate Social Responsibility (CSR) And Sustainability (Brand association) | 3.61 | 0.537 | Strongly Agree |
| 4. Loyalty and can recommend to others (Brand Attitude and Behavior) | 3.60 | 0.554 | Strongly Agree |
| **Overall** | **3.65** | **0.415** | **Strongly Agree** |

***Legend:*** *Strongly Disagree (1.00-1.49); Disagree (1.50-2.49); Agree (2.50-3.49); and Strongly Agree (3.50-4.00)*

*Price*

In terms of Price, the results (see Table 7) indicate strong positive perceptions regarding various pricing aspects of the product/service. Respondents strongly agree that the product/service offers good value for money (mean = 3.54, SD = 0.561) and that pricing transparency of plans and fees is high (mean = 3.50, SD = 0.604). Rather than strongly agree, they agree on the fairness of pricing compared to other telecommunications providers (mean = 3.45, SD = 0.665) and feedback on price changes, promos, and discounts (mean = 3.36, SD = 0.653), indicating some variability in perceptions. Satisfaction with the billing experience and payment options is strong (mean = 3.56, SD = 0.614). Respondents generally agreed with pricing aspects, with an overall mean score of 3.48 and a standard deviation of 0.497, reflecting a generally positive perception with slight variability.

**Table 7.** Descriptive statistics of respondents' level of assessment on price

| Indicator | Mean | SD | Interpretation |
|---|---|---|---|
| 1. Value for money of the product/service against | 3.54 | 0.561 | Strongly Agree |
| 2. Pricing transparency of plans and fees | 3.50 | 0.604 | Strongly Agree |
| 3. Perceive Fairness of Pricing compared to other telco providers | 3.45 | 0.665 | Agree |
| 4. Feedback on Price Changes, Promos, and Discounts | 3.36 | 0.653 | Agree |
| 5. Satisfaction on the Billing Experience and Payment Options | 3.56 | 0.614 | Strongly Agree |
| **Overall** | **3.48** | **0.497** | **Agree** |

*Service Quality*

Table 8 shows service quality's strong positive perceptions across various dimensions. Respondents strongly agree on service accessibility and network reliability (mean = 3.56, SD = 0.588), response time for technical support and after-sales concerns (mean = 3.50, SD = 0.667), and communication about service interruptions and maintenance advisories (mean = 3.54, SD = 0.602). They also agree on data speed and performance (mean = 3.44, SD = 0.601) and overall service quality assessment (mean = 3.53, SD = 0.547). Overall, the results indicate a highly positive perception of service quality, with an overall mean score of 3.51 and a standard deviation of 0.491, reflecting strong agreement among respondents.

**Table 8.** Descriptive statistics of respondents' level of assessment on service quality

| Indicator | Mean | SD | Interpretation |
|---|---|---|---|
| 1. Service Accessibility and Network Reliability | 3.56 | 0.588 | Strongly Agree |
| 2. Data Speed and Performance | 3.44 | 0.601 | Agree |
| 3. Response Time for Technical Support and After-sales concern | 3.50 | 0.667 | Strongly Agree |
| 4. Service Interruption Communication/ Maintenance Advisory | 3.54 | 0.602 | Strongly Agree |
| 5. Service Quality-Overall Assessment | 3.53 | 0.547 | Strongly Agree |
| **Overall** | **3.51** | **0.491** | **Strongly Agree** |

*Customer Experience*
Table 9 indicates a high positive across several key aspects. Respondents have a highly positive perception of their experiences, strongly agreeing with statements about employees' interaction, courtesy, and helpfulness (mean: 3.69, SD: 0.515), aftersales support (mean: 3.58, SD: 0.557), product/service performance (mean: 3.53, SD: 0.517), overall customer journey (mean: 3.52, SD: 0.517), and total customer experience (mean: 3.56, SD: 0.444). Although respondents agree that they receive good value for money (mean: 3.46, SD: 0.589), this aspect shows slightly lower satisfaction and higher response variation than other factors.

**Table 9.** Descriptive statistics of respondents' level of assessment on experience

| Indicator | Mean | SD | Interpretation |
|---|---|---|---|
| 1. Employees' interaction, courtesy, and helpfulness | 3.69 | 0.515 | Strongly Agree |
| 2. Aftersales Support (Technical Support and Billing Experience) | 3.58 | 0.557 | Strongly Agree |
| 3. Product/ Service Performance | 3.53 | 0.517 | Strongly Agree |
| 4. Value for Money | 3.46 | 0.589 | Agree |
| 5. Overall Customer Journey | 3.52 | 0.517 | Strongly Agree |
| **Overall** | **3.56** | **0.444** | **Strongly Agree** |

### 3.3 Normality Test
The Shapiro-Wilk test results in Table 10 indicate that the distributions for Brand Image, Pricing, Service Quality, and Customer Experience significantly deviate from normality. For Brand Image, with a mean of 3.65 and a standard deviation of 0.415, the test yielded W = 0.801 and p < .001, signifying a non-normal distribution. Pricing, having a mean of 3.48 and a standard deviation of 0.497, also displayed non-normality with W = 0.883 and p < .001. Similarly, Service Quality, which has a mean of 3.51 and a standard deviation of 0.491, produced W = 0.87 and p < .001, indicating a lack of normal distribution. Lastly, Customer Experience, with a mean of 3.56 and a standard deviation of 0.444, showed W = 0.852 and p < .001, confirming that this data set does not follow a normal distribution.

**Table 10.** Normality test results (Shapiro-Wilk test)

| | | | Shapiro-Wilk | |
|---|---|---|---|---|
| | **Mean** | **SD** | **W** | **p** |
| Brand Image | 3.65 | 0.415 | 0.801 | < .001 |
| Price | 3.48 | 0.497 | 0.883 | < .001 |
| Service Quality | 3.51 | 0.491 | 0.87 | < .001 |
| Customer Experience | 3.56 | 0.444 | 0.852 | < .001 |

### 3.4 Relationship Between Variables
***Correlation Analysis***
Table 11 shows Spearman's rho correlation results, which indicate a significant positive relationship between Brand Image, Pricing, Service Quality, and Customer Experience.

**Table 11.** Correlation analysis result (spearman's rho correlation result)

| | | Spearman's rho | p-value | Interpretation |
|---|---|---|---|---|
| H1 | Brand Image to Customer Experience | 0.664 | < .001 | Positive Significant |
| H2 | Pricing to Customer Experience | 0.683 | < .001 | Positive Significant |
| H3 | Service Quality to Customer Experience | 0.716 | < .001 | Positive Significant |

The correlation between Brand Image and Customer Experience is 0.664 with a p-value of < .001, indicating a strong and significant positive relationship. This suggests that as the perception of Brand Image improves, Customer Experience also tends to improve. Customers who perceive a telecom company's brand favorably are more likely to report a positive overall experience. This underscores the importance of robust brand management strategies within telecom companies. Brand image is intrinsically linked to consumer attitudes, encompassing beliefs and preferences towards a brand. Consumers with a positive image of a brand are more inclined to make purchases and exhibit brand loyalty. Conversely, without a strong and positive brand image, it is exceedingly difficult for companies to attract new customers and retain existing ones (Riyanto & Nasir, 2023).

The result also shows a correlation of 0.683 between Price and Customer Experience with a p-value of < .001, indicating a significant positive relationship, meaning that a favorable price is associated with better Customer Experience. Competitive and transparent pricing structures contribute positively to customer satisfaction, indicating that customers value fair pricing and consider it a critical component of their overall experience. Nurzana and Bustami (2022) define pricing as the value or sum customers must trade for an offer. Factors such as sales or market share, image improvement, customer satisfaction, competitive effort, and profit are used to assess price attractiveness. Pricing methods include cost-based, demand-based, competition-based, customer-need-based, and new product pricing. Price is a primary indicator of service quality, and the Price Performance Dimension evaluates attractiveness through the Four Customer Definitions of the Price Value approach: cheap cost, quality gained for the price paid, all that is sought from the service, and everything obtained compared to what is offered (Zhafirah et al., 2021).

Finally, it presents the strongest correlation of 0.716 between Service Quality and Customer Experience, with a p-value of < .001, confirming a significant positive relationship. This implies that higher Service Quality is strongly linked to enhanced Customer Experience. This suggests that the reliability, responsiveness, and quality of telecom services are paramount in determining customer satisfaction. Enhancing service quality can significantly improve customer experience, making it a crucial focus area for telecom companies. According to Tjahjaningsih and Maskur (2020), service quality can lead to customer satisfaction when perceived service quality meets or exceeds expectations. High-quality service reduces customer churn and fosters loyalty. Their research supports that service quality positively affects customer satisfaction, highlighting its critical role in the telecom industry.

***Linear Regression Analysis***

The multiple linear regression analysis demonstrates that Brand Image, Pricing, and Service Quality significantly influence Customer Experience (see Table 12).

**Table 12.** Model Coefficients – Customer Experience

| Predictor | Estimate | SE | p | $R^2$ |
|---|---|---|---|---|
| Intercept (Customer Experience) | 0.509 | 0.2253 | 0.026 | 0.628 |
| Brand Image | 0.284 | 0.0836 | < .001 | |
| Price | 0.214 | 0.0745 | 0.005 | |
| Service Quality | 0.360 | 0.0707 | < .001 | |

The intercept is 0.509 ($p = 0.026$), representing the baseline level of Customer Experience. Brand Image shows a positive effect with an estimate of 0.284 ($p < 0.001$), indicating that an increase in Brand Image is associated with a 0.284 increase in Customer Experience. Similarly, pricing has a positive impact, with an estimated value of 0.214 ($p = 0.005$), meaning that better pricing leads to a 0.214 improvement in customer experience. Service Quality has the most substantial effect, with an estimate of 0.360 ($p < 0.001$), suggesting that enhanced Service Quality results in a 0.360 increase in Customer Experience. Linear Regression formula: Customer Experience (0.509) = Brand Image (0.284) + Pricing (0.214) + Service Quality (0.360).

These regression coefficients demonstrate that Brand Image, Pricing, and Service Quality positively relate to Customer Experience. The $R^2$ value of 0.628 indicates that these three factors can explain 63% of the variability in Customer Experience. The remaining 37% of the variability is attributable to other factors not included in this study. This underscores the significant role that Brand Image, Pricing, and Service Quality play in shaping Customer Experience while also suggesting that future research should explore additional variables that may influence Customer Experience.

## 4.0 Conclusion

This study holds significant value for stakeholders, decision-makers, product developers, and marketing personnel across various industries, including SMEs, large enterprises, and local government units (LGUs). It provides critical insights for crafting targeted marketing campaigns, refining product features, and enhancing service offerings to align with customer preferences and needs. These insights can help attract new clients and retain the loyalty of existing ones, as well as prioritize areas for improvement, improve service quality, and effectively address customer pain points. For lawmakers and regulatory bodies such as the Department of Information and Communications Technology (DICT), the National Telecommunications Commission (NTC), and Congress, the study's findings can inform well-founded policy decisions and regulations that promote fair competition and protect consumer rights. These insights are particularly useful in shaping policies that impact the telecommunications sector.

Researchers and academic institutions can also benefit from the study, as it adds valuable insights to the existing knowledge base and stimulates further research and academic discourse in the field. The study highlights the determinants of customer experience in the telecommunications industry, specifically focusing on the roles of brand image, pricing, and service quality. The model's $R^2$ value of 0.628 indicates that these variables explain 63% of the variability in customer experience, underscoring their significance. However, the remaining 37% of variability suggests the influence of additional factors. A key limitation of this study is its exclusion of other potential influencing factors, such as technological advancements, customer support responsiveness, and competitive actions. Future research should incorporate these variables to provide a more comprehensive understanding of customer experience.

Moreover, the study's geographic concentration on the Clark Freeport Zone in Pampanga may restrict the applicability of its findings to other regions or countries. The research was also confined to the leading ISPs in the area, including PLDT/Smart, Globe, Converge, DITO, and other internet service providers. Expanding the research to encompass a broader geographic scope and additional ISPs could provide more generalized insights. By addressing these limitations, future studies can build on this research to offer a more comprehensive view of the factors influencing customer experience in the telecommunications industry.

## 5.0 Contributions of Authors

The researcher, Marie Anne Rose Timbang, played a pivotal role in the conceptualization and design of the study, formulating research questions and hypotheses. She was responsible for the methodology, including data collection methods and research instruments, and led the data collection process. Conducted the data analysis, interpreted the results, and was the primary author of the original draft, including the introduction, literature review, methodology, results, and discussion sections.

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None.

## 7.0 Conflict of Interests

The author declares no conflicts of interest about the publication of this paper.

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# Caught in the Slow Lane: Effects of Unstable Internet Connectivity on Accessing Academic Resources and Collaborative Learning

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**Abstract.** This research examined the effects of unstable internet connectivity on accessing educational resources and collaborative learning among tertiary students. A qualitative methodology, specifically narrative analysis, was employed to capture students' experiences through in-depth interviews. Ten participants were interviewed using open-ended questions. The participants were chosen using a purposive sampling technique based on the predetermined criteria. The study highlighted that students experienced task submission delays due to internet connectivity's erratic nature. They also found accessing online resources to be time-consuming. Furthermore, it was clear that poor internet connection reduced students' enthusiasm and ability to participate, resulting in communication challenges and affecting the promptness of finishing group projects. When the internet connection was strong, students accessed resources more quickly, conducted research more efficiently, and submitted their academic tasks on time. Conversely, poor connectivity led to significant delays and increased stress, negatively impacting their academic performance. This paper demonstrated that the internet is crucial for a more progressive educational landscape, enabling learners to gain more knowledge and improve their skills. It encouraged collaborative efforts between the government and various educational institutions to enhance students' internet access experiences, ensuring they did not fall behind in the global academic landscape.

**Keywords:** Internet connectivity; Educational resources; College students; Higher education.

## 1.0 Introduction

In the 1960s, government researchers used the Internet to share information using large computers. In 1966, Robert Kahn introduced the concept of computer networks for communication, TCP/IP, which stands for Transmission Control Protocol and Internet Protocol. TCP/IP began in the late 1960s with the advent of the ARPANET (Advanced Research Projects Agency Network). Advanced Research Projects Agency (DARPA), ARPANET, aimed to connect diverse computers across research institutions. Researchers like Vinton Cerf and Bob Kahn were tasked with creating a communication protocol robust enough to handle this emerging network. In 1973, Cerf and Kahn initiated work on what would become TCP/IP (Transmission Control Protocol and Internet Protocol). Their goal was ambitious: design a flexible, reliable, and scalable protocol suite. Throughout the 1970s, refinements occurred, culminating in the official specifications for TCP/IP published by DARPA in September 1981. These two RFC (Request for Comments) documents—RFC 791 (Internet Protocol or IP) and RFC 793 (Transmission Control Protocol or TCP)—marked the first public introduction of the finalized TCP/IP framework. Adopting TCP/IP as the standard protocol for ARPANET in 1983 was a pivotal moment—the birth of the global interconnected network we now rely on. Over the decades, TCP/IP has evolved, addressing limitations (such as the transition to IPv6) while remaining the backbone of the internet, enabling seamless communication across continents. The demonstration of ARPANET, the precursor to the Internet, happened in October 1972 at the International Computer Communication Conference, and it coincided with the introduction of email as an early application (Leiner et al., 2022; Andrews, 2019). These developments of the Internet have changed the landscape of communication and information as everything is accessible through various computers and gadgets. However, only some things correspond to equal opportunity as divisions on more substantial internet access exist, specifically the disparities between urban and rural areas. The study was situated in Palimbang, where more substantial internet access is impossible to experience, hampering the students living there. As a result, tertiary students residing in this rural area of the Philippines often find themselves "caught in the slow lane" of the digital highway, facing slower internet speeds, frequent disruptions, and restricted access to online resources and opportunities.

Perez (2023) conducted a study highlighting the academic achievement gap exacerbated by the COVID-19 pandemic, which forced a rapid switch to online learning. The study found that the lack of internet and computer access disproportionately harmed the academic performance of low-income and minority students. In another study, Hossain et al. (2024) analyzed the effects of internet usage on student's academic progress in Bangladesh. They used distinct machine learning (ML) algorithms to predict the students' performance. The study provided valuable insights into how internet usage patterns could be used to predict academic outcomes.

Additionally, a study explored the impacts of digital technologies on students' knowledge, skills, attitudes, and emotions. The study provided a comprehensive overview of how digital technologies reshape the educational landscape and influence student outcomes (Timotheou et al., 2023). Another study also investigated the impact of different Internet uses on students' performance. The study found that increasingly frequent Internet use negatively influences students' academic achievement progression. Notably, higher use of instant messaging applications was linked to girls' poorer mathematics academic performance progression (Akmad, 2024).

According to Crawford's (2021) release article, the changes brought by the Internet to the world are shaping the landscape of work and education. People have become reliant on the Internet, which has become part of their daily routine. During the pandemic, the work-from-home setup has expanded rapidly across the globe, which helps individuals working in the comfort of their homes. However, not all have access to the Internet, as nearly the world's population is divided in half by the lack of Internet access. As a result, they will become even more marginalized as digital technology, the economy, and information rapidly change. The Internet is not merely an entertainment tool, as highlighted during the pandemic when women residing in slums in Manila faced a pronounced digital divide. Despite this divide, they found ways to utilize the Internet by relying on Piso Wi-Fi vending machines. These machines enabled them to stay connected and provided them with a tool for communication, allowing them to fulfill their roles as mothers and enjoy other aspects of life that women are entitled to (Valdez & Javier, 2022).

While studies on Internet connectivity in rural communities have examined topics such as the impact on student learning, the establishment of ICT centers, and the role of the Internet in rural residents' lives, few researchers have investigated the specific experiences through a narrative analysis of the tertiary students on the use of unstable internet connectivity. Understanding the experiences of tertiary students in availing internet connections is crucial, given the shift towards a digital economy where everything is accessible online, including educational resources that could benefit the academic learnings of the students. This study aimed to explore these experiences, providing valuable insights for government authorities to address connectivity issues and diminish the disparity between rural and urban locations. The data obtained from this study would inform policymakers to adopt measures to improve internet connectivity, enabling rural populations to participate actively in the digital world. Furthermore, existing studies often focus on quantitative measures of internet access and adoption rates. However, they must capture the narratives and opportunities that rural students encounter in their daily interactions with the Internet. Therefore, there was a need for qualitative research that delves into the individual stories, perspectives, and motivations of rural college internet users.

This study analyzed the narratives of tertiary students accessing internet connectivity in Palimbang. Specifically, it sought to address the following questions: (1) how does Internet connectivity affect students' academic life in terms of the following? (a) Access to educational resources; (b) Collaborative Learning.

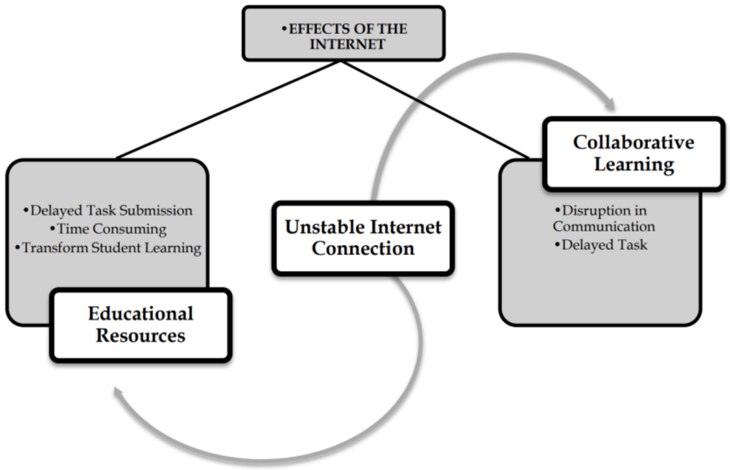


**Figure 1.** Research Framework

## 2.0 Methodology

### 2.1 Research Design

This paper used qualitative inquiry with the use of narrative analysis to vividly understand the complex structure of the experiences; thematic analysis was also utilized to identify recurring patterns and themes of the experiences of the tertiary students to fully grasp the overall interpretation of the data as Creswell (2014) explained that qualitative methodology enables the researcher to fully equip themselves in the exploration of different phenomenon and experiences of the participants involving their in-depth perspectives as outlined by Braun and Clarke (2006).

### 2.2 Research Locale

The study was carried out in Palimbang, Sultan Kudarat, Philippines. The research area included ten (10) tertiary students of Sultan Kudarat State University, the sole state-owned and higher educational institution of Palimbang, with a total land area of approximately 30,000 sq. meters. The university is located in Barangay Poblacion, Palimbang (SKSU Planning Office, 2024).

### 2.3 Research Participants

This research interviewed ten (10) tertiary students of Sultan Kudarat State University – Palimbang Campus, five (5) students from the Bachelor of Elementary Education program, and another five (5) students from the Bachelor of Science in Agribusiness program. The participants were selected based on the following criteria: (a) Students using the Internet as their source of academic information and communication, whether through a laptop or cellular phone, (b) 19-25-year-old bonafide tertiary students of Sultan Kudarat State University, (c) born and raised in the municipality of Palimbang, Sultan Kudarat.

### 2.4 Research Instrument

The primary instruments of this research were the interview guide questions and consent form, both validated and approved by the research ethics committee of Mindanao State University with IERC approval protocol code 079-2024-MSUGSC-IERC. The interview protocol was designed as open-ended questions to grasp the wholeness of the participants' responses. Permission letter was utilized and sent to the director of Sultan Kudarat State University – Palimbang before interviewing the students, pen and paper for note taking the significant statements, a camera for documentation, and an audio/video recorder to record the responses of the participants for the transcription to make sure that the data is accurate.

**2.5 Data Gathering Procedure**
In conducting the study, the researcher employed a structured data collection approach by creating a questionnaire guide. The problem statements were carefully examined to align with the research questions. Each problem statement was then linked to relevant questions, ensuring comprehensive coverage of all research issues. Potential participants were communicated with either in person or virtually, inviting their active engagement in the study. Informed consent forms outlining the study's goals and methods were shared with participants, who willingly signed them.

A formal letter seeking permission for interviews was also prepared, documenting research objectives and ethical considerations as the research ethics committee advised. Participants received individual copies of this letter. The researcher adapted their language and communication style to ensure participants' comfort and understanding. Appropriate regional languages (such as Tagalog) were used during in-depth interviews, and participants responded in the same language. After each interview, the researcher sincerely thanked the participants for their valuable time and contributions.

**2.6 Ethical Considerations**
In qualitative research, adherence to ethical guidelines is crucial, especially given the extended duration of such studies (Arifin, 2018). To ensure ethical considerations, the researcher established transparent communication with participants. They informed participants about the research process, their level of involvement, and access to relevant research areas, fostering trust (Creswell, 2012). Equitable treatment was provided, along with comprehensive information about the research purpose and the use of findings. The researcher avoided misleading questions, treating participants as valuable partners in data collection. Confidentiality and anonymity were prioritized during data processing and report writing. Both favorable outcomes and divergent data were presented, respecting participants' diverse perspectives. After completing the study, the researcher communicated further to validate the findings. Ethical considerations were central to maintaining trust and integrity throughout the research process.

## 3.0 Results and Discussion

**3.1 Effects of the Internet on Tertiary Students**

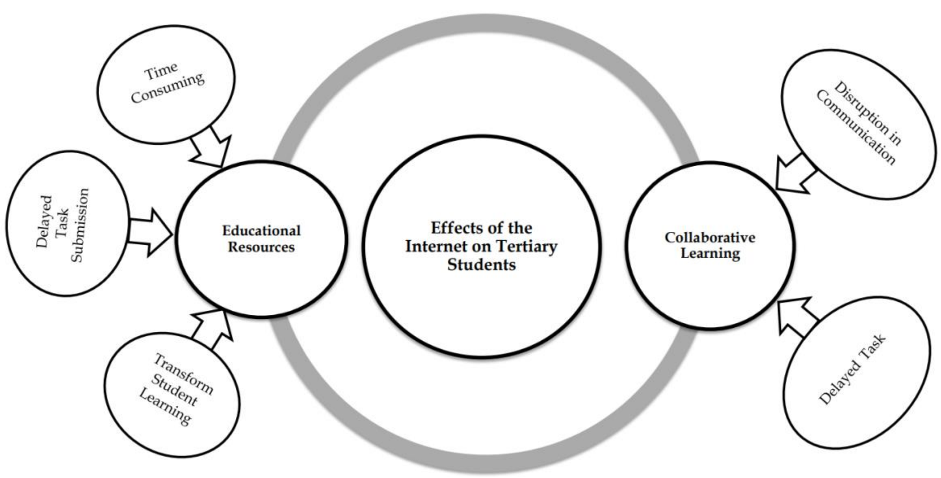


**Figure 2.** Effects of Internet Connectivity

Access to the Internet plays a crucial role in 21st-century education, as it revolves heavily around integrating technology to assess students' academic performance. According to Seward et al. (2019), classrooms, including students, should not operate in isolation from the world but serve as a positive and safe extension of it. Similarly, Jenkins (2009) emphasizes the digital imperative among students to fully realize their overall potential. Hence, students must not be deprived of internet access, as it is essential for integrating them into the ever-evolving realm of information and education. The Internet has significantly impacted tertiary students by revolutionizing access to information, facilitating communication, and transforming learning methods (Poushter, 2016). In Palimbang, the instability of internet connectivity significantly impacts tertiary students in various ways, as highlighted through the narratives gathered. These experiences shed light on the extensive effects of internet connectivity issues on the tertiary students of the municipality. The figure (referenced as Figure 2) illustrates the impact of internet connectivity on tertiary students in Palimbang. The quality of internet connection influences how these students utilize online educational resources and collaborative learning. Based on the responses of the tertiary students, the internet connection in Palimbang had both positive and negative effects on students' access to educational resources. On one hand, it has transformed student learning despite its instability. On the other hand, it delayed task submissions and consumed more time. Regarding collaborative learning, the unreliable internet connection in Palimbang has caused communication disruptions and task delays.

### 3.2 Access to Educational Resources

The results of this study delve into the profound impact of internet connectivity on accessing educational resources, particularly in the context of Palimbang. As the participants highlighted, internet connection quality plays a crucial role in the efficiency of accessing resources and conducting research.

***Time-Consuming***

Based on the narratives shared by the participants when the internet connection was poor, as observed in Palimbang, it significantly prolongs the time required for these tasks due to the sluggish data transmission rates. This sentiment was supported by recent research conducted by Wang and Ang (2020), who found that inadequate internet connectivity hinders educational access and research productivity, particularly in rural areas. According to the participant, this:

*"There was a significant impact on accessing educational resources. For example, when the internet connection was abysmal, accessing resources and conducting research consumed much time because the internet connection was weak. Conversely, when the connection is strong, it is better because it allows easier access to educational resources".* [IDI, P6-BSAB]
*"Sometimes, I just cry because it is already late, and the Internet consumes so much time. I would spend 2 to 3 hours and still be unable to access the Internet".* [IDI, P4-BEED]

The participants pointed out that the inconsistent internet connection in Palimbang obstructs access to the educational resources necessary for their coursework. Due to this unstable connectivity, they spend significant time using the Internet for academic purposes. As emphasized, a strong internet connection alleviates these effects on students and enhances the accessibility of educational resources. This sentiment resonates with findings from a study by Goyal and Singh (2019), which underscored the positive correlation between robust internet connectivity and improved access to educational materials. Therefore, it becomes evident that the stability of internet connectivity plays a pivotal role in facilitating efficient access to educational resources, ultimately influencing the academic productivity and learning outcomes of tertiary students in Palimbang.

***Delayed Tasks Submission***

The participants shared that an unstable internet connection affected their browsing experiences in Palimbang. This poor connectivity has led to delays in submitting their academic-related tasks. A survey conducted in the Philippines found that between 57 and 66 percent of respondents reported that their academic performance was impacted by irregular internet connectivity. Additionally, around a quarter of teachers and students face more severe consequences, encountering this issue daily (Malipot, 2021). A participant shared that:

"*This affects us, like when searching for our sources, Sir. For example, in our research papers, sometimes the slow Internet becomes a disruption, Sir. It becomes a reason why sometimes our submissions get delayed, hampers our communication within our respective groups."* [IDI, P7-BSAB]
*"Due to the feeble signal here in Palimbang, sometimes we cannot submit our tasks, assignments, or projects by their deadlines. Our submissions get delayed because the signal could be more robust on days without signal, so we cannot access the Internet."* [IDI, P5-BEED]

The participants added that the obstacles presented by slow Internet significantly interrupt the search for academic sources, especially during the preparation of research papers. This hindrance holds incredible significance for tertiary students who depend heavily on the Internet, especially considering the world's advancement towards advanced technology. The viewpoint of Wang and Ang (2020) also highlights the negative impact of insufficient internet connectivity on research productivity, leading to delays in submitting the academic work of the students. Other participants also expressed frustration over the sluggish internet connection, highlighting its correlation with Smith's study (2020), which underscores how unreliable internet access could profoundly affect academic productivity, especially for students heavily reliant on online resources. Such connectivity issues may impede progress in school-related tasks, underscoring the significance of reliable Internet for academic success. The participant added:

*"We cannot immediately access educational resources, especially the files we need, because it depends on the data connection in Palimbang. Our submissions, especially our tasks, get delayed because the internet connection in Palimbang could be more robust. Like in our college, we can only submit the necessary tasks given by the professor from time to time, and due to the Internet, the submission of our tasks gets delayed."* [IDI, P3-BEED]

The participants highlighted how a weak internet connection delays the completion of school academic tasks. This suggests a direct correlation between technological infrastructure and educational outcomes, emphasizing the impact of internet connection on college students in rural areas when navigating online learning environments in the presence of unreliable internet connectivity. Moreover, the participants' narrative underscores how these connectivity issues hinder timely access to educational resources. The delay in submitting assignments due to slow Internet affects individual academic progress and impacts collaborative efforts within research teams.

***Transform Student Learning***

Even though there were negative effects of accessing internet connection in Palimbang, participants expressed their sentiments regarding the significance of internet connectivity for their academic pursuits. The students acknowledged the Internet's substantial assistance in accelerating their studies, particularly in research tasks. The participants expressed that:

*"As a college student, this is a big help for me as a self-support in my studies. It helps speed up my studies, especially in research, although it has its opposing advantage because our Internet here could be more vital. Sometimes, I need help with my studies, especially when doing a case study or other urgent school work, so I find it difficult. However, it also has its positive advantage because, as a student, it makes my tasks here at school more manageable and makes the tasks given by the teacher easier."* [IDI, P8-BSAB]

*"The Internet is helpful because it makes life easier for students. You no longer have to go to the library and read books individually. The Internet is just one click away, and now many sites, like AI, make students' work even more straightforward."* [IDI, P1-BEED]

### 3.3 Collaborative Learning

Collaborative learning, particularly online, has been recognized as a significant factor in enhancing academic performance. It involves a joint intellectual effort by students or students and teachers, where they develop their knowledge by interacting. This interaction enables individual students to combine their expertise, experience, and ability to accomplish a mutual learning goal (Han & Ellis, 2021; Signh et al., 2020). In the context of Palimbang, the importance of collaborative learning using stable Internet was more pronounced as tertiary students showed great significance in accessing Internet connection. Education experts in the Philippines have revealed that a decent gadget and a stable internet connection are two of the most important things that all students and teachers should have to engage and rise above the challenges in the country's new distance learning techniques (Domingo, 2020).

***Disruption in Communication***

According to the participants' narratives, one of the effects of internet-based collaborative learning was the interruption in communication caused by unstable internet connections. The lack of a stable internet connection can pose challenges to online learning. Collaborative learning using a stable internet connection is vital in enhancing students' academic performance. It promotes active participation, arouses interest in exploring concepts, and helps overcome geographical barriers, democratizing student access to information and educational content (World Economic Forum, 2019). However, the effectiveness of collaborative learning was highly dependent on the stability of the internet connection, making it an essential factor in the successful implementation of online collaborative learning strategies (Malipot, 2021). It also could make the learning experience isolating and hinder the effectiveness of collaborative activities (Wang, 2021). Therefore, ensuring a stable internet connection was crucial to facilitate effective collaborative learning, especially in areas like Palimbang. As stated by the participants:

*"My communication and interaction with classmates are affected because we are not just in one barangay. My classmates live in areas like Domolol, where there is no signal. They only use Wi-Fi, but it is feeble when they connect to it. So, that is what happens. It feels like a huge burden because it is hard to communicate and collaborate online."* [IDI, P4-BEED]
*"The Internet has both positive and negative aspects, Sir. The positive aspect is that when I collaborate with my group, we share our thoughts and ideas through Internet research. However, sometimes it also has a negative impact because some of my group members rely on me… just because I have an internet connection; they tend to neglect their tasks that should be shared among the group."* [IDI, P8-BSAB]

Through the participants' perspectives, the Internet has revolutionized how they learn and collaborate. It allows for seamless sharing of ideas and resources, making collaborative tasks more efficient. For instance, in group work, students could share their thoughts and findings from their research with their group members, regardless of where they were located. However, due to the inconsistent internet connectivity in Palimbang, most tertiary students needed help collaborating effectively and utilizing the Internet as their primary mode of online communication. It led to less-than-optimal results in their collaborative efforts. If the Internet were stable and reliable, it could be possible. However, in Palimbang, the unstable Internet prevents students from fully engaging in collaborative learning. The only effective collaboration happens face-to-face, as online collaboration outside of school is virtually impossible due to the poor internet connection. In addition, the study by Perez et al. (2024) investigated how students' attitudes and interactions with peers affected their engagement in collaborative and gamified online learning tasks. The findings affirmed that both students' individual attitudes and social interactions played a significant role in encouraging participation in these activities.

Moreover, the research demonstrated that involvement in such activities correlates positively with the emotions students experience about their classes and assessments (Perez et al., 2024). It was profound to state that collaborative learning through Internet access is necessary for students' learning development. Hence, it affirmed the beneficial influence of contemporary technology through using the Internet on collaborative learning (Vali, 2023). As experienced by the tertiary students of Palimbang, it could sometimes lead to an imbalance in group participation. Other participants added that:

*"When the Internet is weak… because the primary source of our information and our means of connecting is through the Internet, so its effect when it's weak… sometimes when we video call or call my other group mates for group projects, if the Internet is weak, our communication gets cut off due to the weak Internet".* [IDI, P10-BSAB]
*"Our communication within my group gets delayed, and sometimes, my other group members would say that I'm not contributing because of the weak internet access; the communication gets delayed due to the Internet."* [IDI, P2-BEED]

The participants expressed the effects of the Internet they faced when their internet connection was weak. They rely on the Internet as their primary source of information and communication, especially for group projects. However, when the internet connection is weak, it disrupts their communication, particularly during video calls, which hampers their collaborative work. It highlights the importance of a stable internet connection for effective online collaboration and learning. It was coherent in the study of Goyal and Singh (2019), which underscores the critical role of seamless internet access in fostering effective communication and collaboration among students. In today's interconnected world, where digital platforms are essential mediums for interaction and cooperation, reliable internet connectivity is indispensable for facilitating meaningful student engagement.

***Delayed Task***
Several participants expressed their struggles with the unstable internet connection in Palimbang. This unreliability hindered them from accomplishing their intended tasks due to difficulties accessing the Internet. As shared by the participants:

*"Sometimes, our plans get delayed… like, for example, during a meeting… we've decided to work on our thesis on a certain day, and sometimes we have to reschedule it to coincide with a good signal."* [IDI, P7-BSAB]
*"Sometimes, I cannot give much attention to my group mates because of the internet connection; it is like I am running out of time for them. When the teacher gives tasks, or something that needs to be searched on the Internet and suddenly the Internet or data dies, we cannot finish what we are doing, and that is the biggest struggle as a group because we start to panic since the Internet is needed for the activities assigned by the teacher."* [IDI, P2-BEED]
*"When the signal is weak, it is a disadvantage because it is weak in the morning, and not all of us have a signal. So what happens is our activities get delayed."* [IDI, P9-BSAB]

The participants described the effects of the Internet on collaborative learning, which they face due to an unstable Internet connection in Palimbang. They mention that their academic plans, such as working on their thesis or completing tasks assigned by their teacher, often must be completed on time. These activities required a stable internet connection for research and collaboration. When the internet connection was weak or suddenly dropped, they could not complete their tasks, leading to panic within the group. It highlights the critical role of a reliable internet connection in facilitating online learning and collaboration. The observed phenomenon corresponds with recent scholarly investigations. One study emphasized the detrimental impacts of sluggish internet connectivity on virtual classes amid the COVID-19 crisis. Another report highlighted the obstacles posed by limited internet availability for students engaged in online education, particularly in Southeast Asia. Moreover, research conducted by a member of the National Research Council of the Philippines underscored that internet accessibility remained a significant hurdle for educators nationwide. These inquiries emphasize the critical role of dependable and widespread internet access in facilitating productive online learning environments and cooperative efforts (The Conversation, 2020; Arayata, 2021).

## 4.0 Conclusion

The study underscores the profound influence of internet connectivity on the educational experiences of tertiary students in Palimbang. Participants consistently narrated that poor internet connectivity significantly hampers their ability to access educational resources efficiently. This inefficiency manifests in prolonged time spent on academic tasks, leading to frustration and emotional distress, as evidenced by the narratives of students who struggle to complete their work on time due to slow internet speeds. Based on the students' experiences, the findings highlighted the detrimental effects of inadequate internet connectivity on educational access and research productivity. These studies collectively emphasize that stable and robust internet connectivity is not merely a convenience but a necessity for modern education, particularly in rural areas like Palimbang. The participants' experiences reveal that the quality of internet connectivity directly impacts their academic productivity and learning outcomes. With a strong internet connection, students can access resources more quickly, conduct research more efficiently, and submit their academic tasks on time. Conversely, poor connectivity leads to significant delays and increased stress, negatively impacting their academic performance. Therefore, the stability of internet connectivity is crucial for facilitating efficient access to educational resources. Improving the internet infrastructure in Palimbang is essential to enhance its tertiary students' academic productivity and learning outcomes. The study underscores the pressing necessity for specific interventions to tackle connectivity challenges students in rural areas face. With this, it is recommended that:

a) The local government unit of Palimbang invests in upgrading the internet infrastructure to ensure stable and high-speed internet connectivity. It could involve collaboration with internet service providers and government agencies to enhance the existing network and;
b) Establish community Wi-Fi hubs in strategic locations such as schools, libraries, and community centers. These hubs can provide students with reliable internet access, especially during peak usage times and;
c) Implement subsidized Internet plans for students and educators to make high-speed Internet more affordable. It can be achieved through partnerships with telecom companies and government subsidies;
d) Conducting digital literacy programs to educate students and teachers on optimizing internet usage and managing online resources efficiently. It can help mitigate the impact of slow internet speeds by teaching effective online research and resource management techniques.

## 5.0 Contributions of Author
The authors conceptualized the outcomes presented in each section of this study equally. This includes everything from the data collection to the analysis of the results.

## 6.0 Funding
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## 7.0 Conflict of Interests
The authors equally developed this paper's concept, ensuring no conflicts of interest from the authors.

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# Exploring the Mediating Role of Internship Experience to the Self-Efficacy and Career Aspirations of Undergraduate Students

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**Abstract.** This research investigated the hypothesized relationships between internship experience, self-efficacy, and career aspirations among undergraduate students in the Philippines. A sample of 100 participants completed an online survey that comprised the Work Experience Questionnaire (WEQ), Generalized Self-Efficacy Scale (GSES), and Career Aspiration Scale (CAS) to measure the research variables. Cross-sectional surveys and purposive sampling were employed to identify the participants. To test the potential mediating role of internship experience, a mediation analysis was conducted using the Hierarchical Multiple Regression Method. The findings revealed a significant positive association between self-efficacy and career aspirations. However, contrary to the initial hypothesis, the analysis did not detect a mediating effect of internship experience. This challenges the prevailing assumption that internships universally enhance the self-efficacy-career aspiration link. The study acknowledges limitations, such as the potential influence of unexplored variables not incorporated into the research design. Despite this, the study explores the interplay between internship experiences, self-efficacy, and career aspirations within the undergraduate population. Future research with a larger sample and a more comprehensive framework incorporating additional potentially mediating factors is warranted for a deeper understanding of this intricate relationship.

**Keywords:** Self-efficacy; Internship experience; Career aspirations; Mediation analysis; Undergraduate students.

## 1.0 Introduction

Internships are a crucial bridge between theoretical education and practical experience for undergraduate students. It allows students to apply their classroom knowledge to real-world scenarios (Bawica, 2021; Sharir et al., 2016) and foster a deeper understanding of their chosen field (Kaşlı & İlban, 2013). It also provides students with invaluable exposure to the realities of the workplace. The literature emphasizes that experiencing real job situations allows students to develop realistic expectations for their future careers (Lam & Ching, 2007). This exposure can be particularly beneficial in adjusting career aspirations to align with the demands and opportunities of the chosen field.

Moreover, research highlights a positive correlation between internship experiences that provide significant insights and students' self-efficacy (Tabbada et al., 2023). Self-efficacy refers to individuals' confidence in their ability to execute tasks and pursue goals (Bhati et al., 2022), influenced by practical experiences, mentorship, and exposure to real-life challenges (Yao & Wu, 2024). High levels of self-efficacy among undergraduate students are associated with more ambitious career aspirations (Njiku et al., 2022), reinforcing the link between self-belief and career goals (Bindu & Padmahan, 2016).

However, while these studies show that internship offers a valuable bridge between education and the professional world, it was also found that some internship experiences can negatively impact student self-efficacy and career aspirations. Potential challenges within the perceived internship experience, such as menial tasks or a lack of mentorship, can create negative learning experiences. These negative experiences can lead to decreased self-efficacy, hindering advancement within the student's chosen career path (Ko, 2007). Some studies also suggest that negative internship experiences can lead to students' uncertainty about their chosen career paths and may even cause some to abandon their fields altogether (Fidgeon, 2010)

To deepen our understanding of these insights, we turn to the Social Cognitive Career Theory (SCCT) proposed by Lent et al. (1994). SCCT is a model of career development that describes how personal inputs, contextual affordances, and social cognitive variables affect the formation of self-efficacy and career aspirations. One of SCCT's strengths lies in its emphasis on self-efficacy. SCCT positions self-efficacy as the driving force behind ambitious career aspirations. By allowing students to apply their knowledge in real-world settings through internships, SCCT suggests a positive impact on student confidence. However, the theory assumes a linear relationship between positive experiences and increased self-efficacy. Negative internship experiences, such as menial tasks, inadequate supervision, or lack of learning opportunities, can create a sense of inadequacy and disillusionment. When students encounter these negative experiences, their confidence in their abilities and chosen career paths can be undermined, potentially leading them to question their suitability for their chosen fields.

Building upon this knowledge base, our study delves into the intricate relationship between Filipino undergraduate students' perceived internship experiences, self-efficacy beliefs, and career aspirations. We aim to achieve this by investigating the impact of self-efficacy on students' career aspirations and assessing the potential mediating role of perceived internship experience to students' self-efficacy and career aspirations.

## 2.0 Methodology

### 2.1 Research Design

Cross-sectional surveys and purposive sampling were employed to identify the participants. To test the potential mediating role of internship experience, a mediation analysis was conducted using the Hierarchical Multiple Regression Method. The findings revealed a significant positive association between self-efficacy and career aspirations.

### 2.2 Research Locale

The study was conducted in the Luzon and Visayas regions of the Philippines. These two regions are the major geographical portion of the Philippines, with Luzon Island being the largest and the Visayas being the center part of the country. The research area included private and public colleges across various provinces and cities within the Luzon and Visayas regions. The colleges vary in specialization and institutional distinctiveness, reflecting the diversity of Higher education in the Philippines.

### 2.3 Research Participants

This study's participants are 100 undergraduate students from different institutions in the Philippines who have completed at least one internship requirement for the school year 2023-2024. Among the respondents, 73% are female, and the greater proportion of courses, accounting for 48%, are in the profession of Health Sciences (e.g., nursing, psychology, and pharmacy). Among the hundred participants, the majority, 82%, hailed from private schools, with the remaining 18% coming from public schools.

### 2.4 Research Instrument

This study utilized three primary questionnaires to gather data on internship experience, self-efficacy, and career aspirations. The instruments include the adapted Work Experience Questionnaire (WEQ), the Generalized Self-Efficacy Scale (GSES), and the Career Aspiration Scale (CAS).

The researchers adapted the Work Experience Questionnaire (WEQ) originally developed by Martin (1997). The 11-item questionnaire was modified to enhance its relevance and applicability to this study and to assess various aspects of the students' perceived internship experiences. The scale demonstrates strong reliability ($\alpha = 0.902$). The questionnaire includes items that measure the quality and relevance of the internship as perceived by the students, as well as the skills and competencies gained.

The Generalized Self-Efficacy Scale (GSES) by Schwarzer and Jerusalem (1995) was used to measure the students' level of self-efficacy. The 10-item GSES, with a reliability score of ($\alpha = 0.935$), was designed to assess a broad and stable sense of personal competence to deal effectively with various stressful situations. In this study, the researchers modified the GSES to focus on domain-specific self-efficacy beliefs related to career development, such as efficacy in job performance, networking, and professional decision-making.

The Career Aspiration Scale (CAS), established by Gregor and O'Brien (2015), was also utilized. The CAS is a self-report questionnaire designed to assess the student's career aspirations, including leadership, achievement, and educational aspirations. With a strong internal consistency of ($\alpha = 0.806$), the scale consists of 24 items, each rated on a Likert scale ranging from 0 (not at all true of me) to 4 (very true of me). For the specific context of this study, the researchers modified items to focus on career aspirations and to ensure that the questionnaire is relevant and applicable to the undergraduate students.

### 2.5 Data Gathering Procedure

An online questionnaire was distributed via Google Forms on Facebook groups, university email lists, and online forums tailored for undergraduate students who completed at least one internship requirement for the school year 2023-2024.

### 2.6 Ethical Considerations

Ethical considerations were applied to ensure the protection and respect of all participants. Informed consent was obtained from each participant, ensuring they were fully aware of the study's nature, purpose, and potential risks. Participants were also informed that their participation was voluntary and that they could withdraw from the study without any repercussions. To maintain confidentiality, no personally identifiable information was collected, and all data was stored securely, accessible only to the researchers. The study also adhered to the principle of non-maleficence by ensuring that the questionnaire avoided sensitive or distressing questions that could cause harm to the participants. By adhering to these ethical considerations, the study aims to maintain the highest standards of integrity and respect for the rights and well-being of all participants.

## 3.0 Results and Discussion

This study hypothesized that self-efficacy influences the career aspirations of undergraduate students and that the perceived internship experience mediates the relationship between their self-efficacy and career aspirations. The result is shown in Table 1.

**Table 1**. Correlation analysis of internship experience, self-efficacy, and career aspiration

| | | **Career Aspirations** | **Self-Efficacy** | **Internship Experience** |
|---|---|---|---|---|
| **Career Aspirations** | Pearson r | - | 0.497** | 0.189 |
| | Sig. (2-tailed) | - | <.001 | 0.059 |
| **Self-Efficacy** | Pearson r | 0.497** | - | 0.171 |
| | Sig. (2-tailed) | <.001 | - | 0.088 |
| **Internship Experience** | Pearson r | 0.189 | 0.171 | - |
| | Sig. (2-tailed) | 0.059 | 0.088 | - |

Note: *p <.05, **p <0.1, ***p <.001

The researchers analyzed three variables based on participant responses to examine their relationships. In Table 2, self-efficacy significantly correlates with career aspiration ($r = .497$, $p = .001$). While internship experience also positively correlates with career aspirations, it is not statistically significant (r = .189, p = .059). Additionally, although self-efficacy positively correlates with internship experience, the correlation is not statistically significant (r = .171, p = .088). These findings suggest that self-efficacy plays a role in influencing career decision-making alongside contextual factors and personal attributes (Winga, 2021) and highlight self-efficacy as a key factor influencing career aspirations (Betz & Hackett, 1981; Gregor et al., 2020). Furthermore, this aligns with Bandura's (1977) theory, which posits that self-efficacy in career contexts relates to an individual's confidence in handling tasks related to their career pursuits.

Moreover, students with high self-efficacy have stronger interest in a particular career area. They are likely to demonstrate the behaviors they aim to exhibit, exert significant effort to achieve their goals, and confidently navigate the workplace, thereby influencing their future career-planning decisions (Betz & Hackett, 1981; Rodinda & Eva, 2023). Conversely, individuals with low self-efficacy may need more confidence in their abilities as they navigate the world of work, potentially impacting their career planning (Rodinda & Eva, 2023). Each student must assess their skills and abilities when determining their career path. Educators are encouraged to develop programs that enhance students' sense of belief, as it significantly influences their career paths. Individuals with lower or moderate self-efficacy may benefit from support, training, and additional development to progress in their careers (Hartman, 2020). These findings build upon prior research highlighting the impact of self-efficacy on career aspirations (Ballout, 2009; Hartman, 2020).

Considering that internships rank among the most influential factors shaping students' career decisions (Richardson, 2008), the relationship between internship experience, career aspirations, and self-efficacy reveals a weak correlation. This suggests that the quality and nature of internship experiences among undergraduate students have a limited impact on altering their career aspirations. Potential contributing factors to these findings stem from the initial gap in expectations (Kusluvan & Kusluvan, 2000) that students encounter at the outset of their internships. Therefore, institutions are advised to carefully plan and communicate structured internship programs to students before they commence their internships (Cheong et al., 2014).

Table 2. Model summary for internship experience

| R | $R^2$ | MSE | F | df1 | df2 | p |
|---|---|---|---|---|---|---|
| 1.1717 | .029 | 0.396 | 2.967 | 1.00 | 98.00 | 0.088 |

The findings presented in Table 2 reveal that self-efficacy accounts for approximately 2.49% of the variance in the internship experience ($R^2$ = .029). The results imply that gaining a positive or negative internship experience does not necessarily lead to an increase or decrease in a student's belief in their ability to succeed in specific situations or tasks. Factors beyond internship experiences, such as personal backgrounds (Ivana, 2019), educational background, upbringing, and individual psychological traits (Lefevre et al., 2010), likely play a more critical role in shaping and developing self-efficacy beliefs. Since internship experiences may not significantly influence self-efficacy, educators can explore and implement alternative strategies that foster students' confidence, resilience, and preparedness for future career pursuits. Therefore, despite participating in internships, individuals may not observe a direct impact on their self-efficacy levels solely based on these experiences. This underscores the importance of considering broader influences on student development and career readiness.

**Table 3.** Direct and indirect effects summary

| Effect Type | Effect | BootSE | BootLLCI | BootULCI | p |
|---|---|---|---|---|---|
| Total Effect of SE on CA | 0.411 | 0.073 | 0.267 | 0.555 | .001 |
| Direct Effect of SE on CA | 0.396 | 0.074 | 0.250 | 0.542 | .001 |
| Indirect Effect (IE) | 0.075 | 0.023 | -0.057 | 0.057 | .088 |
| Completely Standardized IE | 0.018 | 0.023 | -0.057 | 0.057 | .088 |

*Note: SE = Self-Efficacy; CA = Career Aspirations; IE = Internship Experience.

Furthermore, Table 3 presents the second part of the analysis, which examines the variables' direct and indirect effects. The findings reveal a significant direct effect of self-efficacy on career aspirations (.396, p <.001), indicating that higher levels of self-efficacy predict stronger career aspirations among undergraduate students. This suggests that students with elevated confidence and self-esteem are more likely to succeed in pursuing ambitious career goals and effectively implementing them in their workplace (Hamzah et al., 2022). Therefore, it is advised that educators and mentors foster students' self-belief, as this positive reinforcement can significantly impact their overall development and future achievements. Digamon and De La Pena (2022) also highlighted that educators who foster strong relationships with their students tend to show increased engagement and attentiveness to their academic progress.

Research suggests that individual differences among students, such as self-efficacy, intrinsic motivation, and prior experiences, often substantially influence career aspirations than internship experiences alone (Ivana, 2019). Factors like lifestyle preferences and intellectual challenges (Lefevre et al., 2010) also significantly shape students' career decisions besides internships. Therefore, while internships provide valuable opportunities for undergraduates to acquire practical skills and industry insights, their ability to significantly change career aspirations needs to be improved. Students are likely influenced more by their internal characteristics and external circumstances rather than the specific details of their internship experiences when determining their long-term career goals. Thus, educators, mentors, and institutions should consider a holistic career development approach encompassing various influences beyond internships alone.

## 4.0 Conclusion

This study investigated the potential mediating role of internship experiences on the relationship between self-efficacy and career aspirations in undergraduate students, drawing upon Social Cognitive Career Theory (SCCT). While SCCT posits that environmental factors like internships can bolster self-efficacy, ultimately influencing career aspirations, the current research yielded a surprising outcome. The analysis confirmed a significant positive association between self-efficacy and career aspirations, aligning with SCCT principles. However, the hypothesized mediating effect of perceived internship experiences was not supported. This finding presents a critical challenge to the traditional understanding of internship experiences within SCCT. The theory suggests that internships provide students with opportunities to gain performance accomplishments, vicarious experiences, and social persuasion – all of which can contribute to increased self-efficacy. However, the results suggest that, in this specific context, perceived internship experiences alone may not significantly influence career aspirations beyond the direct effect of self-efficacy.

Several explanations for this outcome can be explored. First, the nature of the internship experiences might be a contributing factor. The quality of the internship, the level of responsibility provided, and the industry relevance might have played a role. Internship experiences that lack these elements might not provide the necessary opportunities to enhance self-efficacy. Second, SCCT acknowledges the interplay of multiple factors. Perhaps other environmental factors, such as strong mentorship programs or career exploration activities alongside internships, might be necessary for internships to exert a stronger mediating influence on career aspirations.

Future research informed by SCCT could delve deeper into these possibilities. Investigating specific aspects of internship experiences that contribute most to self-efficacy development would be valuable. Additionally, exploring how internship quality or industry relevance moderates the mediating effect could provide a more nuanced understanding. Ultimately, a more comprehensive approach that considers the combined influence of internship experiences and other environmental factors within the SCCT framework is needed to elucidate their impact on career aspirations fully. By critically examining the limitations of internship experiences in isolation, this study hopes to contribute to a more holistic understanding of career development in undergraduate students. Future research informed by SCCT can build upon these findings to optimize internship programs and maximize their impact on student self-efficacy and career aspirations.

## 5.0 Contributions of Authors

Dioquino - conceptualization, revision, resources; Manaig - discussion, investigation, resources; De Veyra - validation, data analysis, resources; Obida - investigation, discussion, resources; Manaois - theorizing, supervision, and final editing

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# 7.0 Conflict of Interests

The authors declared no potential conflicts of interest concerning this article's research, publication, and authorship.

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# The Heart of Healthcare: Development and Initial Validation of 'Malasakit' Scale in Healthcare Services

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**Abstract.** 'Malasakit' is an innate Filipino identity that manifests through the compassionate actions of healthcare professionals in their patient care, resonating 'Malasakit' throughout our society and culture. This study aims to develop and validate a 'Malasakit' scale by examining the psychometric properties and exploring how 'Malasakit' is perceived and implemented in healthcare settings. A scale of 85 items was given to 130 professionals in various healthcare services. The results of an analysis showed that the initial framework of four factors (Empathy, Care, Compassion, and Concern) was partially confirmed using Exploratory Factorial Analysis. Using the oblique rotation method (Promax) and principal axis factoring estimation, we extracted factors to comprehend variable relationships, ensuring analytical validity. We eliminated 39 of 85 questions with factor loadings below .50. We excluded items with two-factor cross-loadings near .50. Due to persistently low factor loadings below .35, arousal and relax factors were removed. To ensure a stricter scale, all items must share above 0.70 similarities. This strict approach yielded 19 items arranged into two categories. As a key finding, two characteristics emerged: Empathy (Cognitive and Somatic Empathy), found in the literature, and Compassion (Multicultural Competence Care, Reflective Patient-Centered Care, Affective Empathy, and Hospitality), emerging in Filipino health care services. The study found that the scale can assess empathy and care in healthcare services, including factors specific to Filipino healthcare practices.

**Keywords:** Malasakit; Empathy; Compassion; Reflective care; Healthcare services.

## 1.0 Introduction

'Malasakit' is an intangible cultural value that molds today's Filipino consciousness. 'Malasakit' is a word that encapsulates the meaning of stewardship, concern, and compassion, which are part of the Filipino character (Habito, 2016). 'Malasakit' is deeply rooted within Filipinos, and it is most commonly acted upon by caring for their families and communities, which often extends to strangers (Redona, 2018). 'Malasakit' enables Filipinos to express empathy and care for others by instituting a strong sense of connection and affinity in the Philippines. The coronavirus pandemic has highlighted both exemplary and detrimental human behaviors. News reports have featured stories of heroism from medical practitioners on the frontlines of the battle against COVID-19, as well as individuals who initiated community pantries for the poor, inspiring others to contribute (Salles, 2022). In this context, 'malasakit' was defined as a combination of two Filipino words: "malasin" (to look) and "sakit" (pain).

Thus, 'malasakit' means to observe or recognize the physical, emotional, or spiritual pain of others and strive to alleviate it. (Salles, 2022). Furthermore, it continues to influence Filipino identity. This value has been integral to Filipino culture worldwide (Menguin, 2021).

'Malasakit' is seen as a virtue related to compassion. Filipinos are known for being compassionate; this manifests when they side with the 'underdogs' (anybody considered a victim) since they know their situations. Furthermore, given that they are aware of their real-life situations, they presume situations subjectively and are easily affected by the unfortunate circumstances of others (Redona, 2018). With that, being able to side with anybody who is a victim and expressing care and empathy even to strangers, as described in Menguin's definition of 'Malasakit,' amplifies the relation to compassion.

Moreover, it has also been suggested that 'malasakit' is a virtue related to empathy. It is similar to creating a strong sense of community and belonging, as described in Menguin's definition of 'malasakit.' 'Malasakit' has been associated with empathy as its English translation, describing that a person who shows empathy generally takes the perspective of others and is sensitive to their inner perspective (Haslam, 2007). In understanding the concept of empathy in medical practice, according to (James, 2023), establishing an empathic relationship with the patients also leads to fewer disputes (i.e., litigation). It enables healthcare professionals to connect with their patients more humanly. Notably, compassion comes after empathy (James, 2023).

Empathy encompasses the awareness and understanding of other people's feelings. Compassion, on the other hand, is an emotional response to empathy (James, 2023). A pattern is observed as empathy helps people to understand based on shared humanity, potentially leading to compassion wherein an appropriate response beyond feelings is mediated (Jimenez, 2021). In medicine, both are fundamental in building trust and delivering health care; however, it is significant to note that compassion comes after empathy (James, 2023).

In another perspective, 'malasakit' is associated with and often translated as concern for others (Menguin, 2021). Concern is an emotional response of tender feelings toward a distressed other ( Davidov et al., 2013). A healthcare provider must be able to identify their patients' concerns in order to provide comprehensive care (Frank, 2017). Concerns and symptoms are not necessarily linked. However, the lack of identification or failure to pay attention to either will affect physician-patient interaction and care delivery success.

'Malasakit' is also seen caring for others (Redona, 2018). In addition, Redona defines 'malasakit' as the Filipinos' way of saying God cares. The thought of care has a crucial role in the sole identity of healthcare practitioners and is expected to be part of care receivers (Krause et al., 2017). According to Krause, the definition of "care" can be adapted by replacing activity with action, which indicates intentionality and goal-directedness. Overall, 'malasakit' is believed to care for others—you care for them, know that you can help, and act on it (Menguin, 2021).

Lastly, Kagandahang loob is a Filipino value that is described as showing genuine kindness to others (Resurreccion, 2007). In its nature, it has varying definitions depending on an individual's perspective; however, its closest English translation is kindness (Ferrucci, 2006), along with a combination of values such as care, compassion, humility, and patience. Moreover, the study discovered three domains of kagandahang loob, which are 1) 'Malasakit,' 2) Pakikipagkapwa, and 3) Malinis na kalooban. 'Malasakit' here is described as being sensitive to the needs of others and having the initiative to help without doubt. There is also the presence of considering other's sake, being unmindful of self, and being selfless.

To gain a deeper understanding of the concepts of compassion, empathy, and care concerning 'malasakit,' it is essential to explore various theoretical frameworks. These theories will provide a strong foundation and offer a comprehensive perspective on the intricate nuances of these concepts. The first theory is the Emancipatory Theory of Compassion, which states that compassion involves a desire for freedom from suffering by all others that is seen as vital to emancipatory nursing praxis and practice. This theory, which includes patients' and nurses' sufferings, moves beyond a nurse-patient relationship to situate suffering and compassion within communities and populations. In this way, it becomes a framework for a more humane and just healthcare system that considers all stakeholders. (Georges, 2013).

Furthermore, the Theory of Empathy focuses on the role of empathy in nurse-patient interactions. This theory particularly shows that empathy comes not only from acquired behaviors or choosing proper words but also from an inherent emotional sensation that facilitates self-identity and the capability to view others in their own shoes. By doing this, nurses can build a rapport with their patients that surpasses cultural boundaries and provides better care (Alligood & May, 2000).

In addition, the cultural care theory fosters diversity and universality, which has become relevant in nursing. It is considered a valuable theory that can assist nurses in their clinical practice and provide culture-specific and culturally congruent nursing care, ensuring the improvement of client care. It is also mentioned that professional care was predicted to exist in all human cultures. On the other hand, care is the physical and spiritual balance, with help, encouragement, and provision adapting to individual situations that contribute to greater health and well-being (Leininger, 1995).

Filipinos have an exclusive perspective called 'Pantayong Pananaw' or, in other words, an independent discourse that only Filipinos can understand, a "we" perspective. According to this theory, this perspective emphasizes a shared experience and internal logic within the Filipino context, using their concepts and language, such as 'Malasakit' and 'Bayanihan.' Furthermore, this is a method of acknowledging the history and development of the nation based on the "internal connectedness and linking of characteristics, values, knowledge, wisdom, aspirations, practices, behavior, and experiences as a unified whole" (Salazar, 1997).

Along with this is the Kapwa Theory, 'kapwa' is a Filipino term used to describe a sense of shared identity. The Kapwa Theory discusses Filipino social interaction and, specifically, answers how people interact with other people. Furthermore, the theory explores the construct of knowing that within interactions, it is known whether it is between a "*hindi ibang tao*" (one of us) or "*an ibang tao*" (not one of us). Regardless, it is emphasized that one should treat both as a kapwa and with a sense of equality, which originates from recognizing a shared identity or a sense of inner self. Moreover, the theory also establishes twelve Filipino values to be considered, with "*kapwa*" or "*pakikipagkapwa*" as the core value from which all other values emanate. (Enriquez, 2004).

In this study, 'Malasakit' is a virtue related to empathy, compassion, care, and concern. It is important to note that one must focus on providing patients with the necessary services while demonstrating the utmost concern for their pain, health status, and financial circumstances. Since there is more money, achievements, and success in healthcare, one may wonder if some or most of them show 'Malasakit' for their patients. In essence, this study aims to develop a scale to understand the concept and application of 'Malasakit' as a process in the context of medicine grounded in the notion that in the field of medicine, achievements, fame, success, and money are established, bringing the researchers to the question, "Do medical practitioners have 'Malasakit?'". The study aims to help the patients understand the concept of 'Malasakit' from the perspective of healthcare professionals and will benefit them by demonstrating that 'Malasakit' helps them understand their feelings and hardships. Identifying the presence or absence of 'Malasakit' can contribute to future research and implementations of programs that can further train healthcare professionals about demonstrating the value of 'Malasakit,' thus paving the way for the betterment of the delivery of healthcare and will benefit the patients.

## 2.0 Methodology

### 2.1 Research Design

This study will utilize an exploratory factor analysis research design. It is a measurement model used to identify the structure and dimensionality of the observed data and reveal the underlying constructs that cause the phenomena. This design identifies and examines inter-correlated variables or clusters—called factors or latent variables—. Each observed variable is possibly a measure of every factor; thus, their relationships must be determined (Columbia University Irving Medical Center, 2023). In researching and studying the construct of Malasakit, particularly in developing a psychometric instrument or scale, exploratory factor analysis is the best fit as this study aims to gather and determine factors that will define the concept of Malasakit. Along with this, developing the instrument underwent a reduction of factors or variables, which is important for minimizing errors and ensuring each variable's reliability. Researchers are then expected to interpret and label these factors according to each item included, specifically discussing their conceptual and operational definitions about Malasakit in delivering healthcare (Taherdoost et al., 2014).

**2.2 Research Participants**
The study was conducted in a private medical institution in an urbanized city in southern Luzon, Philippines. This study's participants are 130 healthcare professionals with past or present experience delivering healthcare in the Philippines; this includes doctors/physicians, registered nurses, pharmacists, physical therapists, and occupational therapists. They should be adults—at least 18 years old following the stated age of majority in Republic Act no. 6809.

**2.3 Research Instrument**
A questionnaire was used as the instrument of the study, which has been derived from various scales concerning malasakit, specifically compassion, empathy, concern, and care scales. These values have often been correlated to exhibiting malasakit in the healthcare setting. The instrument given to the eligible participants consists of 85 questions that underwent primary and secondary validation from a healthcare professional and psychometrician. Through a questionnaire, the researchers can observe the presence of malasakit in the field and discover its constructs after assessing each factor's multicollinearity. To check the scale's reliability, the researchers used the Cronbach alpha coefficient with a 0.965 reliability index and ensured an item-test correlation of .30 with a value of 0.470 to 0.716.

**2.4 Data Gathering Procedure**
The desired number of participants in the sample of this research is supported by the studies of Stevens (2003, p. 294) and Hair et al. (p112) Table of Loadings for Practical Significance, which reports the following rules of thumb based on sample size. This Table of Loadings for Practical Significance supports the 130 participants with a 0.60 - 0.75 range of factor loadings in this study, further discussed in the results and discussion section. Once the questionnaire has been created from various scales concerning Malasakit, the researchers will collect data by disseminating the questionnaires to eligible participants online utilizing Google Forms for easier accessibility and distribution during the academic year 2023-2024. This questionnaire first includes an informed consent form, which contains a summary of the study, the significance of the study, and the procedures. Then, they will answer each close-ended question using rating scales. These rating scales align with the 5-point Likert scale—1 as strongly disagree, 2 as disagree, 3 as neither agree or disagree, 4 as agree, and 5 as strongly agree. After collecting data from the survey, the researchers will assess these responses quantitatively; however, they will only serve as additional support for recommendations for future research studies. Descriptive statistics will assess their demographics during this part of the process. Descriptive statistics are derived from the data series, where the distribution of values will be described in the form of averaging, frequency, standard deviation, and percentage (Lee, 2020).

**2.5 Ethical Considerations**
The study adhered to a rigorous ethical procedure in which participation from professionals was entirely anonymous and voluntary, ensuring strict confidentiality of the responses. With this, a non-coercive recruitment occurred as they were required to provide a signed informed consent before official participation. These guidelines, which are in accordance with ethical regulations, focus on critical principles: (1) Safeguarding against any potential harm, (2) Obtaining clear consent, (3) Maintaining confidentiality, (4) Avoid Deceptive methods, and (5) Allowing participants the option to withdraw at any time. The ethics review committee responsible for approving this study is from the De La Salle Medical and Health Sciences Institute's institutional ethical regulation board, particularly from the Senior High School faculty department. In adherence to the Data Privacy Act of 2012, the data gathered was stored in an Excel file accessible to the researchers. A licensed statistician also had access to the raw and treated data solely to interpret and summarize numerical data; however, after statistical procedures, the file was changed to restricted access. All information the participants gave was handled with confidentiality and was only used to analyze the different factors of malasakit existing in the health workforce. Given that necessary data analysis procedures are completed, all files of the participants' responses have been permanently deleted and are irreversible. Moreover, this rigorous ethical procedure in place effectively to mitigate the risk of discomfort, access to data, and other pertinent factors involving the risk-benefit ratio favorable to the participants

**2.6 Data Analysis**

Data Analysis is what one would refer to as applying statistical and logical methods to describe, simplify, condense, and recap data to extract meaningful patterns. Shamoo and Resnik (2003) express the idea of analytic procedures as "a set of methods that provide inductive inferences for a data set to distinguish signal (the phenomenon of interest) from noise (statistical fluctuations) present in the data." Data analysis is important in scientific research and business; recently, it has gained extreme importance due to the big demand for data-informed decisions.

The following are the specific objectives of this study:(1) To develop an instrument/scale for Malasakit in healthcare delivery(2) To collate participants' demographic characteristics (3) To determine dimensions, factors, and constructs of Malasakit in healthcare (4) To measure the significant relationship between the demographic profile characteristics and Malasakit. The collected data were subjected to Exploratory Factor Analysis (EFA). EFA is a statistical technique used for data reduction, reducing the data to a smaller set of summary variables and exploring an underlying theoretical structure of phenomena. At this stage, the questionnaire comprised 118 items. After being critically evaluated by three validators, it was finally reduced to 85 items. Upon completing the entire exercise of collecting data through questionnaires, EFA was run twice on this scale, which was further reduced to 46 and then down to the current 26 after ten items had been deleted since their values did not meet the minimum requirements for skewness and kurtosis tests. Afterward, another three items were deleted since they did not significantly load on any of the two identified factors, in addition to losing the Malasakit's scale total size up to 19 items today.

It demanded a rational data interpretation approach, further informing the findings from the researchers' perspective. References to supporting literature are crucial in substantiating the presented ideas. In other words, researchers finally discussed what the findings meant within the framework of their study and whether they were related to the research objectives.

## 3.0 Results and Discussion

**3.1 Demographic Profile**

The participants' demographic profile is diverse in terms of age, sex, occupation, type of healthcare provided, and monthly family income. The total number of participants gathered in the study is 130: doctors, nurses, pharmacists, physical therapists, and occupational therapists. It

In terms of age, the participants are mostly early adults. Early adults are those who are around the age of 20 to 40 years old. (CliffsNotes, n.d.). Most participants are 26 to 32 years old, comprising 36.9% (n=48) of the sample. This is followed by 30.0% (n=39) of the participants who fall under the age range of 33 years old to 40 years old. Meanwhile, 13.8% (n=18) are 41 to 48 years old, 9.2% (n=12) are 49 to 56 years old, 8.5% (n=11) are 18 to 25 years old, and 1.5% (n=2) are 65 years old and above.

Regarding sex at birth, 66.2% (n=86) of the participants are female, while 33.8% (n=44) are male. This shows that the sample adequately represents both genders in the target population. Regarding occupation, most of our participants are nurses—comprising 63.1% (n=82) of our gathered participants. As for the rest, 24.6% (n=32) are doctors, 10.0% (n=13) are occupational therapists or physical therapists, and 2.3% (n=3) are pharmacists.

Regarding the type of healthcare service, more than half of the participants are under curative care, representing 38.4%(n=50) of the population. As for the other types of healthcare service, 20.8% (n=27) are under rehabilitative care, 17.7% (n=23) are under palliative care, 13.8% (n=18) are under promotive care, and 9.2% (n=12) are under preventive care. This suggests that the healthcare professionals who participated in this study are focused on providing active treatment and practices to cure patients (e.g., chemotherapy).

Among the participants, 43.1% (n=56) reported a monthly family income of Php 10,000 to 40,000 per month. This suggests that most of the participants have an income lower than P42,000, which is the basic minimum income required to ensure the survival of a family of five members. (The Philippine Star, 2018). As for the rest, 18.5% (n=24) have a salary of more than Php 200,000, 16.2% (n=21) acquire Php 40,000 to 80,000, 10.8% (n=14) garner

Php 80,000 to 120,000, 5.4% (n=7) acquire Php 160,000 to 200,000, 3.1% (n=4) acquire Php 120,000 to 160,000, and another 3.1% (n=4) garner less than Php 10,000 per month.

### 3.2 Malasakit in Healthcare Delivery

**Table 1.** Descriptive statistics of Malasakit in healthcare delivery

| Items | M | CI | SD | Interpretation |
|---|---|---|---|---|
| M1. Just by looking at my patient's current state, I know if they are feeling sad. | 4.185 | [4.1058-4.311] | 0.734 | High |
| M2. Just by observing my patient's nonverbal cues, I can identify whether my patient is feeling angry. | 4.431 | [4.316-4.546] | 0.670 | Very high |
| M3. Just by observing my patient's nonverbal cues, I can identify amusement in my patient. | 4.308 | [4.193-4.423] | 0.669 | Very high |
| M4. Just by seeing or hearing my patients, I can feel whenever they are frightened. | 4.323 | [4.209-4.437] | 0.661 | Very high |
| M5. Just by observing my patients, I am able to perceive if they are feeling calm. | 4.354 | [4.354-4.471] | 0.680 | Very high |
| M6. Just by observing my patients, I am able to perceive if they are feeling dissatisfied. | 4.338 | [4.222-4.455] | 0.677 | Very high |
| M7. Just by seeing or hearing someone, I am able to know if they are feeling embarrassed. | 4.254 | [4.123-4.385] | 0.761 | Very high |
| M8. I am open to receiving feedback from my patients for the betterment of my approach to the treatment I deliver. | 4.623 | [4.529-4.717] | 0.547 | Very high |
| M9. I am open to consulting with other healthcare providers about my approach to treating my patients. | 4.623 | [4.532-4.715] | 0.532 | Very high |
| M10. I am eager to acquire and implement additional methods to improve the care and treatment I offer to my patients. | 4.623 | [4.527-4.719] | 0.561 | Very high |
| M11. I demonstrate empathy and understanding towards patients and their families during their healthcare journey. | 4.446 | [4.341-4.551] | 0.611 | Very high |
| M12. As a healthcare provider, I always show respect to both the patient and their family in patient-centered care. | 4.677 | [4.591-4.763] | 0.501 | Very high |
| M13. I demonstrate respect and understanding for patients' cultural and religious beliefs. | 4.700 | [4.618-4.782] | 0.477 | Very high |
| M14. As a healthcare provider, I would maintain eye contact and project a genuine smile to convey approachability during interactions with patients. | 4.508 | [4.404-4.611] | 0.600 | Very high |
| M15. I strive to support patients in times of need. I use empathic actions to help them navigate difficulties and reassure them that I, their healthcare provider, is there for them. | 4.400 | [4.502-4.298] | 0.592 | Very high |
| M16. As a healthcare provider, I strive to understand my patients' perspectives and feelings by putting myself in their shoes. | 4.431 | [4.310-4.552] | 0.704 | Very high |
| M17. As a healthcare provider, I am committed to understanding the emotional and psychological experiences of my patients. | 4.469 | [4.364-4.574] | 0.612 | Very high |
| M18. In providing care, I always express concern towards my patients. | 4.592 | [4.495-4.690] | 0.566 | Very high |
| M19. I try to see and treat my patient as a holistic being rather than just a mere person with a disease. | 4.654 | [4.561-4.746] | 0.539 | Very high |

*Note. M refers to the data's mean. CI is the confidence interval, while SD is the standard deviation. Verbal interpretation follows: more than 4.2 - 5 = Very high, more than 3.4 - 4.2 = High, more than 2.6 - 3.4 = Average, more than 1.8 - 2.6 = Low and, 1.8 and less = Very Weak.*

The descriptive statistics indicate that the mean values range from 4.185 to 4.700, with 4.185 corresponding to item M1, "Just by looking at my patient's current state, I know if they are feeling sad," and 4.700 corresponding to item M13, "I demonstrate respect and understanding for patients' cultural and religious beliefs." The overall mean is 4.43, suggesting a very high level of "malasakit" with a standard deviation of 0.64 among the participants who are experiencing malasakit in their healthcare delivery.

In addition, the item with the highest mean is item M13: "I demonstrate respect and understanding for patients' cultural and religious beliefs," which suggests that most respondents demonstrate malasakit through respecting and understanding various cultural and religious beliefs. This notion resonates with the findings of (Durieux-Paillard, 2011), emphasizing the significant influence of culture and diversity on clinical practice. The lowest mean, on the other hand, which corresponds to item M1: "Just by looking at my patient's current state, I know if they are feeling sad," suggests that it is challenging for healthcare professionals to demonstrate malasakit by feeling sad whenever they look at their patient.

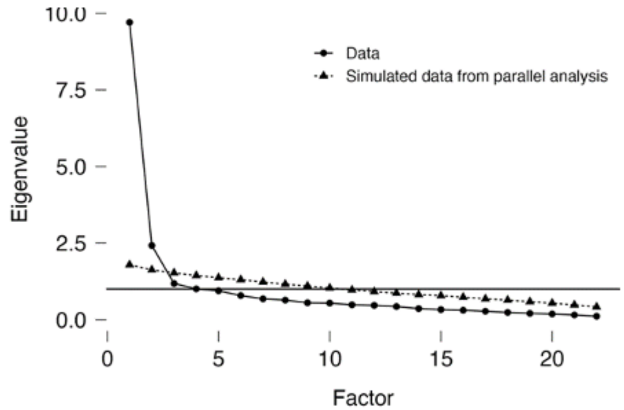


**Figure 1.** Scree plot

This figure represents the scree plot with corresponding plotted eigenvalues—the measure of the amount of variance accounted for by a factor. This is utilized to visually determine the number of factors by observing the point of inflection (where the curve flattens) of the factors. Observing Figure 1, there are two points in the steep curve before the line trend begins to flatten; hence, two observed factors account for most of the data's total variability, with both having eigenvalues greater than 1. Considering that only the first two factors are plotted above their corresponding simulated data, it is interpreted and validated that only two factors will be extracted. The remaining factors are deemed non-meaningful as they account for a small proportion of the total variability.

**Table 2.** Factor Loadings

| | Factor 1 | Factor 2 | Uniqueness |
|---|---|---|---|
| M33 | 0.826 | | 0.389 |
| M34 | 0.810 | | 0.466 |
| M30 | 0.804 | | 0.387 |
| M31 | 0.753 | | 0.462 |
| M42 | 0.752 | | 0.415 |
| M32 | 0.716 | | 0.552 |
| M41 | 0.693 | | 0.458 |
| M35 | 0.675 | | 0.533 |
| M40 | 0.666 | | 0.550 |
| M37 | 0.636 | | 0.511 |
| M44 | 0.608 | | 0.587 |
| M38 | 0.607 | | 0.553 |
| M13 | | 0.902 | 0.266 |
| M10 | | 0.899 | 0.341 |
| M9 | | 0.799 | 0.371 |
| M15 | | 0.765 | 0.411 |
| M12 | | 0.737 | 0.431 |
| M8 | | 0.723 | 0.503 |
| M14 | | 0.686 | 0.366 |
| M1 | | | 0.732 |
| M4 | | | 0.810 |
| M29 | | | 0.660 |

Note: Applied rotation method is promax.

Looking at Table 2, it is evident that two factors result from executing the exploratory factorial analysis. The main objective of factorial analysis is data reduction—condensing numerous observed variables or indicators into a smaller set of linear composites referred to as components, variates, underlying or latent dimensions, or more commonly known as factors (Peterson, 2000). Initially, the researchers assumed four factors and calculated factor loadings. The researchers excluded items with factor loadings below .50, removing 39 out of 85 questions. The researchers also excluded items with close to .50 cross-loadings on two factors. Further refinement included removing items related to arousal and relax factors due to consistently low factor loadings below .35. To ensure a stricter scale, recommendations by MacCallum et al. (1999, 2001) were followed, requiring all items to have commonalities over 0.60 or an average communality of 0.70. This thorough process led us to a final set of 19 items associated with the malasakit scale, organized into two factors.

As stated by (Hair et al., 1998), factor loadings exceeding ±0.30 are deemed to meet the minimal significance level. Loadings of ±0.40 are considered more significant, while those reaching ±0.50 or higher are considered practically significant. As the table indicates, both factors exhibit significant data, ranging from 0.607 as the lowest to 0.753 as the highest in factor 1. On the other hand, for factor 2, the lowest factor loading is 0.686, while the highest is 0.902. In addition, 0.607, the lowest in factor 1, corresponds to item 38, "I strive to support patients in times of need. I use empathic actions to help them navigate difficulties and reassure them that I, their healthcare provider, is there for them." This suggests that healthcare providers may struggle to express empathy and compassion towards their patients through empathic actions. For factor 2, the lowest coefficient corresponds to item 14, which has a significance of 0.686, "Just by observing my patients, I am able to perceive if they are feeling dissatisfied." This indicates that healthcare providers may struggle to discern whether their patients are dissatisfied solely through observation. Although these factors may rank lowest, they are still deemed significant. According to Hair, Anderson, Tatham, and Black's study in 1998, any factors reaching a correlation coefficient of ±0.50 or higher are deemed practically significant. Furthermore, 0.753 as the highest in factor 1, corresponds to item 31, "I am open to consulting with other healthcare providers about my approach to treating my patients." This indicates that the participants are encouraged and motivated to collaborate with other healthcare providers to explore effective treatment options for their patients. Lastly, item 13 has the highest coefficient in factor 2, "Just by observing my patients, I am able to perceive if they are feeling calm." This suggests that healthcare providers are more capable of perceiving if their patients feel calm than dissatisfied through observation. Similar to the lowest coefficients, the highest coefficients in factors 1 and 2 are deemed significant, as these coefficients exceed ±0.50.

Based on Table 2 for factor loadings, two factors were determined, consisting of twelve items for factor 1 and seven items for factor 2, with 19 questions. Each factor represents a construct of malasakit in the context of healthcare services. To ensure the factors and their corresponding items, CFA was conducted to construct an adjusted structural model. According to Tavakol and Wetzel (2020), the model supports a causal relationship between the factors and instrument items, leading to elaborate data analysis on each construct or dimension.

### 3.3 Representation of 2-Factor Loadings and their Meaning

The two identified factors were thoroughly analyzed per item. Factor 1 describes compassion in the context of healthcare through four tenets—specifically, 1) reflective patient-centered care, 2) affective empathy, 3) cultural competence, and 4) hospitality. Under this category, 12 items (items 8-19) are included, all involving an effective response rooted in empathy. Factor 2 is observed to exhibit empathy in the items through specific classifications, which are 1) cognitive empathy and 2) emotional empathy. Seven items (items 1-7) fall under this category, including a type or degree of perception and understanding of a patient's situation.

**Compassion.** In the healthcare setting, compassion involves a feeling of sympathy or feeling for another's suffering with an emphasis on having a desire to help patients (Point Loma Nazarene University, n.d.). For instance, all four tenets focus beyond empathy, featuring a relational action after recognizing, understanding, and emotional resonance with another's concerns, distress, pain, or suffering, such as offering reassurance and comfort to relieve a patient's anxiety. (Lown, 2016).

**Reflective patient-centered care.** Patient-centered care establishes a partnership between healthcare professionals and patients to ensure that the patient's needs, wants, and preferences are considered in medical decisions (Shaller, 2007). Furthermore, reflective patient-centered is seen in two of the hallmarks of compassionate healthcare, which are the a) ability to collaborate, communicate, and partner with patients and family members to the extent they need and desire, and b) a commitment of all who provide and support healthcare to communicate and collaborate (American Association of Colleges of Nursing, n.d.). Three items—items 8, 9, and 10—are categorized in this tenet. All three items embody reflective patient-centered care by utilizing the feedback of patients and other healthcare providers to improve the quality of healthcare being provided.

**Affective empathy.** Recognizing one's emotions through facial expressions, body language, and vocal intonation encompasses the concept of affective empathy. After one has recognized the emotions of others, this evokes an emotional response to the other person's situation and prompts the accurate identification of one's corresponding emotional state, often through self-reflection and insight (Reniers et al., 2011). Six items fall under the category of Affective empathy on the scale, specifically items 11, 12, 15, 16, 17, and 18. Through these items, one's affective empathy can be assessed by exhibiting empathic behaviors such as showing respect, actively listening, understanding other's experiences, and expressing concern.

**Cultural competence.** In healthcare, cultural competence is defined as the continuous process of developing knowledge, skills, and attitudes to provide effective and inclusive healthcare, considering the differences of each patient in cultural behaviors, beliefs, and needs (O'Brien et al., 2021). It is realized that understanding a patient's suffering and having the desire to do something with it is made possible through providing culturally competent care (Papadopoulos et al., 2016). With the increasing reports of culturally insensitive care globally, it is essential to go beyond and extend compassion by understanding where they come from and responding appropriately to the patient's wishes and desires (Regis College, 2023). From the improved scale, only item 13 falls under this tenet, which measures healthcare professionals' respect and understanding for diverse cultural and religious beliefs.

**Hospitality.** To be hospitable is to build relationships and communicate in a supportive and caring manner (Burke, 2023). Hospitality plays a significant role in the healthcare experience by improving patient satisfaction, quality of life, and happiness (Majeed & Kim, 2023). Furthermore, as Burke (2023) stated, hospitality goes beyond being service-minded. It features a holistic approach, seeing each patient in a multi-dimensional sense rather than as a mere case. Hospitality and compassion go hand-in-hand; there is the presence of flexibility such that there is an uncompromised commitment to providing healthcare and establishing a human connection, empowering the patients with confidence and control (Boyd, 2024). Items 14 and 19 fall under this category, with the first focused on building rapport through genuineness and approachability, while the latter focused on viewing patients holistically.

**Empathy.** Explaining empathy, in general, captures multidimensional psychological constructs all aligned in understanding and being able to feel the positive and negative moments of others (Malakcioğlu, 2022). Empathy as a healthcare value concept encapsulates comprehending the patient's experiences, perspectives, and burdens that shall be reflected in the communication process between the worker and client (Catlow et al., 2020). Empathic interactions are the foundation for trusting worker-patient relationships, enabling them to openly show their perceptions of personal health concerns and even beyond them. This research has also provided insight into why cognitive and emotional empathy constitutes the two tenets of factor 2.

**Cognitive empathy.** Most questions about the same factor are identified as cognitive empathy, which, on the other hand, is called affective perspective-taking. Abramson et al. (2020) describe it as when a perceiver can accurately perceive or analyze one person's feelings. Included items 1-7, except for item 4, revolve around primarily observing cues from the patient to understand their perceived specific emotions effectively. In the medical field, healthcare professionals such as our participants must actively listen to their client's concerns and consider where their patients are coming from, training them to be sensitive to their emotional states amid their health issues. According to the study of Riess (2017), cognitive empathy should take over when there is a lack of emotional empathy since biases are always present in all settings when there are cultural differences, even in medical care.

**Emotional Empathy.** In simpler terms, "experience sharing," one can feel and share another's emotions even if the experience has not occurred (Abramson et al., 2020b). The only item classified under this dimension of empathy is Item 4, stating, "Just by seeing or hearing my patients, I can feel whenever they are frightened.". Based on the statement, patient-centered medical professionals are expected to be able to put themselves in their patient's shoes by sharing their burdens and emotions, which can aid in formulating a better overall response during consultations.

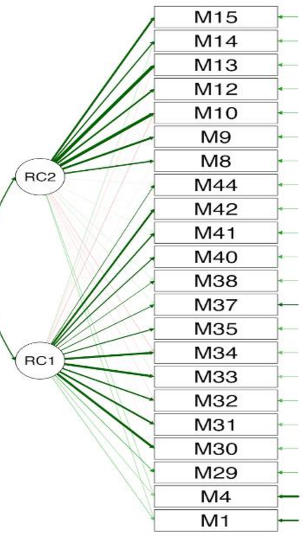


**Figure 2.** Confirmatory Factor Analysis

Confirmatory factor analysis proceeds EFA as it primarily confirms the discovered factors. Tavakol and Wetzel (2020) state that instrument items are thoroughly tested to extract their underlying internal structure and assess the suitability to the proposed model indicated in Table 6. In this study, the researchers adopted CFA solely to confirm the corresponding items to the factors given in EFA, consisting of 2 dimensions with 12 variables in Factor 1 and 7 in Factor 2. The analysis began with identifying each item's inner construct and grouping factors based on the results. The analysis from statistical data shows that "compassion" (factor 1) encompasses questions from 30-44, while "empathy" (factor 2) comprises items from 8-15.

## 4.0 Conclusion

The study employed quantitative methods, using Exploratory Factor Analysis (EFA) to collect essential data to address the research question. The two factors identified through EFA were validated using Confirmatory Factor Analysis (CFA). Data were gathered using a questionnaire with established scales that measured affiliated values such as empathy, compassion, care, and concern. Initially comprising 85 items, the questionnaire was refined to 19 questions through multiple rounds of EFA and various statistical tests. The instrument aimed to uncover the underlying constructs and dimensions of 'Malasakit,' providing insights into its application within medical practice.

To further elaborate on the item reduction, the questionnaire with 118 items was given to validators, and after a thorough validation process, 85 items were returned to the researchers. Utilizing the exploratory factor analysis, the 85 items were reduced to 46 items considering the significance level of factor loadings, wherein items with below 0.50-factor loadings will be eliminated. For a stricter process, another EFA was conducted, and from 46 items, the questionnaire was left with only 26 items. Skewness and kurtosis were also utilized to check the degree of asymmetry in a variable's distribution. Of the 26 items, 21 were left after utilizing skewness and kurtosis. Finally, after the scree plot had been utilized to validate the data further, the questionnaire was left with 19 items.

Based on the study's results, in line with the tabulated result for the factors related to 'Malasakit,' there were two dimensions, with 12 variables in Factor 1 and 7 variables in Factor 2. The researchers perceived empathy and compassion as two dimensions of constructing 'Malasakit.' Factor analysis further extracted these dimensions into six tenets with 19 variables. These tenets encompass reflective patient-centered care, affective empathy, cultural competence, and hospitality under compassion. On the other hand, cognitive and emotional empathy is under the category of empathy.

The results made the researchers understand the underlying constructs of 'Malasakit,' further deepening its relationship with empathy and compassion. These two factors play a massive role in the positive effects of healthcare workers' practices and patients' feedback. The researchers also realized how understanding, shared emotion, and empathic actions are essential in demonstrating 'Malasakit' in medical practice. The discovered tenets are suggested to be incorporated by all healthcare professionals since they promote careful and wiser decision-making, resulting in accurate and appropriate treatment and diagnosis of clients. Along with patient satisfaction, it has also been proven that healthcare workers who exhibit 'Malasakit' as compassion and empathy will foster a sense of purpose and fulfillment in delivering their service, which could further promote a positive light to each part of the medical setting (Coles, 2023).

The research for developing a 'Malasakit' scale has its limitations, which are recommended to be investigated in future research. To begin with, a small sample size was used to conduct the scale's initial development; however, a larger sample size is recommended, such as a 1:5 ratio, where all factor solutions are correct and valid for all measurement scales. With a larger sample size, factor analysis tends to provide more precise estimates of population loadings and is also more stable, or less variable, across repeated sampling (MacCallum et al., 1999). For future research, further investigation on the factors and tenets is suggested to create new terminologies for use, coining new terminologies all about care (Williams et al., 2010). Further investigation of the factors, including their operational definition in a clinical context or their suitability to be used in other countries outside of the Philippines with different cultural values and backgrounds, is highly suggested for future studies. The researchers also recommend future research to conduct an initial pilot testing of the 'Malasakit' scale. This is to take a step further in testing and proving the validity of the developed scale. Future research may involve developing a revised version of the 'Malasakit' scale wherein items benefit different fields and occupations more.

Overall, the study concludes that 'Malasakit' consists of two factors, each encompassing various tenets: empathy and compassion. The 19-item 'Malasakit' scale explores these constructs, assessing the level of 'Malasakit' exhibited by healthcare providers. 'Malasakit' is intangible, not only within Filipino culture but also within the healthcare field.

## 5.0 Contributions of Authors

LC - conceptualization of the study, writing of the abstract, data analysis, supervising the construction of the paper. LT – conceptualization of the study, editing, writing of the results and discussion; AA- editing, writing of the results and discussion. MA- editing and writing the conclusion. CJ - editing and writing the introduction. JN - editing and writing the methodology.

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## 7.0 Conflict of Interests

The authors affirm that the research was conducted without any commercial and financial affiliation that might pose a conflict of interest.

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# Evaluating Student Satisfaction and Preferences in Higher Education Online Learning: A Post-Pandemic Exploration

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**Abstract.** This study, grounded in transformational learning theories, investigated the satisfaction levels of higher education students with online learning during the COVID-19 pandemic. The study found that students expressed a neutral sentiment towards the online learning environment, with key aspects valued by students, including instructor support, guidance, and personalization. However, students reported the lowest satisfaction with the knowledge and skills acquired, indicating a need to align teaching methods with desired learning outcomes. Facility performance also received a neutral mean satisfaction score. Students appreciated webinars, seminars, and extracurricular activities, recognizing their importance in enriching online education. However, they wanted more than school-provided facilities, suggesting physical resources and service improvements. Regarding future learning modes, students preferred blended classrooms, face-to-face instruction, and specific online teaching platforms over exclusive online classes, emphasizing the need for diversified learning approaches and effective digital tools. A notable finding was the positive correlation between students' willingness to recommend online learning in the future and their overall satisfaction, underscoring the importance of instructor engagement, diverse learning modalities, and aligning teaching methods with desired learning outcomes to meet the evolving needs of students in a post-pandemic educational landscape. These findings have significant implications for the future of higher education, particularly in the design of online learning platforms and the role of educators in enhancing the student experience.

**Keywords:** Blended Learning; Higher Education; Online Learning; Post-pandemic education; Student satisfaction,

## 1.0 Introduction

Face-to-face training has traditionally dominated instructional methods in the Philippines. However, the COVID-19 pandemic forced higher education institutions to transition rapidly to online teaching platforms, regardless of students' and educators' technical readiness and expertise (Almusharraf & Kharo, 2020). This shift mirrors global trends observed by Raturi (2018), who noted that many higher education institutions worldwide are increasingly adopting virtual learning environments, breaking down barriers for learners and instructors. This transition to online teaching became widespread in the Philippines due to the pandemic's impact, compelling institutions to alter their teaching and learning modalities.

Student satisfaction with online learning has become a significant focus within higher education. The swift adoption of online teaching methods by community colleges, universities, and other institutions marked a crucial development in educational delivery (Dziuban et al., 2015). As a result, student satisfaction with these online platforms is now recognized as a key factor in the success of educational processes (Elshami et al., 2021). Various elements, such as teacher-related factors, technological challenges, and interactivity, are essential in determining student satisfaction. Bolliger (2004) provided reliable statistics demonstrating that specific tools could effectively estimate students' satisfaction with online courses. However, the pandemic presented new challenges; Foerderer et al. (2021) noted that during the spring semester of 2021, many students attended lectures from their bedrooms, with instructors struggling to share screens, class discussions occurring in impromptu breakout rooms with minimal engagement and passive video sessions replacing hands-on science labs. These conditions highlighted the strain on educational quality and student engagement. Nevertheless, online education was crucial in maintaining accessibility for students during COVID-19 lockdowns (Elshami et al., 2021).

The determinants of student satisfaction are dynamic and influenced by various educational experiences, services, and amenities (Weerasenghe, 2017). This sentiment measures the alignment between students' expectations and the services provided, encompassing feelings of contentment and dissatisfaction (Oliver, 1980, 1999). Learning satisfaction is often linked to teaching and learning activities, while contentment reflects the alignment between expectations and perceived services (Weerasenghe, 2017). Singley (2010) discussed factors influencing student satisfaction in Lent's model of well-being and psychosocial functioning, including academic self-efficacy, progress toward goals, and social support. These factors shape overall well-being and psychosocial adjustment among students. Social cognitive theory also contributes to understanding satisfaction, highlighting the significance of teaching strategies aligned with social cognition principles (Bandura, 1986, 1989). Malouff (2010) further supports the connection between social cognition theory, teaching styles, and student satisfaction.

E-learning presents benefits such as flexibility and cost-effectiveness facilitated through asynchronous and synchronous learning networks (Harsasi et al., 2018). However, bandwidth constraints can impede non-verbal communication and the transmission of cultural insights (Anderson, 2008). The "new normal" brought about by the COVID-19 pandemic emphasizes the need for efficient learning processes, with student contentment playing a critical role in this efficiency (Elshami et al., 2021). The quality of service, especially in private higher education institutions, directly influences student satisfaction, with particular emphasis on platforms, grading schemes, training sessions, and technical support (Ilias, 2008).

The pandemic further highlighted the need for professional development and innovative teaching strategies to enhance online learning experiences. Social cognitive theory suggests that knowledge formation occurs through participation in activities, feedback, and various forms of social interaction (Bandura, 2001). This perspective underscores the significance of learning environments and interactions, challenging the notion of cognition as an isolated process.

Despite the swift transition to online learning during the COVID-19 pandemic, a considerable research gap exists in fully understanding the complex factors influencing student satisfaction with online education in the Philippine context. Existing studies often address general aspects of online learning and student satisfaction but frequently overlook the specific challenges and technological limitations faced by Filipino students and educators. This study seeks to address this gap by exploring the factors that impact student satisfaction with online courses in the Philippines, focusing on technological limitations, teacher effectiveness, and interactive components. The importance of this research lies in its potential to guide policymakers and educational institutions in understanding the unique needs and experiences of students in the Philippines. This, in turn, can lead to better design and implementation of online learning environments and strategies, ultimately improving educational outcomes.

## 2.0 Methodology

### 2.1 Research Design

The study employs a quantitative cross-sectional survey design to systematically gather and analyze student satisfaction with online learning experiences at a State University in Surigao City, Philippines. This design enables the collection of detailed snapshot data simultaneously, facilitating a comprehensive evaluation of student satisfaction and identifying potential areas for improvement in online education.

### 2.2 Research Participants

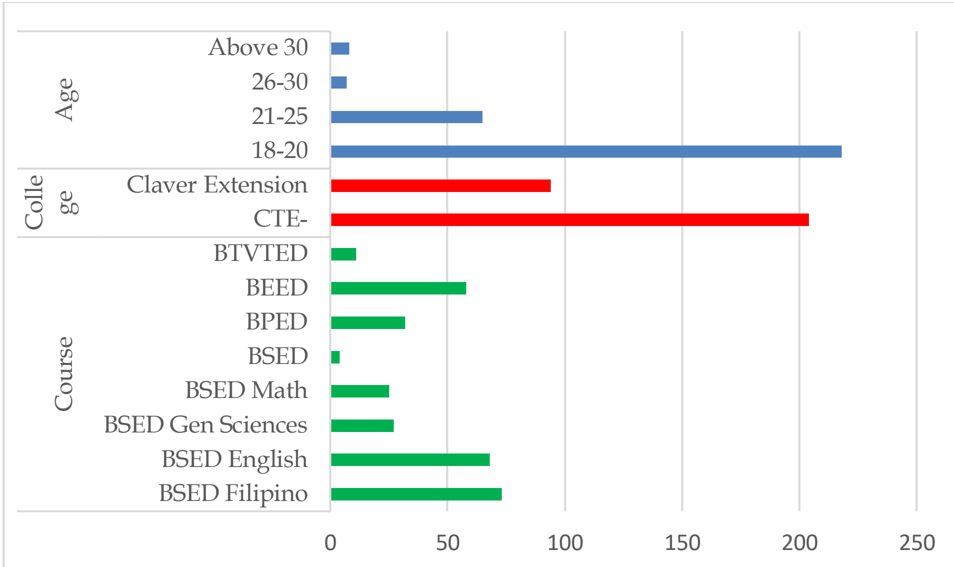


**Figure 1.** Summary of respondents' profile

The study involved 283 participants, comprising students across different academic levels—freshmen, sophomores, juniors, and seniors. The participants, aged between 18 and 30, were enrolled in various academic programs, including Bachelor of Elementary Education (BEED), Bachelor of Secondary Education (BSED), Bachelor of Physical Education (BPED), and Bachelor of Technical Vocational Teacher Education (BTVTED).

### 2.3 Research Instruments

The survey instrument used in this study was adapted with permission from Almusharraf and Khahro (2020). The instrument underwent rigorous validity and reliability testing. The survey began with three questions to collect demographic information from respondents. The remaining twenty-two questions required participants to indicate their level of agreement with statements designed to gauge their perceptions and satisfaction with various actions taken by university management to enhance online teaching and learning during the COVID-19 pandemic. The questionnaire was structured into four sections: demographics, satisfaction with the online learning environment, satisfaction with school support, and assessments of online learning platforms and approaches.

### 2.4 Data Gathering Procedure

The survey was distributed to participants through multiple platforms, including Google Classroom, messenger apps, and email.

### 2.5 Ethical Considerations

Prior ethical approval was obtained from the Office of the Division of Student Affairs and the Office of the Campus Director at the State University in Surigao City, Philippines. Participants were fully informed about the study's purpose and the use of their responses for research on student satisfaction. Completing the survey on Google Forms served as explicit consent from participants to participate in the research. Throughout the survey administration process, strict adherence to ethical principles was maintained, including ensuring informed consent, safeguarding participant anonymity and confidentiality, employing rigorous data security measures, promoting voluntary participation, protecting privacy, avoiding biased questioning, and ensuring responsible and ethical use of collected data. These measures were implemented to uphold the ethical integrity and credibility of the research study.

## 3.0 Results and Discussion

### 3.1 Level of Satisfaction with Online Learning Environment

**Table 1.** Descriptive statistics of the level of satisfaction in an online learning environment

| Indicators | Mean | SD | Interpretation |
| --- | --- | --- | --- |
| 1. I am satisfied with the teachers' help during COVID-19 (one-on-one feedback, inclusion in the learning process, comprehension of situations, etc.). | 3.9 | 0.7 | Agree |
| 2. I am satisfied with the alternate assessment plans that faculty members used for the COVID-19. (An oral exam, project, case study, presentation, open-book test, or assignments). | 3.8 | 0.9 | Agree |
| 3. The course has several online distribution methods (texts, audio, video, PowerPoint slides, games, and quizzes) that suit me. | 3.8 | 0.8 | Agree |
| 4. I am satisfied that the online courses enabled me to meet the course's learning objectives. | 3.6 | 0.9 | Agree |
| 5. I am satisfied with the teacher's direction and follow-up (phone calls, emails, and virtual meetings) during the online course activities. | 3.9 | 0.9 | Agree |
| 6. I am satisfied with the knowledge and skills I have acquired from Covid-19 Online Teaching (e.g., analytical and research skills, flexibility, adaptability, interpersonal abilities). | 3.5 | 0.9 | Agree |
| 7. I am satisfied with the extent of engagement in the course (e.g., active classroom vs. lecture-based) during online teaching. | 3.7 | 0.8 | Agree |
| 8. I am content with the diverse online teaching methods employed by the instructors, including active learning opportunities, demonstrations, games, and group and individual discussions. | 3.8 | 0.8 | Agree |
| 9. I am satisfied with the instructor's ability to personalize online instruction and encourage a student-centered methodology. | 3.9 | 0.9 | Agree |
| **Composite** | **3.8** | **0.12** | **Agree** |

**Legend:** 1-1.79 – Strongly Disagree; 1.8-2.59 – Disagree; 2.6 – 3.39 – Neutral; 3.4-4.19 – Agree; 4.2-5 – Strongly Agree

As reflected in Table 1, the students rated the indicators with the highest mean of 3.9, verbally interpreted as Neutral. The indicators include, "I am satisfied with the amount of help I got from the teachers during the COVID-19 (one-on-one feedback, inclusion in the learning process, comprehension of situations, etc.). "I am happy with the direction and follow-up (phone calls, emails, and virtual meetings) provided by the teachers during the activities of the online course," and "I am satisfied with the instructor's ability to personalize online instruction and encourage a student-centered methodology." This preference aligns with the conclusion drawn by Zaheer (2015) that instructor support yielded the highest mean score.

On the other hand, the indicator "I am satisfied with the knowledge and skills I have acquired from Covid-19 Online Teaching (e.g., analytical and research skills, flexibility, adaptability, interpersonal abilities)" got the lowest mean score of 3.5. Manzanares (2022) emphasizes the importance of carefully assessing student and instructor satisfaction with the teaching-learning process in virtual environments to make the necessary modifications as soon as possible. According to Wu and associates (2010), learning satisfaction is a complex construct influenced by performance expectations and the prevailing learning climate. It is worth noting that various elements, including system functionality, content features, engagement, and computer self-efficacy, can significantly shape these performance expectations. Moreover, Foerderer (2021) provided intriguing insights into student satisfaction across different learning modalities. Surprisingly, even when students were compelled to enroll in the format dictated by their school, be it Online, Hybrid, or Person, there was no significant difference in their overall satisfaction ratings. This suggests that students' satisfaction may not be primarily tied to the mode of instruction but rather to other crucial factors. One such essential factor is the role of professors in enhancing satisfaction, as highlighted by Foerderer (2021). The study found that when professors were accessible, offered clear explanations of the learning process (including goals, expectations, and assessment criteria), and provided constructive criticism on assignments, students reported feeling the most satisfied with their lectures.

The findings from various studies shed light on factors influencing learning satisfaction and student preferences in different learning modalities. These findings underscore student satisfaction's multifaceted nature in various learning contexts. They highlight the importance of professor accessibility, course design, and student engagement in shaping satisfaction. Additionally, the effectiveness of different learning modalities and sensory engagement in online learning significantly influence student preferences and overall satisfaction.

### 3.2 Level of Satisfaction with Facility Performance

**Table 2.** Descriptive statistics of the level of satisfaction with facility performance

| Indicators | Mean | SD | Interpretation |
|---|---|---|---|
| 1. I am satisfied with the staff's response time to technical help during COVID-19 (such as account login, LMS support, and the Internet Technology Center) | 3.7 | 0.8 | Agree |
| 2. I am satisfied with the social and emotional help provided by the school counselor. | 3.7 | 0.8 | Agree |
| 3. I am satisfied with the support and follow-up I received from my academic advisor. | 3.8 | 0.7 | Agree |
| 4. I am satisfied with the available extracurricular activities, seminars, and webinars. | 4.0 | 0.8 | Agree |
| 5. I am satisfied with the school's resources, such as the mentors, e-learning center, tutoring center, and tutorials. | 3.6 | 0.8 | Agree |
| **Composite** | **3.8** | **0.1** | **Agree** |

**Legend:** 1-1.79 – Strongly Disagree; 1.8-2.59 – Disagree; 2.6 – 3.39 – Neutral; 3.4-4.19 – Agree; 4.2-5 – Strongly Agree

Table 2 shows students' satisfaction with Facility Performance as rated by the students with a mean of 4.0, which is verbally interpreted as neutral. The indicator with the highest mean includes "I am satisfied with the extracurricular activities, seminars, and webinars that are available." The lowest mean, 3.6, verbally interpreted as neutral, indicates " I am satisfied with the resources offered by the school, such as the mentors, e-learning center, tutoring center, and tutorials."

However, it is worth noting that satisfaction with this particular form of education based on didactic and technical innovation was extremely high during the pandemic's first two years (Manzanares, 2022). As to offered webinars, seminars, and extracurricular activities, Choe (2019) emphasized that in the context of online learning, online courses employ distinct implementation strategies compared to face-to-face classes. Building a successful online learning environment requires a deep understanding of best practices, technology, content design, learning evaluation, student motivation, and factors unique to online situations.

Additionally, Carliner (2004) introduces an intriguing concept related to asynchronous online courses. Online courses can reduce learning time, possibly cutting it in half. This is attributed to its flexibility, allowing learners to skip through topics they already know, unlike traditional classroom settings where they must sit through everything. Furthermore, proponents of online learning argue that it can be more effective because it engages more senses, thus enhancing the learning experience (Carliner, 2004). The better the data is maintained, the more senses are involved in learning, potentially leading to increased comprehension and retention. These findings underscore student satisfaction's multifaceted nature in various learning contexts. They highlight the importance of professor accessibility, course design, and student engagement in shaping satisfaction. Additionally, the effectiveness of different learning modalities and sensory engagement in online learning significantly influence student preferences and overall satisfaction.

### 3.3 Preferences in Online Learning

**Table 3.** Descriptive statistics on preferences

| Indicators | Mean | SD |
|---|---|---|
| 1. I promote learning using ONLY online programs in the future. | 2.7 | 1.1 |
| 2. I recommend acquiring knowledge through mixed classrooms, combining traditional instruction with interactive internet resources. | 3.8 | 0.9 |
| 3. I recommend learning through in-person instruction alone. | 3.9 | 0.9 |
| 4. The most efficient platform for instruction was Google Classroom, which was used to deliver courses virtually. | 3.9 | 0.8 |
| 5. There were no technical or content difficulties, making the distribution of high-quality material in the module/LMS simple. | 3.7 | 0.8 |
| 6. The best platform for teaching was Zoom/Google Meet, which was used for online courses. | 3.9 | 0.9 |

**Legend:** 1-1.79 – Strongly Disagree; 1.8-2.59 – Disagree; 2.6 – 3.39 – Neutral; 3.4-4.19 – Agree; 4.2-5 – Strongly Agree

As observed in Table 3, the indicator with the highest mean rating is "I recommend learning through in-person instruction alone." This preference was similarly found in the population studied by Gherhes et al. (2021), indicating a stronger preference for face-to-face learning over e-learning. Another indicator that received the highest mean rating was: "The most efficient platform for instruction was Google Classroom, which was used to deliver courses virtually," and "The Zoom/Google Meet used for online course delivery was the most effective teaching platform." Additionally, Widiyatmoko A. (2021) emphasized that Google Classroom can facilitate conversation activities for both professors and students, improving the online science learning process by making it more engaging, enjoyable, and efficient in terms of time management. Furthermore, Okmawati (2020) demonstrated the effectiveness of the Google Classroom platform, suggesting it as a viable option for schools and teachers looking to offer appealing digital learning experiences while transitioning to virtual courses. On the contrary, the indicator with the lowest mean of 2.7, interpreted as disagreement, is "I promote learning using only online programs in the future." This suggests that students prefer modes of delivery other than exclusively online classes.

### 3.4 Differences in Satisfaction with Online Learning Experience

Table 4 presents the analysis results, examining the variations in groups of students' satisfaction with online teaching and learning approaches during the COVID-19 pandemic.

**Table 4.** Group differences in their satisfaction with their online learning experience

| Independent Variable | Group | Mean | F (df) | p-value | Remark |
|---|---|---|---|---|---|
| Course | BSED Filipino | 3.68[a] | 2.055 (7) | 0.04 | Significant |
| | BSED English | 3.48[a] | | | |
| | BSED Gen Sciences | 3.46[a] | | | |
| | BSED Math | 3.84[a] | | | |
| | BSED | 3.75[a] | | | |
| | BPED | 3.56[a] | | | |
| | BEED | 3.84[a] | | | |
| | BTVTED | 3.18[b] | | | |
| College | CTE- | 3.57 | 1.36 (1) | 0.24 | Not Significant |
| | Claver Extension | 3.7 | | | |
| Age | 18-20 | 3.65 | 0.87(4) | 0.481 | Not Significant |
| | 21-25 | 3.47 | | | |
| | 26-30 | 3.42 | | | |
| | Above 30 | 3.87 | | | |

Results indicated a statistically significant difference in students' satisfaction with online teaching and learning, primarily driven by their chosen course, as demonstrated by a one-way ANOVA ($F(7,296) = 2.055$, $p = 0.04$). A Tukey post hoc testing revealed that the BSED (Filipino, English, Gen Science, Math), BPED, and BEED groups were significantly more satisfied with online teaching and learning approaches than the BTVTED group ($p = 0.028$). However, there was no statistically significant difference among the BSED, BPED, and BEED groups ($p = 0.61$). Additionally, the results unveiled that satisfaction levels with online teaching and learning approaches during COVID-19 were likely to be similar between students in the CTE-City campus and those in the Claver extension. Similarly, among students aged 18 and over, there was no statistically significant difference in satisfaction levels. Given the uncertainty surrounding the upcoming semester in higher education institutions, whether entirely online, a mix of online and face-to-face classes, or traditional in-person lectures, this study also examined students' satisfaction with recommended online learning. The results of this analysis are presented in Table 5.

### 3.5 Regression Analysis

**Table 5.** Regression analysis on the students' satisfaction with online learning and teaching approaches

| Independent Variable | B | Beta | t | p | Remark |
|---|---|---|---|---|---|
| Constant | 2.81 | | 22.6 | 0 | Significant |
| I recommend learning to use only online classes in the future. | 0.29 | 0.37 | 6.94 | 0 | Significant |

$R^2_{adj}$= 0.37 (N=298, p = 0.00)

The significant change in the students' satisfaction with online teaching and learning approaches is due to the recommendation of online learning (because the p-value is 0.000 < 0.5 level). With a 1% increase in the extent of student's recommendation of online learning, the satisfaction rate will increase by 0.29% (B value). Therefore, the analysis suggests that the students' recommendation of online learning in the future has a significant positive relationship with their satisfaction with online teaching and learning approaches.

The study's key findings reveal several important insights regarding students' satisfaction with the online learning environment, facility performance, future learning modes' recommendations, and demographics' impact. Firstly, the overall mean satisfaction score for the online learning environment is 3.8, which falls within the "Neutral" category. This suggests a balanced sentiment among students regarding their online learning experiences.

Secondly, the highest-rated indicators pertain to instructor support, guidance, and personalization of online learning. This underscores the significance of instructor involvement and adaptability in enhancing students' satisfaction with the online learning process. Conversely, the lowest-rated indicator is related to students' satisfaction with the knowledge and skills gained during online teaching. This finding highlights where improvements may be needed to better align online teaching methods with students' learning outcomes. Moving on to facility performance, the study indicates an overall mean satisfaction score of 3.8, again placing it in the "Neutral" category. Of note is that the highest-rated indicator is satisfaction with offered webinars, seminars, and extracurricular activities, suggesting that students value these additional resources. However, the lowest-rated indicator pertains to satisfaction with school-provided facilities. This outcome suggests room for enhancement in terms of the physical resources and services offered by the institution. Concerning recommendations for future learning modes, students appear less inclined to recommend learning using ONLY online classes, with a mean score of 2.7, indicating disagreement. On the other hand, higher ratings are given to recommendations for blended classrooms, face-to-face classrooms, and specific online teaching platforms. This indicates a preference among students for a mix of learning modalities and effective online tools.

Finally, the study reveals that the course significantly influences online teaching and learning satisfaction. Specifically, BSED, BPED, and BEED students express higher satisfaction levels than BTVTED students. Meanwhile, college and age do not significantly impact satisfaction levels, indicating that these factors are less influential in students' online learning experiences. Additionally, there is a significant positive relationship between students' recommendation of online learning in the future and their satisfaction with online teaching and learning. This suggests that as students become more open to recommending online learning, their satisfaction with online education increases. These discoveries offer valuable perspectives for educational institutions aiming to enhance online learning experiences and customize their methods to better align with students' preferences and needs.

## 4.0 Conclusion

The results indicate that participants generally expressed satisfaction with online learning. Additionally, this study highlights the need for further investigation into integrating professional development seminars with practical training programs to enhance effective teaching and learning in online settings. The findings contribute to our understanding of student satisfaction in higher education during the pandemic, elucidating factors that influence this satisfaction. Notably, students reported satisfaction with instructor support, alternative assessment plans by faculty members, and specific online platforms such as Google Workspace, Google Classroom, and Learning Management Systems. Furthermore, the study emphasizes the critical role of interactions in online courses, which is consistent with social cognitive theory.

While the overall satisfaction with online learning was positive, variations were observed among different courses and programs. BSED, BPED, and BEED students and students from other specific courses reported higher satisfaction than BTVTED students. There was no significant difference in satisfaction levels between students at the CTE-City site and those at the Claver extension, nor was there a significant age-related difference in satisfaction levels.

An interesting finding is the student's preference for a combination of online and face-to-face learning over purely online classes in the future, suggesting that a blended learning approach might be more favorable. Regression analysis indicates a significant positive relationship between students' future recommendation of online learning and their satisfaction with current online teaching and learning approaches. This implies that students who are satisfied with their online learning experiences are more likely to endorse online learning in the future.

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## 7.0 Conflict of Interests
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# Adoption of Cashless Payments by Retail Enterprises in Legazpi City

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**Abstract.** This study examined the adoption of cashless payment methods among retail businesses, identifying the types of payment methods utilized, the factors influencing their adoption, and the challenges retailers face. Data were collected through interviews with 50 retail owners and managers. Results indicate that mobile wallets, particularly GCash, are the most frequently used cashless payment method, followed by debit/credit cards and online banking. Factors driving adoption include ease of use, trust and security, and social influence. However, retailers need to work on technological complexities, customer expectations, limited cash-in and cash-out facilities for mobile wallets, and financial costs from banks and fintech companies. The study concludes that enhanced infrastructure and support are essential for the region's broader adoption of cashless payments. The findings underscore the crucial role of policymakers and financial institutions in addressing these barriers to foster a more inclusive and efficient cashless economy.

**Keywords:** Cashless payments; Retail enterprises; Philippines.

## 1.0 Introduction

Consumers are gradually transitioning from traditional payment methods to contactless devices, driven by the advent of new mobile and other cashless payment technologies. These innovative payment mechanisms eliminate the need for cash as a medium of exchange, thereby reducing cash management costs and enhancing security. They also offer consumers convenience and leave a data trail that can benefit budgeting, accounting, and tax compliance. Cashless payment methods have numerous benefits and are rapidly gaining recognition and popularity.

The COVID-19 pandemic expanded the global adoption of cashless payments (Gorshkov, 2021). According to Pal and Bhadada (2020), the virus responsible for the COVID-19 pandemic, SARS-CoV-2, may spread via banknotes and coins. Therefore, during the pandemic, cashless payment options became increasingly prevalent. It is especially relevant in the Philippines, where the pandemic has become the primary driver of growth in online purchasing, particularly cashless transactions made through e-commerce apps like Lazada and Shopee and food delivery apps like Foodpanda and Grab. Mobile wallets, also known as digital or e-wallets, have become more popular amid fears of the virus spreading. GCash and Maya, the country's major mobile wallet platforms, reported a significant increase in transaction value.

The Visa Survey of 2022 Consumer Payment Attitudes disclosed that 92% of Filipino consumers use cashless purchases during the pandemic. 78% expect to conduct more cashless transactions. 79% believe it is safer to pay electronically. Even in the wake of the pandemic and the "new normal," Filipino consumers are receptive and eager to adopt cashless payment options, as seen in the statistics above. Moreover, the Bangko Sentral ng Pilipinas

(BSP), the country's central bank, has stated that the use of cashless payments has increased by "more than 5,000%" as a result of the pandemic, owing to the increasingly widespread use of Quick Response (QR) codes to transfer money between individuals and merchants (Hilotin, 2021). According to the same Visa survey, 71% of Filipinos prefer establishments that accept cashless payment options. This should encourage businesses to utilize cashless payments since the mode of payment affects consumer behavior. When cash is used, less money is spent, and fewer products are purchased (Khan, 2011). The consumer basket value increases when cashless payment is used compared to hard cash payments (Abidi & Khan, 2019). These results should allow businesses to obtain a competitive advantage, specifically for retail merchants directly serving consumers.

However, many businesses have not yet adopted cashless payment systems. According to the Financial Inclusion Survey of BSP, 93% of payments made in 2021 were paid in cash. Cash is still the most popular method among those who pay the private sector and government. Additionally, BSP reported that only 12% of person-to-business (P2B) payments are digital in its Digital Payments Transformation Roadmap Report. P2B payments offer tremendous potential for the adoption of cashless payments. However, most merchants, or micro, small, and medium enterprises (MSMEs), do not support cashless payments. 1,076,122 MSMEs (99.6% of all establishments) are among the 1,080,638 establishments in the Philippine Statistics Authority's (PSA) 2021 List of Establishments. Most of the MSMEs in the Philippines comprise retail stores serving consumers daily. Moreover, just 18% of business-to-person (B2P) payments, which include salary and wage payments, are digital. The bulk of workers continue to be paid using cash and checks. In addition, supplier payments or B2B (business-to-business) payments continue to rely primarily on cash. According to BSP, 85% of all volume-based supplier payments were made in cash. Acopiado et al. (2022) mentioned in their study that adopters of digital payment technology were mostly medium to large enterprises. Larger companies adopt digital technologies because they have access to more advanced resources for employee skill development and a deep understanding of the significance of technology (Serafica, 2016).

Republic Act No. 111271, commonly called "The National Payment Systems Act," acknowledges the significance of payment systems as integral elements of the country's financial infrastructure. It further acknowledges that the stability and efficacy of the monetary and financial systems are contingent upon the secure and efficient functioning of these systems. The Bangko Sentral ng Pilipinas (BSP), the government agency responsible for ensuring the stability and efficacy of payment systems in the country, expresses its support for digitalizing payments by micro, small, and medium enterprises (MSMEs) as they grow. BSP has issued implementing guidelines regarding registering promotions and adopting digital payments. However, some enterprises have yet to embrace digital or cashless payments. Furthermore, retail enterprises still encounter challenges that prevent them from using cashless payment methods despite the government's ongoing efforts to facilitate the adoption of these methods. The fact that these retail stores make up the bulk of establishments operating in the Philippines underlines their significance to economic growth. These retail stores, which are MSMEs, provide Filipinos employment, aiding the fight against poverty. They produced 62.66% of all employment in the country in 2020. These businesses contribute to the country's Gross Domestic Product (GDP). In 2020, 25% of the nation's total export revenue came from MSMEs (Philippine Statistics Authority, 2021). Therefore, it is essential to recognize that MSMEs, specifically retail enterprises, continue to face impediments to cashless payment adoption, which may hamper their ability to achieve their business objectives. Retail enterprises are vital in supplying the needs and wants of residents in Legazpi City, its adjacent cities, municipalities, and even provinces. Hence, this study assessed retail enterprises' adoption of cashless payments in Legazpi City.

## 2.0 Methodology

### 2.1 Research Design

The research employed both qualitative and quantitative analyses. This methodology involved collecting a wide range of perspectives from diverse participants and identifying the essential elements of the situation being evaluated to obtain substantial data that lead the researcher to reliable findings. The design involved talking directly to the study participants as the researcher gained in-depth information regarding the subject matter. Furthermore, the study is characterized by its descriptive nature since it provided a comprehensive description of the phenomenon under investigation, namely the use of cashless payments by retail enterprises.

### 2.2 Research Participants

The study's participants are 50 owners/managers of retail enterprises in Legazpi, determined using stratified sampling. The retail enterprises are adopters of cashless payment systems. Adopters refer to businesses that have implemented at least one (1) cashless payment method during the in-person interview. The research was centered on Legazpi City, with particular emphasis on the Legazpi Port District, which serves as the City's commercial business district.

### 2.3 Research Instrument

This study used a semi-structured interview guide to obtain data from the study participants. The researcher made an interview guide for soliciting questions and documenting responses before the interviews. Each participant was interviewed using open-ended questions to gather their insights and opinions.

### 2.4 Data Gathering Procedure

To obtain their consent, the researcher corresponded with the study participants using a written letter, which was disseminated before the in-person interview. The local dialect was employed during face-to-face interviews with individuals who were more familiar and comfortable with it. The interviewer ensured that the interview questions were translated to facilitate participants' comprehension and enable them to deliver suitable responses.

### 2.5 Data Analysis

The research employed both qualitative and quantitative analyses. The qualitative analysis of the study encompassed a methodical process of identifying themes and patterns within the data, which were subsequently interpreted. The researcher used several techniques, including analysis of word repetitions, key-words-in-context (KWIC), and utilization of a compare approach. Frequently occurring words were perceived to be significant. Themes were identified through the process of categorizing samples into groups that share similar meanings. The compare and contrast approach was used to identify and analyze the similarities and differences across texts. This study also used descriptive statistics, including frequency distribution and rankings. The researcher identified relevant concepts within the dataset and converted them into quantitative data to facilitate subsequent comparisons and analyses.

### 2.6 Ethical Considerations

Through a letter to the participants, the researcher obtained the participants' permission to conduct the study before data collection. The participants obtained complete disclosure regarding the following: identification of the researcher and the educational institution, provision of contact information in case questions arise, selection of participants, the purpose of the research, benefits of participation, level, and type of participant involvement, assurance of confidentiality and anonymity, and the participant's right to withdraw from the study at any time. The City of Legazpi, particularly the Mayor’s Office, was also informed of the study when the researcher requested pertinent information to set the study's population and sample size.

## 3.0 Results and Discussion

### 3.1 Profile of Retail Enterprises in Legazpi City

**Table 1.** Descriptive statistics of the profile of the retail enterprises in Legazpi City

| | Frequency | Ranking |
|---|---|---|
| **Form of Business Organization** | | |
| Sole Proprietorship | 34 | 1 |
| Partnership | 0 | 3 |
| Corporation | 16 | 2 |
| **Type of Enterprise** | | |
| Micro (1-9 employees) | 50 | 1 |
| Small (10-99 employees) | 0 | 2 |
| Medium (100-199 employees) | 0 | 2 |
| **Length of Operations** | | |
| Less than one year | 6 | 4 |
| One year to less than five years | 16 | 2 |
| Five years to less than ten years | 21 | 1 |
| Ten years or more | 7 | 3 |

The generalizability of the results is limited by the narrow scope of the retail organizations interviewed since all businesses included were micro-enterprises with a workforce of fewer than ten individuals. The researcher opted to employ the classification provided by the Philippine Statistics Authority (PSA) in determining the categorization of micro, small, and medium enterprises (MSMEs), as opposed to relying on the Magna Carta for MSMEs (Republic Act No. 9501). Although according to the Philippine Statistics Authority (PSA) List of Establishments 2021, micro-enterprises comprise the highest proportion among the three (3) categories of enterprises, namely micro, small, and medium, due to the lack of data on small and medium enterprises, the results cannot confirm that the conclusions derived from the study apply to micro, small, and medium enterprises (MSMEs) in general.

The influence of technology adoption in organizations remains consistent regardless of the differing lengths of operations observed across the companies under examination. Some businesses sustained operations spanning more than ten (10) years, whereas others are still in their formative stages, having been actively operating for only a few months. Therefore, the research findings partially align with previous investigations' findings. To begin with, a positive association exists between the age or length of a business and its adoption rate. Organizations increasingly recognize technology as crucial for attaining sustainability as they evolve and accumulate expertise. Furthermore, Trinugroho et al. (2021) have presented findings that demonstrate a favorable association between the utilization of digital technology and the existence of younger businesses and individuals who possess internet connectivity.

### 3.2 Cashless Payment Methods

Table 2 presents the cashless payment methods retail enterprises use in Legazpi City.

**Table 2.** Descriptive statistics of the cashless payment methods used by retail enterprises in Legazpi City

| | Frequency | Ranking |
|---|---|---|
| **Person to Business (P2B) Payments** | | |
| Credit/Debit Card | 10 | 3 |
| GCash | 49 | 1 |
| Maya | 12 | 2 |
| Online banking | 6 | 4 |
| None (Cash) | 0 | 5 |
| **Business to Person (B2P) Payments** | | |
| Debit Card (ATM) | 11 | 2 |
| Online Banking | 0 | 4 |
| GCash | 1 | 3 |
| None (Cash) | 38 | 1 |
| **Business to Business (B2B) Payments** | | |
| Credit/Debit card | 0 | 4 |
| Online Banking | 32 | 1 |
| GCash | 9 | 3 |
| None (Cash) | 18 | 2 |

***Mobile Wallets***

GCash, a mobile application holding a mobile wallet, e-wallet, or e-money, is the most used cashless payment method among the retail enterprises involved in the study, specifically for consumer payments or P2B (person-to-business) transactions. A limited number of retail firms (18%) utilized the mobile application for B2B (business-to-business) payments. In contrast, 2% of the surveyed retail firms have adopted mobile wallet technology to facilitate B2P (Business-to-person) payments. This observation indicates that GCash is not commonly utilized to pay suppliers for merchandise bought and remunerate employees despite its popularity in consumer payments.

Other mobile wallet platforms are available in the country, such as Maya, Coins PH, GrabPay, PayPal, BanKo, Moneygment, Alipay, DragonPay Credits, Lazada Wallet, ShopeePay, 7-11 CLIQQ Pay are not commonly used by retail enterprises in Legazpi City. This observation highlights the lack of success in the Department of Trade and Industry (DTI) endorsements for different digital wallet platforms. Among the endorsed platforms, only one (1) (GCash) has achieved popularity in the retail sector, specifically in Legazpi City.

***Online Banking***

Online banking is the second most frequently utilized form of cashless payment. The bank involved is contingent upon the bank account held by the retailer and the sender or receiver of the payment. The study indicates that online banking is frequently employed for supplier payments or business-to-business (B2B) transactions. This phenomenon can be attributed to the amount of funds transferred between two (2) bank accounts. The transaction limits for online banking are typically higher than those for mobile wallets, with the specific limits varying depending on the bank. Another contributing factor is the tendency for users to maintain higher balances in their bank accounts relative to their mobile wallets. This can be attributed to security, wallet limit, and the earned interest in a bank account. Furthermore, individuals can circumvent the associated charges incurred when moving funds from a regular bank account to a mobile wallet account, followed by transferring funds to another bank account. Consumer or P2B payments using online banking are utilized only by a few retail enterprises, while B2P payments using online banking are uncommon. Online banking is only an option for paid employees using debit cards. They can access their earnings in their payroll account by utilizing an ATM (automated teller machine) card (a debit card) issued to them or by effectively overseeing and controlling their finances by utilizing the bank's mobile application.

***Credit/Debit Cards***

The utilization of card payments, such as credit and debit cards, is limited to a small number of retail establishments. This may be because the study's respondents were all micro-merchants, constituting a significant study limitation. It is imperative to acknowledge that the operation of card payments is contingent upon utilizing payment terminals. The acquisition of these payment terminals is facilitated through financial institutions, including banks such as BPI and BDO, as well as fintech companies like Maya. (Note: Fintech is a portmanteau derived from the combination of the terms "financial" and "technology." "Financial technology" encompasses various applications, software, and technological tools that enable individuals or organizations to digitally access, manage, analyze, or execute financial transactions. (Trificana, 2023).) Maintenance of payment terminals requires a monthly threshold of transactions. The ability of micro merchants to meet the requirements set by banks and fintech companies may vary depending on certain conditions such as daily sales level, income, and financial position. Furthermore, card payments include supplementary expenses, including fees accompanying each transaction and the fixed cost represented by the subscription fee. The observation that all respondents are micro merchants provides a potential explanation for the low number of card payment acceptance in this retail enterprise in Legazpi City since micro-enterprises are described to have high volume, low-value transactions.

Moreover, based on the findings, some retail enterprises that adopted cashless payments in P2B payments do not necessarily use cashless payments in B2P and B2B payments. Some only make use of cashless payments in consumer payments. The results build on existing evidence of the following: 1) According to the Visa Survey of 2022 Consumer Payment Attitudes, a significant majority of 92% of Filipinos employed cashless payment methods when purchasing goods and services. 2) The Bangko Sentral ng Pilipinas (BSP) report highlights that B2P transactions, specifically the remuneration of salaries and wages, accounted for a mere 18% of the overall payment landscape. 3) Additionally, the reliance on cash remains prevalent in B2B transactions, which involve settling supplier payments. Hence, this shows that some of the retail enterprises in the study are still reliant on cash in their business transactions apart from consumer payments.

### 3.3 Factors Influencing Cashless Payment Adoption

The factors under consideration include ease of use, device barriers, trust and security, availability of resources, and social influence (see Table 3).

**Table 3.** Descriptive statistics of the factors influencing cashless payment adoption

| | Frequency | Ranking |
|---|---|---|
| Ease of Use | 36 | 2 |
| Device Barriers | 6 | 5 |
| Trust & Security | 15 | 4 |
| Availability of Resources | 21 | 3 |
| Social Influence | 44 | 1 |

These factors influenced the decision-making process of retail firms in adopting cashless payments. Based on the Technology-Organization-Environment (TOE) Framework, the technology component encompasses the factors of ease of use and device barriers. The organization component includes trust, security, and availability of resources, while the environmental aspect covers the social influence factor. The factors above are consistent with the findings of Raj et al. (2022), where the authors identified perceived ease of use, device barrier, anxiety, perceived cost, and social influence, among other variables, as influencing factors to cashless transactions.

***Ease of Use and Device Barriers***

Ease of use pertains to an individual's perception of the effort required to utilize a specific system. Cashless payments provide convenience to both parties involved in cashless payment transactions. People see cashless payments as convenient because they eliminate the need to carry physical currency. (Ching, 2017; Ha, 2020; and Francisco, 2020). Consumers and businesses can pay the exact amount of the transaction without causing concerns for the other party regarding change availability. (Dave, n.d.). Different cashless payments are very accessible nowadays. Before, most cashless payment users needed a bank account to use a credit and debit card for payments. Today, even unbanked individuals can use cashless payment methods like mobile wallets. Mobile wallets do not require their users to have a bank account. Instead, they only require an individual to have a cellphone number registered to a telco (telecommunications service provider). Ease of use also refers to learnability.

Many respondents reported that it is easy to get familiar with cashless payments, specifically mobile wallets since it is a mobile application just like other applications on their cellular phones. However, a small subset of store owners (identified by the researcher as middle-aged adults (50-59)) have a contrasting viewpoint. The individual's attitude towards the technology is detached. Additionally, there is a perception among specific individuals that the necessary tools for cashless transactions, such as mobile phones, payment terminals, laptops, or computers, pose challenges in terms of usability. Device barriers encompass various aspects that include user interface, simplicity of navigation and input, display clarity, and the quality of the mobile device. These characteristics can significantly influence the user's opinion of service quality, thus affecting their inclination to utilize mobile payment methods.

Adopting the technology above was mainly influenced by the presence of proficient staff capable of utilizing it. This aligns with the complexity characteristic defined by the Diffusion of Innovation (DOI) theory, utilized as a theoretical framework in this study. Complexity refers to the extent to which an innovation is relatively challenging to comprehend and utilize. Retail firms carefully evaluate the complex nature of the technology they intend to employ before its implementation. These enterprises must adopt technology that does not impose a burden but facilitates operations and enhances efficiency.

***Trust and Security***

Trust and security are two interrelated factors. Individuals may worry and worry while considering the security, safety, and utilization elements of technology, particularly about cashless payment systems. Therefore, it is imperative to consider both trust and security when using cashless payment systems. The study observed that in addition to the ease-of-use factor, respondents expressed confidence in the security of their digital payment methods. However, this does not apply to all. Some respondents reported experiencing issues, including financial losses when using cashless payment methods. Users must trust cashless payment technologies. Trust is also an important factor in financial inclusion, which enables financial services to be available to a wide range of users (e.g., bank account ownership, access to credit and insurance, etc.) Financial inclusion is a step to the shift from using cash to cashless payments. Hence, financial inclusion should be prioritized so that cashless payment technologies can also be enhanced.

***Availability of Resources***

The availability of resources within an organization also influences the adoption of cashless payments. The system's proper utilization necessitates internet access and the employment of suitable equipment or devices to allow the execution of transactions. Multiple respondents have indicated that they own Wi-Fi connectivity within their respective enterprises, hence facilitating the establishment of an Internet connection. In contrast, retail enterprises without Wi-Fi rely on mobile data for internet connectivity. The availability and quality of mobile data services are contingent upon the signal strength provided by the telcos (telecommunications service providers).

Additional resources required include electronic devices such as cellular phones, card payment terminals, laptops, and computers. Furthermore, it is crucial to acknowledge that resources could also encompass sufficient financial means to cover the necessary expenses of utilizing cashless payment methods. Availability of resources is synonymous with perceived cost, which refers to the subjective evaluation of the expenses associated with utilizing technologies, encompassing the procurement of necessary gadgets, internet expenditures, and fees imposed by financial institutions and banks.

***Social Influence***

Social influence refers to the phenomena in which individuals are affected by the attitudes, beliefs, and behaviors of others. According to the study's findings, most retail firms have committed to meeting their customers' demands by accepting at least one (1) cashless payment method. Most of the study's respondents underscored their customers' significant impact on integrating cashless payment systems within their enterprises. This is consistent with the findings of Chairunnisa et al. (2020) and Xena and Rahadi (2019), who identified the social influence component as a factor that needs to be considered before adopting cashless payments. Given the preference of numerous customers for cashless payment alternatives, retail businesses have duly considered the potential revenue implications associated with policies aimed at accommodating cashless payments.

The finding above aligns with the research conducted by Heckel and Waldenberger (2022) and Francisco (2020), which stresses the tendency of consumers to favor establishments that provide diverse options for cashless transactions and the subsequent impact on sales. Social media and digital platforms can also facilitate social influence in the adoption of cashless payment. Social media serves as a platform for marketing different cashless payment methods, which, in return, influences merchants such as micro retail enterprises. Promoting cashless payment systems to merchants and their stakeholders, particularly customers is crucial for achieving widespread acceptance. Marketing plays a significant role in raising awareness among consumers and businesses about its various aspects, including its features, benefits, costs, promotions, and incentives.

As a result of this phenomenon, marketing strategies have the potential to persuade both people and businesses to transition from utilizing physical currency to adopting cashless payment methods. Marketing allows payment services to differentiate their offerings from competitors so that users have varying options. It plays a crucial role in fostering confidence and establishing credibility between suppliers of cashless payment solutions and their end consumers. Marketing helps payment service providers to retain their users through personalized offers and updates regarding their services. Marketing can provide pertinent information, such as tutorials regarding cashless payment usage, to help users understand how to use it effectively. Finally, marketing serves as a means of obtaining input from its user base. This feedback can potentially assist payment service providers in improving their cashless payment services.

### 3.4 Challenges Encountered Before Cashless Payment Adoption

Adopting cashless payment methods presents organizations with the problem of managing technological complexities, especially with middle-aged and older people (see Table 4). Several store owners who were interviewed expressed their perception that using cell phones and mobile applications for cashless payments is complicated. Middle-aged and older persons with limited knowledge and expertise in technology frequently encounter the psychological factor of lacking confidence due to their limited exposure and unfamiliarity with rapid technological progressions. Most cashless payment technologies have only been popular recently. It may be stressful for these people to learn the technology, and they may fear failing to learn it.

**Table 4.** Descriptive statistics of the challenges encountered prior to cashless payment adoption

| | Frequency | Ranking |
|---|---|---|
| Technological complexities | 6 | 4 |
| Satisfying client demands in terms of a variety of cashless payments offered | 15 | 2 |
| Meeting requirements of cashless payment | 26 | 1 |
| None | 12 | 3 |

Moreover, middle-aged and older individuals can experience various physical barriers, like visual and hearing impairments, or muscle conditions such as arthritis, which can potentially impede or restrict their capacity to effectively make use of technology such as smartphones, terminals, laptops, and computers that are necessary for cashless payment adoption. Digital ageism, which pertains to the social marginalization of older individuals with the advancement and utilization of digital platforms, leading to a discernible separation between physical and digital realms (Chu et al., 2022), may manifest itself in businesses adopting cashless payment systems. Therefore, it is imperative to look into this issue. These individuals depend on younger staff members with the knowledge and skills to effectively manage emerging technologies. Therefore, as per the interviews conducted with these primary sources, it was seen that they have designated individuals to handle the implementation of cashless payment options within their retail business. This strategic decision was made to accommodate customers who prefer non-cash payment methods. According to Ching (2017), the availability of user-friendly software and systems will encourage the adoption of digital payment methods. This should be true for middle-aged and older adults as well. Technology should also cater to these age groups' needs, not just certain ones.

Before implementing cashless payment systems, several respondents reported encountering an issue with achieving customer expectations about various available payment methods. This compelled them to embrace a minimum of one (1) cashless payment method to accommodate the demands of their customers. This trend can also be observed in retail firms that have previously implemented a cashless payment system. Customers search for various cashless payment options because they do not always use one payment method. Retail businesses consider it a challenge since their clients frequently seek additional options. In the context of B2P payments, the recipients and employees of the respective businesses do not possess discretionary power to determine the payment method for their salaries and wages. The decision rests on the organization, which is its employer. The scope of this investigation does not encompass that particular area. Therefore, it has the potential to be a subject of future research. A future study endeavor might be undertaken to assess the inclination of employees towards various forms of salary payments.

To facilitate debit and credit card payments, a financial institution issues a terminal necessary for the transaction. Obtaining the terminal posed a significant issue for some retail firms that have embraced the adoption of cashless payment systems since specific requirements need to be met before receiving one, depending on the financial institution that will provide the payment terminal. In connection with the availability of resources, retail enterprises should be able to cover the expenses associated with using card payment terminals. On the other hand, a steady internet connection (either by Wi-Fi or mobile data) and a device that will support the mobile application linked with these cashless payment options are necessary for mobile wallets and online banking. To facilitate cashless transactions, businesses must furnish the necessary equipment, which incurs associated expenses. Therefore, retail enterprises should exercise caution and thoroughly evaluate the financial implications before selecting the cashless payment methods they intend to use.

### 3.5 Challenges Encountered After Cashless Payment Adoption

**Table 5.** Descriptive statistics of the challenges encountered prior to cashless payment adoption

| | Frequency | Ranking |
|---|---|---|
| Technological difficulties | 47 | 1 |
| Lack of cash-in and cash-out machine | 3 | 3 |
| Finance costs imposed by banks/fintech companies | 6 | 2 |
| None | 0 | 4 |

As shown in Table 5, the primary type of challenge respondents of the study experienced was technological challenges after implementing cashless payment systems. Store owners and managers have claimed instances of delayed or nonexistent notifications regarding payment receipts from consumers, unexpected system maintenance or issues with the mobile application, unaccounted financial losses, and poor internet connectivity. The matter of internet connectivity is not surprising considering the June 2023 data from Ookla's Speedtest Global Index, which positions the Philippines at 83rd in mobile and fixed broadband speeds. The country has long been plagued by poor internet connectivity, which hurts cashless payments. Issues with the use of automated teller machines (ATM) and cash-in machines have been associated with cashless payments as well because merchants must take money from their mobile wallet (cash-out) and bank account (withdraw) and put money into their mobile wallet (cash-in), respectively. It should also be noted that certain card terminals tend to unexpectedly disconnect from their online network, thereby catching users off guard. This sudden offline status of the terminals creates a sense of surprise, as businesses cannot utilize them to accept card payments. Certain card terminals may be outdated due to their reliance on point-of-sale (POS) equipment. Wireless payment terminals, which are increasingly prevalent, operate independently of point-of-sale (POS) devices. It can be utilized if an internet connection is available, and a sim card is registered correctly with the device.

Moreover, unaccounted financial loss has been an issue for a few study participants. In the past, multiple cash losses occurred in mobile wallets and bank accounts that were subsequently disclosed on social media platforms. Unexpectedly, one's hard-earned money can become misplaced within the digital realm. People are concerned about their online security. Certain concerns were resolved, while others remained unresolved, as indicated in the study's findings. It is also important to acknowledge that electronic money, also known as e-money, stored in mobile wallets does not fall under the scope of insurance provided by the Philippine Deposit Insurance Corporation (PDIC). The PDIC's insurance coverage is designed to protect depositors of member banks, offering insurance coverage of up to P500,000 per depositor per bank. For funds to be eligible for insurance coverage by the Philippine Deposit Insurance Corporation (PDIC), they must be deposited in a bank account rather than being held in alternative forms such as electronic money or mobile wallet platforms.

These technological challenges prove that despite technological advances, it is not perfect. At the same time, it means that there is room for improvement. According to Acopiado et al. (2022), ensuring the enhancement of data security measures for those utilizing cashless payment systems should be seen as a paramount concern. This aligns with the conclusions drawn by Ching (2017), who argued that advancing more secure electronic payment systems would contribute to the expansion of cashless transactions. Moreover, Sahoo and Arora (2017) stated that using cashless payments poses a lower risk than using physical currency if sufficient cybersecurity exists. Hence, fixing these technological issues is imperative to ensure the smooth operations of cashless payment technologies. It is crucial to recognize that stakeholders within the cashless payment ecosystem are responsible for improving digital payment systems. It is worth acknowledging that a significant challenge faced by most retail firms participating in the study pertains to technological challenges. Addressing this issue is crucial for stakeholders seeking to promote the growth of cashless payments. This issue necessitates the involvement of various stakeholders, including regulators, policymakers, cashless payment service providers, media and content creators, merchants, and consumers.

In addition to technological challenges, the research has revealed a deficiency in cash-in and cash-out machines linked to mobile wallets. Despite the extensive network of partners that mobile wallet providers like GCash have established to facilitate the inflow and outflow of money for its users, these efforts may not be sufficient. Certain partner retailers impose substantial fees that can prove costly for mobile wallet users. This observation highlights the existing demand for additional cash-in machines. Furthermore, the machines could include cash-out functionalities, resembling the automated teller machines (ATMs) commonly seen in banks. The machines are unique to mobile wallets since they will not require EMV chip-based cards. As a result, these devices will no longer be referred to as cash-in machines, as they will now facilitate cash-in and cash-out transactions. Enojas et al. (2023) conducted a study wherein they successfully designed and developed a G-Cash machine capable of facilitating cash-in and cash-out functions. The designed machine can take Philippine peso bills. The machine underwent evaluation in the conducted study, whereby its functionality, acceptability, and usefulness were assessed, resulting in favorable outcomes. Globe Fintech Innovations Inc., the corporate entity responsible for GCash, has the potential to leverage this design to develop a future-oriented machine for its users to utilize. Apart from the acceptability of peso bills in cash-in and out machines, GCash could investigate a deposit machine that enables coins to be deposited, such as Bangko Sentral ng Pilipinas' Coin Deposit Machine (CoDMs), which was launched last June 2023. CoDMS allows the public to deposit coins and store the value of those coins in their e-wallet or mobile wallet accounts or shopping vouchers of a well-known shopping mall in the Philippines. After only four (4) months since CoDMS was launched, P98.9 million coins have been deposited into the machines from over 37,000 transactions; the highest single transaction recorded so far among the CoDMS is worth P100,260. (Bangko Sentral ng Pilipinas, 2023). This shows that there is also a demand for machines that allow the public to deposit their coins. This can be viewed as an opportunity for cashless payment providers.

Lastly, some individuals identified charges imposed by banks and fintech companies as challenges in using cashless payment methods. Banks and fintech companies levy fees as a method of generating income. The income generation strategy employed by this financial institution is monetizing the services offered to customers, particularly merchants utilizing card payment terminals for consumer payments. Understanding that these companies must also be compensated for their services is essential. Retail businesses should comprehensively analyze the benefits that cashless payments offer their firm, compared with the associated fees. By doing so, they will recognize that offering a variety of cashless payment alternatives is beneficial, as it effectively offsets the finance costs imposed by financial institutions. However, this could be mitigated.

## 4.0 Conclusion

As the digitalization of payments continues to grow, it is important to understand the overall experience of adopters. The following statements present the conclusions drawn from the study: 1) retail businesses in Legazpi City accept mobile wallet platforms such as GCash and Maya, bank transfers (online banking), and credit and debit cards as cashless payment options; 2) ease of use, device barriers, trust & security, availability of resources, and social influence are essential factors that retail enterprises in Legazpi City consider in cashless payment adoption; and 3) retail enterprises face several challenges prior to and after cashless payment adoption which involves effectively managing technological complexities linked to these systems, satisfying client demands in terms of the variety of cashless payment options provided, meeting the requirements for the selected cashless payment alternatives, lack of cash-in and cash-out machines for mobile wallet platforms and the finance costs imposed by banks/fintech companies.

The shift from utilizing cash to cashless payments is an endeavor that necessitates continuous improvements. Stakeholders should work together to improve such systems, considering the benefits they provide to their users. The recommendations of this study aimed to address the challenges encountered by retail enterprises in Legazpi City in cashless payment adoption and to promote cashless payment use in retail businesses, in general. The recommendations are as follows: 1) the government should continue its efforts in financial inclusion and financial literacy among Filipinos since it directly affects the rate of cashless payment adoption, improve internet connectivity across the nation since poor internet connection has a negative effect on cashless payment use, consider insuring e-money, work with payment service providers to make card payment terminals cheaper and more accessible; 2) payment service providers should prioritize addressing technological concerns faced by their users, implement additional security measures, enhance the present functionality of their mobile applications, develop a machine that incorporates both cash-in and cash-out functions, promote the adoption of wireless payment terminals, deploy agents to MSMEs to conduct periodic inspections of their system use at the grassroots level, develop a system for salary payments and employ various promotional strategies, including social media marketing to MSMEs; and 3) retail enterprises should prominently display signage on their entrances or in highly visible locations such as the cashier counter indicating that they accept cashless payments to inform and encourage customers and indicate that they accept cashless payments in their social media platforms (if any).

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## 7.0 Conflict of Interests

The author asserts that there are no conflicts of interest regarding the publishing of this paper.


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