

The Role of Personal Characteristics on the Entrepreneurial Competence of the Senior High School TVL Students

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Date received: March 4, 2025Originality: 98%Date revised: April 7, 2025Grammarly Score: 99%Date accepted: April 26, 2025Similarity: 2%

Recommended citation:

Apolonio, M. (2025). The role of personal characteristics on the entrepreneurial competence of the senior high school TVL students. *Journal of Interdisciplinary Perspectives*, 3(5), 473-482. https://doi.org/10.69569/jip.2025.136

Abstract. Technical Vocational and Livelihood Education (TVL) has been described as the most effective way to transform the workplace, reduce poverty, enhance the economy, and improve the quality of life for everyone worldwide. Previous studies have highlighted the essence of entrepreneurship in alleviating poverty (Cudia et al., 2019; Gozun & Rivera, 2017). There is a lack of detailed research on the specific entrepreneurial competencies of Senior High Technical-Vocational-Livelihood students in District II, Division of Quezon City. Addressing the gap in understanding how demographic factors shape entrepreneurial skills, the study aims to assess key competencies and identify significant differences based on personal attributes. Using a quantitative-descriptive research design, the study involved 348 senior high school students from District II public schools in Quezon City. Findings indicate that students demonstrated high competence in the Achievement Cluster. However, competencies under the Planning Cluster received the lowest ratings. These findings highlight the role of personal characteristics in shaping students' entrepreneurial potential.

Keywords: Entrepreneurship; Entrepreneurial competence; TVL students; Senior high.

1.0 Introduction

Entrepreneurship is a key driver of economic growth and poverty reduction. Despite this, the Philippines continues to struggle with poverty, ranking 84th in the Global Entrepreneurship Index. In connection with this, previous studies highlight the role of entrepreneurship in alleviating poverty (Cudia et al., 2019; Gozun & Rivera, 2017). TVL programs are designed to prepare students for employment or entrepreneurship right after high school. Investigating their entrepreneurial competencies ensures these programs equip students with the skills needed to succeed in the real world, especially in starting and sustaining small businesses. Despite the growing importance of the Technical-Vocational-Livelihood (TVL) track in preparing students for immediate employment or entrepreneurship, there is a limited number of studies focusing on the entrepreneurial competencies of TVL students, particularly at the secondary education level.

Given these gaps, this study aims to examine the entrepreneurial competencies of Senior High TVL students in District II, Quezon City, which has several public secondary schools actively offering TVL strands, and given that it is also a home to students from a mix of urban and lower-income communities. Focusing on this group offers insights into how entrepreneurial education impacts youth who may see entrepreneurship not just as a career choice, but as a necessity for economic survival and upliftment.

2.0 Methodology

2.1 Research Design

This study employed a descriptive-quantitative research design to examine the conditions during the study and analyze the participants' entrepreneurial competencies. The descriptive method involved collecting data through surveys, allowing for a structured analysis of individual variables as they naturally exist (Gravetter & Forzano, 2018). The quantitative approach enabled a statistical assessment of the gathered data. A previously validated tool, a self-rating Personal Entrepreneurial Competencies (PEC) questionnaire, was used as the primary survey instrument. This questionnaire measured the entrepreneurial competency levels of TVL students, identifying their strengths and areas for improvement.

2.2 Research Participants

The study included 348 senior high school TVL students selected through proportionate random sampling, which ensured equal representation based on the school population. The sample size was determined using established sampling techniques to achieve reliable results. The participants were categorized based on gender, parents' source of income, household monthly income, general weighted average, school size, and favorite subject, ensuring comprehensive analysis.

2.3 Research Instrument

A modified questionnaire, consisting of two sections, was used. The first section gathered demographic information, including gender, parents' source of income, household monthly income, general weighted average, school size, and favorite subject. The second section assessed entrepreneurial competence across three dimensions: (1) Achievement Cluster, (2) Planning Cluster, and (3) Power Cluster. Respondents rated their competencies using a Likert scale. The questionnaire underwent expert face validation to ensure content relevance and clarity. A pilot test was also conducted, and reliability testing using Cronbach's alpha yielded a high reliability score (0.889).

2.4 Data Gathering Procedure

Before data collection, approval was obtained from the division office, school heads, and administrative staff. The questionnaire and an official request letter were distributed to the 348 respondents. The researcher ensured proper monitoring of the distribution and retrieval of the questionnaires within the set time frame. Participation was voluntary, and respondents were informed of the study's purpose and their right to withdraw at any time.

2.5 Ethical Considerations

This study followed ethical guidelines to protect participants' rights and confidentiality. Approval was secured from the Institutional Ethics Committee. Informed consent was obtained from all participants, and parental or guardian consent was required for minors. The study ensured that all data remained confidential and was used solely for research purposes.

3.0 Results and Discussion

3.1 Personal Characteristics of the Participants

Table 1 shows the respondents' frequency and percentage distribution regarding sex, parents' source of income, family income, general weighted average, and school size. Table 2 shows the respondents' frequency and percentage distribution regarding their favorite subject. A notable trend is the higher preference for subjects related to communication and sciences, which may reflect the students' recognition of the importance of these skills in both academic and professional settings. Subjects like 'Media & Information Literacy' and 'Empowerment Technologies (E-Tech): ICT for Professional Tracks' also show a reasonable level of interest (7.47%), indicating an awareness of the importance of digital literacy in modern education. These preferences could have implications for the students' entrepreneurial competencies. For instance, a strong preference for communication-related subjects could enhance their ability to effectively pitch ideas and network, which are crucial entrepreneurial skills. On the other hand, a lower interest in research-related subjects might indicate a gap in analytical skills, which are also vital for successful entrepreneurship. Understanding these preferences helps educators and policymakers tailor their curriculum and teaching methods to better align with the interests and needs of the students, ultimately enhancing their educational experiences and entrepreneurial competencies.

Table 1. Frequency and percentage distribution of the respondents' characteristics

Sex	Frequency	Percentage (%)
Male	31	17.6
Female	145	82.4
LGBTQIA+	24	6.90
Parents' Source of Income		
Salaries and wages	244	70.1
Family-operated enterprises/activities	88	25.2
Remittances	8	2.30
Pension/Insurance	8	2.30
Family Income		
Less than ₱9,520	179	51.4
₱9,521 to ₱19,040	98	28.1
₱19,041 to ₱38,080	42	12.0
₱38,081 to ₱66,640	17	4.89
₱66,641 to ₱114,240	7	2.01
₱114,241 to ₱190,400	3	0.86
At least ₱190,401	2	0.57
General Weighted Average		
90-100 (Outstanding)	77	22.1
85-89 (Very Satisfactory)	164	47.1
80-84 (Satisfactory)	77	22.1
75-79 (Fairly Satisfactory)	23	6.61
Below 75 (Did Not Meet Expectations)	7	2.01
School Size		
Large School	76	21.8
Mega School	272	78.1

Table 2. Frequency and percentage distribution of the respondents in terms of favorite subject

Subject	Frequency	Percentage (%)
Oral Communication	57	16.3
Reading & Writing	18	5.17
Komunikasyon at Pananaliksik sa Wika at Kulturang Pilipino	30	8.62
Pagbasa at Pagsusuri ng Iba't Ibang Teksto Tungo sa Pananaliksik	13	3.74
21st Century Literature from the Philippines and the World	7	2.01
Contemporary Philippine Arts from the Regions	12	3.45
Media & Information Literacy	7	2.01
General Mathematics	30	8.62
Statistics & Probability	16	4.60
Earth and Life Science (Lecture and Laboratory)	38	10.9
Physical Science (Lecture and Laboratory)	8	2.30
Personal Development / Pansariling Kaunlaran	23	6.61
Understanding Culture, Society, and Politics	20	5.75
Introduction to the Philosophy of the Human Person / Pambungad sa Pilosopiya ng Tao	3	0.86
Physical Education and Health	8	2.30
English for Academic and Professional Purposes	10	2.87
Practical Research 1	4	1.15
Practical Research 2	3	0.86
Pagsulat sa Filipino sa Piling Larangan (Akademik, Isports, Sining at Tech-Voc)	8	2.30
Empowerment Technologies (E-Tech): ICT for Professional Tracks	26	7.47
Entrepreneurship	7	2.01

3.2 Entrepreneurial Competence

Table 3 shows respondents' assessment of their entrepreneurial competence under the Achievement Cluster. The overall mean for the respondents' assessments in their entrepreneurial competence under the achievement cluster is 3.57, with the verbal interpretation of competent. The result implies that Opportunity Seeking and Initiative and Risk Taking were the competencies the respondents found moderately competent. This is most likely related to the student's perception of restricted opportunities for starting their businesses. Elmassah et al. (2022) found that risk-taking capability (personal factor), relationship with business partners, and availability of funds (business factors) significantly impact the success of ethnic entrepreneurship in the UAE. A relevant study in the Asian context added that factors such as capital acquisition, employment, financial problems within the family, and

available opportunities in the market play a significant role in the decision-making process of Asian immigrants who want to become entrepreneurs (Sabary et al., 2023).

Table 3. Entrepreneurial competence under the achievement cluster

Indicators	Mean	Verbal Interpretation
Opportunity Seeking and Initiative	3.30	Moderately Competent
Persistence	3.71	Competent
Risk Taking	3.36	Moderately Competent
Demand for Efficiency and Quality	3.70	Competent
Commitment to Work Contract	3.76	Competent
Cluster Mean	3.57	Competent

Table 4 shows respondents' assessments of their entrepreneurial competence under the Planning Cluster. The overall mean for the respondents' assessments of their entrepreneurial competence under the achievement cluster is 3.56, with interpretation of competent. The results were similar to the Abalos et al. (2016) study, where Goal Setting and Information Seeking are the Personal Entrepreneurial Competencies where the students achieved high scores. This reflects that the students are futuristic, which means that they tend to have advanced preparation for the success of their business and are very goal oriented.

Table 4. Entrepreneurial competence under the planning cluster

Indicators		Mean	Verbal Interpretation
Goal Setting		3.59	Competent
Information See	eking	3.66	Competent
Systematic Plan	ning and Monitoring	3.44	Moderately Competent
Cluster Mean	0	3.56	Competent

Table 5 shows respondents' assessments of their entrepreneurial competence under the Power Cluster. The overall mean for the respondents' Assessments of their Entrepreneurial Competence under the Achievement Cluster is 3.66, with a verbal interpretation of Competent.

Table 5. Entrepreneurial competence under the power cluster

Indicators	Mean	Verbal Interpretation
Persuasion and Networking	3.66	Competent
Independence and Self-Confidence	3.67	Competent
Cluster Mean	3.66	Competent

3.3 The Role of Gender on Entrepreneurial Competence

Table 6 shows the result of the Kruskal-Wallis H-Test, which compares the respondents' assessment of their entrepreneurial competence in the achievement cluster when grouped according to gender. A significant difference was observed in the Demand for Efficiency and Quality area, with a p-value of 0.003, which is less than the 0.05 significance level. This result suggests that gender influences how respondents assess their competence in striving for efficiency and quality in their entrepreneurial activities. The significant difference in demand for efficiency and quality implies that females may feel more confident or emphasize maintaining high standards and efficient practices in their entrepreneurial endeavors compared to their male and LGBTQIA+ counterparts. This finding could be due to various factors, including societal expectations, educational experiences, or personal motivations that differ by gender.

Table 6. Comparison of entrepreneurial competence in the achievement cluster when grouped according to gender

Indicator	H-value	P-value	Decision	Remarks
Opportunity Seeking and Initiative	0.85	0.65	Failed to Reject Ho	Not Significant
Persistence	3.37	0.18	Failed to Reject Ho	Not Significant
Risk Taking	1.96	0.37	Failed to Reject Ho	Not Significant
Demand for Efficiency and Quality	11.3	0.003	Reject Ho	Significant
Commitment to Work Contract	5.13	0.07	Failed to Reject Ho	Not Significant

The results of Table 7 indicate that no significant differences were found in the extent of entrepreneurial competence in all areas of the Planning Cluster, including Goal Setting (p-value=0.28), Information Seeking (p-value=0.17), and Systematic Planning and Monitoring (p-value=0.35). These results indicate that respondents' gender profile did not influence their assessment of their entrepreneurial competence under the Planning Cluster.

This is aligned with the results of the recent study of Alkaabi and Senghore (2024), which found that although there were gender variations in particular areas of entrepreneurial competency and mindset, these differences were not statistically significant. Similarly, another study by Polinar (2023) revealed no significant differences in entrepreneurial competencies when analyzed by sex or grade level, suggesting that these demographic factors do not determine students' entrepreneurial abilities. This suggests that gender may not be a significant determinant in shaping students' entrepreneurial competencies under the Planning Cluster in the context of this study.

Table 7. Comparison of entrepreneurial competence in the planning cluster when grouped according to gender

Indicator	H-value	P-value	Decision	Remarks
Goal Setting	2.50	0.28	Failed to Reject Ho	Not Significant
Information Seeking	3.37	0.17	Failed to Reject Ho	Not Significant
Systematic Planning and Monitoring	5.13	0.35	Failed to Reject Ho	Not Significant

Table 8 compares the respondents' assessment of their entrepreneurial competence regarding the Power Cluster when grouped according to gender. A significant difference was observed in "Persuasion and Networking," with a p-value of 0.02, and "Independence and Self-Confidence," with a p-value of 0.02, less than the 0.05 significance level. This finding could be due to various factors, including different socialization experiences, educational backgrounds, or support systems influencing gender confidence levels. Conversely, research conducted by Bober et. al. (2024) found that sex significantly affects the level of personal entrepreneurial competencies among TVL-Home Economics students. This study emphasized the need for age-appropriate and gender-sensitive entrepreneurial activities to address these differences effectively.

Table 8. *Comparison of entrepreneurial competence in the power cluster when grouped according to gender*

Indicator	H-value	P-value	Decision	Remarks
Persuasion and Networking	7.67	0.02	Reject Ho	Significant
Independence and Self-Confidence	7.07	0.02	Failed to Reject Ho	Not Significant

3.3 The Role of Parents' Source of Income on Entrepreneurial Competence

Table 9 compares the respondents' assessment of their entrepreneurial competence in the achievement cluster when grouped according to Parents' source of income. The results indicate that no significant differences were found in the extent of entrepreneurial competence in all areas of the Achievement Cluster including Opportunity seeking and Initiative (p-value=0.80), Persistence (p-value=0.80), Risk-taking (p-value=0.56), Demand for Efficiency and Quality (p-value=0.65), Commitment to Work Contract (p-value=0.60). The findings suggest that the respondents' parents' source of income does not significantly impact their assessment of their entrepreneurial competence. This implies that regardless of their household source of income, respondents tend to evaluate their entrepreneurial competence similarly.

Table 9. Comparison of entrepreneurial competence in the achievement cluster when grouped according to parents' source of income

Indicator	H-value	P-value	Decision	Remarks
Opportunity Seeking and Initiative	0.97	0.80	Failed to Reject Ho	Not Significant
Persistence	0.97	0.80	Failed to Reject Ho	Not Significant
Risk Taking	2.01	0.56	Failed to Reject Ho	Not Significant
Demand for Efficiency and Quality	1.62	0.65	Failed to Reject Ho	Not Significant
Commitment to Work Contract	1.83	0.60	Failed to Reject Ho	Not Significant

Table 10 compares the respondents' assessments of their entrepreneurial competence in the planning cluster when grouped according to parents' source of income. The results indicate that no significant differences were found in the extent of entrepreneurial competence in all areas of the Planning Cluster, including Goal Setting (p-value=0 0.53), Information Seeking (p-value=0.18), and Systematic Planning and Monitoring (p-value=0.59). The findings suggest that the respondents' parents' source of income does not significantly impact their assessment of their entrepreneurial competence in the Planning Cluster. This implies that regardless of their household source of income, respondents tend to evaluate their entrepreneurial competence similarly.

Table 10. Comparison of entrepreneurial competence in the planning cluster when grouped according to parents' source of income

Indicator	H-value	P-value	Decision	Remarks
Goal Setting	2.18	0.53	Failed to Reject Ho	Not Significant
Information Seeking	4.77	0.18	Failed to Reject Ho	Not Significant
Systematic Planning and Monitoring	1.90	0.59	Failed to Reject Ho	Not Significant

Table 11 indicates no significant differences in the extent of entrepreneurial competence in all areas of the Power cluster, including Persuasion and Networking (p-value=0 0.36), Independence, and Self-Confidence (p-value=0.20). The findings suggest that the respondents' parents' source of income does not significantly impact their assessment of their entrepreneurial competence in terms of the Power Cluster. This implies that regardless of their household source of income, respondents tend to evaluate their entrepreneurial competence similarly.

Table 11. Comparison of entrepreneurial competence in the power cluster when grouped according to parents' source of income

Indicator	H-value	P-value	Decision	Remarks
Persuasion and Networking	3.16	0.36	Failed to Reject Ho	Not Significant
Independence and Self-Confidence	4.56	0.20	Failed to Reject Ho	Not Significant

3.4 The Role of Household Income on Entrepreneurial Competence

Table 12 presents that no significant differences were found in the extent of entrepreneurial competence in some areas of the achievement cluster including 'Persistence' (p-value=0.09), 'Demand for Efficiency and Quality' (p-value=0.10), and Commitment to Work Contract (p-value=0.71). Conversely, a significant difference was observed in one area of the Achievement cluster specifically, 'Opportunity seeking and Initiative' where the recorded p-value was 0.003, and 'Risk Taking' with a p-value of 0.02. This implies that the respondents from low-income families most likely do not intend to venture into business and do not perceive opportunity and initiative in engaging in entrepreneurial activities due to different factors such as culture, family members, and the availability of financial resources. This finding shows that family income potentially impacts the students' engagement regarding establishing new ventures.

Table 12. Comparison of entrepreneurial competence in the achievement cluster when grouped according to household income

Indicator	H-value	P-value	Decision	Remarks
Opportunity Seeking and Initiative	19.6	0.003	Reject Ho	Significant
Persistence	10.8	0.09	Failed to Reject Ho	Not Significant
Risk Taking	14.6	0.02	Reject Ho	Significant
Demand for Efficiency and Quality	10.6	0.10	Failed to Reject Ho	Not Significant
Commitment to Work Contract	3.68	0.71	Failed to Reject Ho	Not Significant

Table 13 compares the respondents' assessment of entrepreneurial competence in the planning cluster when grouped according to household monthly income. The results indicate no significant differences in the extent of entrepreneurial competence in some areas under the Planning Cluster, including 'Goal Setting' (p-value=0.12). Conversely, a significant difference was observed in 'Information Seeking' and 'Systematic Planning and Monitoring', which obtained 0.004 and 0.001, respectively. This implies that monthly household income or the students' social status affects how they perceive the importance of information-seeking, systematic planning, and monitoring. This is aligned with the study of Acharjee and Maity (2017), where the results show that information seeking is influenced by income level. High-income groups spend more time seeking information than low — and middle-income groups.

Table 13. Comparison of entrepreneurial competence in the planning cluster when grouped according to household income

Indicator	H-value	P-value	Decision	Remarks
Goal Setting	10.0	0.12	Failed to Reject Ho	Not Significant
Information Seeking	18.9	0.004	Reject Ho	Significant
Systematic Planning and Monitoring	22.6	0.001	Reject Ho	Significant

Table 14 compares the respondents' assessment of their entrepreneurial competence in the Power Cluster when grouped according to household monthly income. The results indicate no significant differences in the extent of entrepreneurial competence in the Power cluster 'Independence and Self-Confidence', with a p-value of 0.41. Conversely, 'Persuasion and Networking' obtained a p-value of 0.04, less than the 0.05 significance level.

Table 14. Comparison of entrepreneurial competence in the power cluster when grouped according to household income

Indicator	H-value	P-value	Decision	Remarks
Persuasion and Networking	12.8	0.04	Failed to Reject Ho	Not Significant
Independence and Self-Confidence	6.10	0.41	Reject Ho	Significant

3.5 The Role of General Weighted Average on Entrepreneurial Competence

Table 15 compares the respondents' assessment of their entrepreneurial competence in the achievement cluster when grouped according to the General Weighted Average. Opportunity seeking and Initiative (p-value=0.23), Risk-taking (p-value=0.37), and Commitment to Work Contract (p-value=0.08), showed no significant differences. However, it is noteworthy that a significant difference was observed in one area of the Achievement cluster, specifically, Persistence (p-value=0.04), and Demand for Efficiency and Quality (p-value=0.006). These results indicate that respondents' general weighted average profile may influence their assessment of their entrepreneurial competence, especially those who obtained Outstanding grades in their academic performance. It is notable in the results under Achievement Cluster, specifically, 'Persistence' and 'Demand for Efficiency and Quality'. This implies that students who obtained high grades find themselves more persistent and self-efficient due to factors affecting their learning process, such as the teaching process, facilities, and support from parents and the community. In the study of Villacorta and Arnaldo (2023), TVL teachers significantly influence the level of TVL track competencies. There is also a lack of support from the parents and the community.

Table 15. Comparison of entrepreneurial competence in the achievement cluster when grouped according to general weighted average

Indicator	H-value	P-value	Decision	Remarks
Opportunity Seeking and Initiative	5.57	0.23	Failed to Reject Ho	Not Significant
Persistence	9.62	0.04	Reject Ho	Significant
Risk Taking	4.20	0.37	Failed to Reject Ho	Not Significant
Demand for Efficiency and Quality	14.4	0.006	Reject Ho	Significant
Commitment to Work Contract	8.31	0.08	Failed to Reject Ho	Not Significant

Table 16 presents under the planning cluster, results indicate no significant difference in some areas, namely, Goal Setting (p-value=0.69), and Systematic Planning and Monitoring (p-value=0.16). However, Information seeking shows a significant difference (p-value=0.03). These results indicate that respondents' general weighted average profile may influence their assessment of their entrepreneurial competence, especially those who obtained Outstanding grades in their academic performance, similar to competencies such as opportunity-seeking, initiative, and risk-taking. Information-seeking competency is closely related to opportunity recognition. In recognizing business opportunities, individuals seek information. Previous research proposed that individuals might identify opportunities to start new ventures because they have excellent access to information due to distinguished search behavior or social networks.

Table 16. Comparison of entrepreneurial competence in the planning cluster when grouped according to the general weighted average

Indicator	H-value	P-value	Decision	Remarks
Goal Setting	2.24	0.69	Failed to Reject Ho	Not Significant
Information Seeking	10.1	0.03	Reject Ho	Significant
Systematic Planning and Monitoring	6.53	0.16	Failed to Reject Ho	Not Significant

Table 17 compares the respondents' assessment of their entrepreneurial competence regarding Power Cluster when grouped according to General Weighted Average. Under Power Cluster, it is noteworthy that a significant difference was observed in Persuasion and Networking, with a p-value of 0.01. Meanwhile, results obtained under Independence and Self-Confidence show no significant difference (p-value=0.13). Indicating a significant difference in Persuasion and Networking implies that respondents who gained an outstanding general weighted average are most likely to convince, build, and maintain relationships with people to achieve desired goals, especially when venturing into business. This may be due to several factors, including an individual's social interest, cultural, emotional, and social capacity.

Table 17. Comparison of entrepreneurial competence in the power cluster when grouped according to general weighted average

Indicator	H-value	P-value	Decision	Remarks
Persuasion and Networking	12.8	0.01	Reject Ho	Significant
Independence and Self-Confidence	7.01	0.13	Failed to Reject Ho	Not Significant

3.6 The Role of School Size on Entrepreneurial Competence

In Table 18, the results indicate that no significant differences were found in the extent of entrepreneurial competence in all areas of the achievement cluster, including opportunity seeking and initiative (p-value=0.55), persistence (p-value=0.82), risk-taking (p-value=0.50), demand for efficiency and quality (p-value=0.28), and

commitment to work contract (p-value=0.30). This means that there are no significant differences in the assessment of the entrepreneurial competence of the respondents when they are grouped according to the school size.

Table 18. Comparison of entrepreneurial competence in the achievement cluster when grouped according to school size

Indicator	U-value	P-value	Decision	Remarks
Opportunity Seeking and Initiative	0.35	0.55	Failed to Reject Ho	Not Significant
Persistence	0.04	0.82	Failed to Reject Ho	Not Significant
Risk Taking	0.45	0.50	Failed to Reject Ho	Not Significant
Demand for Efficiency and Quality	1.15	0.28	Failed to Reject Ho	Not Significant
Commitment to Work Contract	1.04	0.30	Failed to Reject Ho	Not Significant

Table 19 compares the respondents' assessment of their entrepreneurial competence under the planning cluster when grouped according to their school size. The results indicate that no significant differences were found in the extent of entrepreneurial competence in all areas under the Planning Cluster, namely, Goal Setting (p-value=0.14), Information Seeking (p-value=0.20), Systematic Planning and Monitoring (p-value=0.29)

Table 19. Comparison of entrepreneurial competence in the planning cluster when grouped according to school size

Indicator	U-value	P-value	Decision	Remarks
Goal Setting	2.11	0.14	Failed to Reject Ho	Not Significant
Information Seeking	1.60	0.20	Failed to Reject Ho	Not Significant
Systematic Planning and Monitoring	1.10	0.29	Failed to Reject Ho	Not Significant

Table 20 compares the respondents' assessment of their entrepreneurial competence when grouped according to their school size. The results indicate no significant differences in the extent of entrepreneurial competence in all areas of the power cluster, including Persuasion and Networking (p-value=0.23) and Independence and Self-Confidence (p-value=0.33).

Table 20. Comparison of entrepreneurial competence in the power cluster when grouped according to school size

Indicator	U-value	P-value	Decision	Remarks
Persuasion and Networking	1.38	0.23	Failed to Reject Ho	Not Significant
Independence and Self-Confidence	0.93	0.33	Failed to Reject Ho	Not Significant

3.7 The Role of Favorite Subject on Entrepreneurial Competence

Table 21 compares the respondents' assessment of their entrepreneurial competence when grouped according to their favorite subject under the achievement cluster. The results indicate that no significant differences were found in the extent of entrepreneurial competence in some areas of the Achievement Cluster, including Opportunity-Seeking and Initiative (p-value=0.30), Persistence (p-value=0.69), Risk-taking (p-value=0.59), and Demand for Efficiency and Quality (p-value=0.08). This means that there are no significant differences in the assessment of the entrepreneurial competence of the respondents when they are grouped according to their favorite subject. On the other hand, one area shows a significant difference: "Commitment to Work Contract' with a p-value of 0.04.

Table 21. Comparison of entrepreneurial competence in the achievement cluster when grouped according to favorite subject

Indicator	H-value	P-value	Decision	Remarks
Opportunity Seeking and Initiative	22.6	0.30	Failed to Reject Ho	Not Significant
Persistence	17.7	0.69	Failed to Reject Ho	Not Significant
Risk Taking	17.8	0.59	Failed to Reject Ho	Not Significant
Demand for Efficiency and Quality	29.1	0.08	Failed to Reject Ho	Not Significant
Commitment to Work Contract	31.8	0.04	Reject Ho	Significant

The study's findings aligned with previous research, indicating that the curriculum content impacted entrepreneurial competencies. This was supported by the work of Shirokova et al. (2017) and Gieure et al. (2019), who investigated the direct relationship between curriculum content, curriculum material, teaching strategies, assessment, feedback, and entrepreneurial competencies. The findings demonstrated a direct correlation between the entrepreneurial curriculum content and the development of entrepreneurial capabilities. Kosimov (2015) also proposes that extending the duration of practical training enhances students' professional abilities and knowledge. It assists students in developing the essential skills and abilities to use the information they have gained in practical situations effectively. This includes creating production processes specific to their profession and preparing, implementing, monitoring, and maintaining them.

Table 22 compares the respondents' assessment of their entrepreneurial competence when grouped according to their favorite subject under the Planning Cluster. The results indicate that no significant differences were found in the extent of entrepreneurial competence in some areas of the Planning Cluster, including Goal Setting (p-value=0.62), Information Seeking (p-value=0.56), and Systematic Planning and Monitoring (p-value=0.55). This means that there are no significant differences in the assessment of the entrepreneurial competence of the respondents when they are grouped according to their favorite subject.

Table 22. Comparison of entrepreneurial competence in the planning cluster when grouped according to favorite subject

Indicator	H-value	P-value	Decision	Remarks
Goal Setting	17.4	0.62	Failed to Reject Ho	Not Significant
Information Seeking	18.2	0.56	Failed to Reject Ho	Not Significant
Systematic Planning and Monitoring	18.5	0.55	Failed to Reject Ho	Not Significant

The results in Table 23 indicate no significant differences were found in the extent of entrepreneurial competence in some areas of Power Cluster Persuasion and Networking (p-value=0.07), and Independence and Self-Confidence (p-value=0.186). In all these areas, the p-values exceed the 0.05 level of significance. As a result, the decision is to fail to reject the null hypothesis. This means that there are no significant differences in the assessment of the entrepreneurial competence of the respondents when they are grouped according to their favorite subject.

Table 23. Comparison of entrepreneurial competence in the power cluster when grouped according to favorite

Indicator	H-value	P-value	Decision	Remarks
Persuasion and Networking	29.9	0.07	Failed to Reject Ho	Not Significant
Independence and Self-Confidence	25.4	0.18	Failed to Reject Ho	Not Significant

4.0 Conclusion

The study assessed the respondents' entrepreneurial competence, revealing a high level of proficiency in Persistence, Demand for Efficiency and Quality, and Commitment to Work Contract. This suggests they demonstrate initiative and a drive for improved quality, productivity, and profitability. The respondents also showed strengths in Goal Setting, Information Seeking, and Systematic Planning and Monitoring, indicating their ability to plan and gather necessary information. Additionally, they exhibited competencies in Persuasion and Networking, Independence, and Self-Confidence, reflecting their ability to collaborate, build networks, and influence others. However, Risk-Taking, Opportunity-Seeking, and Initiative received the lowest ratings among the competencies. The study also found that gender significantly influenced Persuasion and Networking. At the same time, household income levels impacted Opportunity Seeking, Initiative, Risk Taking, Information Seeking, Systematic Planning and Monitoring, and Persuasion and Networking. In contrast, parents' sources of income did not lead to significant differences. The general weighted average also influenced Persistence, Demand for Efficiency and Quality, Information Seeking, and Persuasion and Networking. School size did not affect competency assessments, but differences were observed in Commitment to Work Contract based on respondents' favorite subjects. Since this study focused only on students, future research should include a larger and more diverse sample from multiple higher education institutions. Exploring additional factors, such as educational background and entrepreneurial experience, could provide a more comprehensive understanding of the development of entrepreneurial competencies.

5.0 Contributions of Authors

MA - Conceptualization, methodology, data analysis, writing - original draft, writing - review and editing.

6.0 Funding

The author received no financial support for this article's research, authorship, and/or publication.

7.0 Conflict of Interests

There are no conflicts of interest to disclose when accomplishing this study.

8.0 Acknowledgment

The researcher further extends her gratitude to her research adviser, Dr. Lizyl R. Rebusquillo, for her immeasurable support and guidance in making this research study possible. She is truly an angel sent from above. To the esteemed panel of examiners: Dr. Dennis O. Dumrique, Dr. Ryan C. Roque, Prof. Francis Leo T. Mingo, and Dr. Caroline T. Sumande, she is thankful for their constructive comments and recommendations, which contributed to the betterment of this work. She also wants to thank her family, especially her mother, her number one cheerleader, and the wind beneath her wings. Her prayers for the researcher sustained her this far. Above all, I thank the Almighty Father, who has given me strength, wisdom, and courage to accomplish this research after years of delay. Truly, God has perfect timing.

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