

Academic Resilience in the Face of Internet Challenges: A Narrative Analysis of Tertiary Students' Experiences

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Abstract. This qualitative research explored internet connectivity's influence on tertiary students' academic lives in Palimbang, Sultan Kudarat. It highlighted the challenges posed by unstable internet connections, students' resilience in adapting to them, the coping mechanisms employed by the students in accessing unstable internet connections, and the emotional toll it took on them. This paper used narrative analysis to interpret the data set from the participants. Through in-depth interviews, ten (10) participants shared their experiences of grappling with sluggish and unstable internet connections, hindering access to educational resources, and disrupting collaborative learning endeavours. Despite these challenges, students demonstrated resilience, employing strategies like accessing the Internet during off-peak hours and utilizing offline resources. However, these adaptations came with their own set of drawbacks, including sleep deprivation and financial strain. Emotionally, frustration with unreliable internet connectivity was palpable, yet students recognized the Internet's transformative role in their learning journey. The paper underscored the vital importance of reliable Internet infrastructure in rural education, advocating for concerted efforts to bridge the digital divide and ensure equitable access to quality Internet services. Ultimately, it highlighted the resilience of rural students while emphasizing the urgent need to improve the digital infrastructure to support their academic endeavors in the digital age.

Keywords: Higher education; Tertiary students; Academic resilience.

1.0 Introduction

In today's digitally connected world, the Internet has become essential for communication, information access, education, and economic development (Dogniez, 2019). However, while urban areas often enjoy high-speed, reliable internet access, this remains a persistent challenge in rural areas worldwide (IEEE Standards Association, 2021). This digital divide between rural and urban areas highlights disparities in access to technology and internet services, presenting a pressing issue with far-reaching implications for individuals, communities, and society. As a result, tertiary students residing in Palimbang often find themselves disadvantaged, facing slower internet speeds, frequent disruptions, and restricted access to online resources and opportunities. Internet connectivity in Palimbang and rural areas of the Philippines has been a challenge, limiting participation in the digital economy and impacting the access of tertiary students to more robust internet connectivity, which is predominantly concentrated in urban areas. Internet development in the country began in 1994 when Benjamin Tan established a connection with SprintLink at the PLDT Network Center in Makati City. Efforts to improve connectivity in Mindanao include the launch of a submarine cable system by PLDT in Dipolog and upgrades to internet services by Globe Telecommunications, including wireless enhancements through LTE and VoLTE technology (Strover, 2001; DICT, 2015; IECEP, 2018; Mercurio, 2022).

One of the critical functionalities of the Internet is its capacity to disseminate information and enable interactions between individuals using their respective devices (Leiner et al., 2022). However, despite these advancements, specific rural communities face various challenges in accessing stable internet connectivity. This limitation hampers their ability to fully engage and participate in the global community, which has increasingly seen interest in the impact of internet connectivity on students. Several studies have examined the relationship between internet usage and academic performance. Kim and Kim (2016) found that smartphone addiction was associated with lower GPAs and less time spent studying among university students in South Korea. Choi and Lee (2017) also found that internet addiction was associated with lower grades and less time spent studying among high school students in South Korea. The shift to online learning has presented significant hurdles for students, especially those lacking adequate resources, as evidenced by a study in the Philippines. Moreover, students' mental strain, leading to performance hindrances, was noted. Despite these challenges, students have shown resilience, utilizing innovative coping mechanisms to navigate resource scarcities.

Several studies have examined the challenges of online learning and the methods students use to overcome them. Martin et al. (2020) conducted a systematic review that synthesized research on adaptive learning from 2009 to 2018. They discovered fluctuations in the number of published articles on adaptive learning throughout the decade, peaking in 2015. Most of these studies were conducted in Taiwan and the United States higher education institutions, primarily computer science. The research focused on various adaptive strategies and technologies, offering a comprehensive overview of the field during this timeframe. The study identified adaptive strategies by analyzing the adaptive sources in the students' content and instructional models. The students' learning styles varied significantly, primarily focusing on technology. In the Philippines, internet connectivity is significantly different between rural and urban areas. According to a report by the Philippine Statistics Authority (PSA), as of 2020, only 22.2% of households in rural areas have access to the Internet, compared to 43.5% of households in urban areas (PSA, 2020). This digital divide is further exacerbated by the slow and unreliable internet speeds in rural areas, which hinder residents' academic and economic opportunities.

The lack of internet connectivity and the slow internet speed in rural areas also affect the education sector. A study by the Philippine Institute for Development Studies (PIDS) found that students in rural areas face significant challenges in accessing online learning resources due to the lack of internet connectivity and infrastructure (PIDS, 2020). This study has resulted in a significant disparity in educational opportunities between rural and urban areas. The government has recognized the importance of addressing the digital divide in the country. In 2017, the Department of Information and Communications Technology (DICT) launched the Free wifi for All Program to provide free Internet access to public places, including rural areas (DICT, 2019). However, the program's implementation has faced challenges, including the lack of infrastructure and slow internet speed in rural areas.

On the other hand, understanding the narratives of college internet users in Palimbang is crucial for several reasons. Firstly, it sheds light on the experiences of students disproportionately affected by the digital divide. These students may face barriers to education, educational resources, and peer collaboration, potentially limiting their overall well-being as learners. Secondly, researchers, policymakers, and service providers can gain insightful knowledge about these students' particular challenges by exploring the narratives of college internet users in rural areas. This information can then inform the development of targeted interventions, laws, and infrastructure improvements to close the digital divide and promote universal internet access. Furthermore, rural areas are often rich in unique cultural, social, and ecological contexts, and the narratives of internet users within these communities can provide valuable perspectives on the impact of connectivity on local identities, community cohesion, and cultural preservation. Understanding these narratives in the context of academic development is particularly important. By capturing these narratives, researchers can contribute to a broader understanding of how the digital gap affects rural students and its social ramifications.

This study aimed to analyze the narratives of tertiary students regarding internet connectivity in Palimbang. Specifically, it attempts to answer the following questions: (1) What are the specific challenges faced by tertiary students in rural areas when using the Internet? (2) How do tertiary students in Palimbang cope with connectivity issues? (3) What are the broader implications of connectivity on the academic learning of tertiary students?

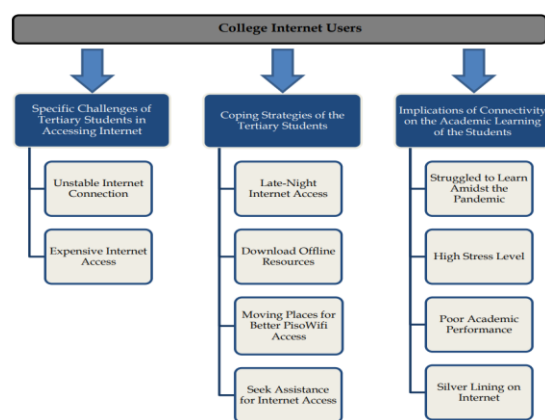


Figure 1. Research framework

2.0 Methodology

2.1 Research Design

A qualitative research methodology was applied in this inquiry. With the guidance of text or images, qualitative research explores significant phenomena and collects participants' in-depth perspectives (Creswell, 2014). It enables understanding experiences and aims to define phenomena through the participants' perspectives. This study design allows for acquiring an exceptional level of knowledge that is challenging to obtain using a closed-question survey. Using a qualitative technique, participants could freely and unrestrictedly share their experiences, opinions, and emotions. Pierce (2008) emphasizes that the qualitative method benefits the researcher by enabling a thorough awareness of the subtleties and complexities of social and human life. The study specifically used narratology, which focuses on narrative structures, analyzing and interpreting the participants' narratives. It also analyzed the underlying principles and conventions of storytelling to uncover the researcher's patterns, themes, and narrative strategies.

2.2 Research Locale

The study was conducted in Palimbang, Sultan Kudarat, Philippines. Covering an area of 484.85 square kilometers (187.20 square miles), Palimbang constitutes approximately 9.04% of the total area of Sultan Kudarat province (PhilAtlas, 2020). According to the 2020 Census, the municipality has a population of 92,828 residents distributed across its forty barangays. This census represents roughly 1.89% of the SOCCSKSARGEN region's population and 10.87% of Sultan Kudarat province's population (PhilAtlas, 2020). The research area of the study included ten tertiary students from Sultan Kudarat State University – the sole state-owned higher educational institution in Palimbang, with a total land area of approximately 30,000 square meters. The university is located in Barangay Poblacion, Palimbang (SKSU Planning Office, 2024).

2.3 Research Participants

The study focused on interviewing college internet users from Palimbang, Sultan Kudarat. Ten rural tertiary students were selected for physical interviews. The inclusion criteria include bonafide students of Sultan Kudarat State University – Palimbang, tertiary students who have access to the Internet using cellular phones or laptops, and students aged 18-25.

2.4 Research Instrument

This study used open-ended questions crafted by the researcher based on the study's research problems. An informed consent form from the ethics committee of Mindanao State University was distributed to the participants to ensure that the ethical guidelines of the research were followed. The same research committee from Mindanao State University – General Santos validated the interview protocol. A permission letter, interview guide questions, pen and paper, camera, and audio/video recorder were utilized to collect comprehensive and reliable data. These tools contributed to the study's objectives and provided valuable insights into the experiences of internet users in Palimbang, Sultan Kudarat.

2.5 Data Gathering Procedure

The study used a structured data collection approach by formulating a questionnaire guide. Ensuring alignment with the research questions, the researcher scrutinized the problem statements. Each problem statement was matched with relevant questions to provide comprehensive coverage and appropriate addressing of all research issues. Communication with potential participants was established in person or virtual, seeking their engagement in the study. Informed consent forms detailing the goals and methods of the study were provided to the participants, who were required to sign the forms to demonstrate their willingness to be involved.

A formal letter was also prepared to request permission to interview the selected participants, documenting the research objectives and ethical considerations with guidance from the research ethics committee. Each participant received an individual copy of this letter. The researcher adjusted his language and communication style to ensure that participants could understand and engage comfortably. Appropriate regional languages, such as Tagalog, were used, and participants responded in Tagalog during the in-depth interviews. After each interview, the researcher expressed gratitude and appreciation to the participants for their time and contribution.

2.6 Ethical Considerations

Adhering to ethical guidelines is essential in all research investigations, with particular significance in qualitative studies due to their extended duration (Arifin, 2018). To ensure ethical considerations, the researcher established clear communication with participants, informing them about the research process, their level of involvement, and access to the relevant research area, fostering trust and confidence (Creswell, 2012). Participants received equitable treatment, along with comprehensive information regarding the research purpose and the use of findings. The researcher avoided asking misleading questions that could misrepresent the research objectives, instead treating participants as partners in collecting vital information and data. Confidentiality and anonymity were prioritized throughout the data processing and report writing stages. The researcher presented both favorable outcomes and contradictory or divergent data, considering the participants' diverse perspectives. Upon completion of the study, the researcher communicated further with participants to discuss and validate the study's findings. Overall, ethical considerations were of utmost importance in qualitative research. The researcher upheld participant confidentiality, provided transparent and equitable treatment, and engaged in open communication to ensure the trust and integrity of the research process.

3.0 Results and Discussion

3.1 Challenges of Tertiary Students in Accessing the Internet

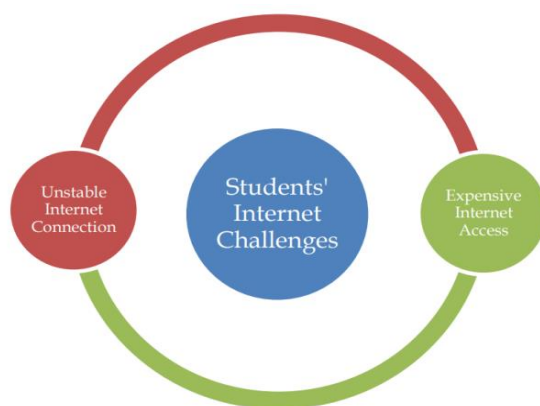


Figure 2. Challenges in accessing the internet

Accessing information poses a common challenge in rural communities, as they receive less information than their urban counterparts, who enjoy immediate access to a wealth of information (Jacobs & Herselman, 2006). Rural communities were excluded from the digital information sphere due to insufficient infrastructure. According to Jacobs and Herselman (2006), access to information plays a vital role in enhancing people's understanding of

various global phenomena. Figure 2 shows tertiary students' challenges in accessing internet connection in the municipality of Palimbang, Sultan Kudarat. During the interview with the participants, their responses were based on the unstable and expensive Internet.

Unstable Internet Connection

Tertiary students in Palimbang encountered numerous difficulties accessing stable internet connectivity, significantly hindering their ability to utilize online resources. Participants had expressed their concerns regarding the inconsistent nature of internet services in Palimbang. As the participants narrated that:

"The Internet in Palimbang, the data signal is not consistent. There are times when it is strong, and there are times when it is weak. The PisoNet, on the other hand, is strong, but the factor that can affect it is when there is a power outage and there is no internet. Without the internet, we wait for it to return because our barangay is far from the cell site, so our data is fragile. We rely on the PisoWifi vending machine." [IDI, P1-BEED]

"The Internet in Palimbang could be more robust; in short, it is weak. When it is like this, you cannot search, especially in the morning, because it is fragile. Sometimes, even if you wake up at one in the night, it is still weak. Moreover, sometimes, it goes on and off." [IDI, P6-BSAB]

Given these experiences of the participants, it was clear that the state of the Internet in Palimbang could have been better due to the challenges posed by unstable data and wifi signals. The strength of the data and Wi-Fi signals varies, sometimes being robust and sometimes feeble, leading to disrupted internet service. The community's remote location from the cell site might contribute to the weak signal. While PisoNet offers a more reliable connection, it was contingent on the availability of electricity, so, during power outages, there was no internet service at all. Hence, many tertiary students depend on the PisoWifi vending machine for their internet needs. These narratives of the students were supported by different studies because there is a contradictory scenario where, despite the need for internet access in rural communities to alleviate their isolation, as pointed out by Salemink (2015) and referenced in Onitsuka (2018), these areas were still trailing in terms of digital connectivity and integration. Specifically, geographical barriers have led to a need for more internet connectivity in rural regions, further distancing them from the advantages of the contemporary world.

Expensive Internet Access

Tertiary students often face the challenge of high internet service costs. Many students had expressed that the weekly cost of internet access was quite steep, especially considering its inconsistent quality. They sometimes find it not worth the expense, mainly when they cannot utilize the service fully due to its instability. Participants share that:

"Currently, just like the price of rice, internet services have also increased. Before, the additional charge was only three pesos, but it has increased to five. Now, if you load 50 pesos, the additional charge is already 10 pesos. So, as self-supporting students, instead of our money going to our allowance, it sometimes goes to internet expenses just for us to research our tasks or the assignments given by our teachers. We are having difficulty with the internet connection because sometimes, when the wifi signal is weak, your time will run out, and you still need to finish your task." [IDI, P8-BSAB]

"It is expensive for me. For example, I load 40 pesos with Wi-Fi and want it to last for one week. However, what happens is that my time on the wifi runs out before I can finish my research. It is frustrating because it is a waste of money and time. I tried using data because it is 4G. I tried loading 100 pesos for seven days or one week of internet access. However, the same thing happens: the signal comes out on the data but does not load. Then I received a text from 8080 saying that my data had run out when I had not even used it or it had expired when I had not even used it. So, it is not worth it for me. Then, one time, I tried because my aunt has PLDT wifi. I tried the PLDT wifi and loaded 1k for one month because I heard it was intense. However, when I got it, it only lasted for two days, so it was a waste because it kept turning off. So, it is expensive, my time is consumed, and it was not worth it." [IDI, P4-BEED]

Several participants echoed the sentiment that subscribing to internet services sometimes feels futile due to the slow connection. They feel their money was wasted on a service they cannot fully utilize. Most of these students were working and were, therefore, acutely aware of the financial burden of maintaining an internet connection,

as they were striving to stay connected and access the Internet for their studies. A recent Li et al. (2023) study discovered that 80% of respondents favored traditional in-person learning compared to online alternatives. Additionally, the research highlighted an inverse relationship between students' contentment and factors such as internet accessibility and expenses. This study implies that the exorbitant costs and inconsistent quality of internet connections can markedly influence students' satisfaction and effectiveness in online educational settings. The challenges faced by tertiary students in Palimbang highlight the intricate issues of ensuring reliable internet access in remote and rural areas. It underscores the urgent need for creative solutions to address the problems associated with unstable internet connections that pose significant challenges to students. This situation also emphasizes the necessity for enhanced internet infrastructure and services in Palimbang. The habit of waking up early or staying up late to use the Internet when the signal is more substantial, and the mismatch between the cost and the availability of the Internet, as many students have voiced that the weekly cost of Internet access was relatively high, particularly given its unreliable quality.

Sometimes, they find it not worth the cost, especially when they cannot fully use the service due to its instability. According to a survey by the SEQuRe Education Movement (2021), approximately 57 to 66 percent of participants stated that their academic performance suffered due to inconsistent internet connectivity. The survey also indicated that extra expenses related to internet usage were a concern for up to 32 percent of teachers and around 70 to 75 percent of students and parents daily. These results underscore the financial strain caused by internet costs for students and their families, compounding their difficulties in accessing online education. The study was a testament to how long students could access an internet connection. Other studies like Li et al. (2023), Castellano (2019), Jacob and Hersekman (2006), Saleminik (2015), and Onitsuka (2018) supported that these challenges exist among individuals who accessed internet connection.

3.2 Coping Mechanisms of Students

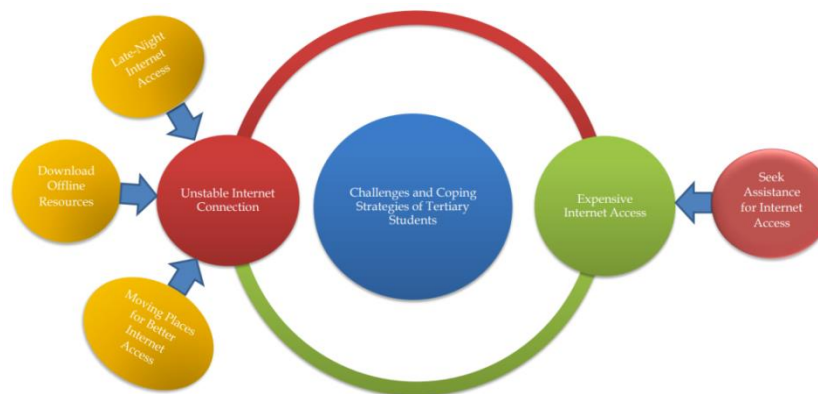


Figure 3. Coping mechanism of students in accessing the internet

In Palimbang, students at the tertiary level also grapple with internet problems. The primary difficulties they encountered when accessing the Internet were its instability and the need to stay up late at night for better connectivity. Despite these challenges, tertiary students have developed adaptive strategies to stay connected in an area with internet issues. The substantial disparity in internet access in rural regions was a significant issue faced by numerous countries globally. In response to this problem, rural communities have adopted various adaptive measures to gain internet connectivity (Katsaros et al., 2018). Figure 3 illustrates the various coping mechanisms tertiary students in Palimbang use to access the Internet in an area with inconsistent connectivity. These strategies were not heavily reliant on technology, but rather ingenious methods devised by the students. Based on the participants' narratives and the data collected, the researcher categorized these unique strategies into three main types: accessing the Internet late at night, downloading resources for offline use, going to areas with stronger PisoWifi connections, and seeking assistance for Internet access.

Late-Night Internet Access

According to the participants' narratives, a prevalent strategy and adjustment they implemented as students to secure a dependable internet connection was to wake up in the middle of the night or at dawn. They found that the internet connection was significantly stronger during these hours compared to the daytime. The participants stated thus:

"I woke up early in the morning because that is the time when both data and wifi are vital. So, I woke up early because, by eight o'clock, many people were using it, so the Internet was weak." [IDI, P1-BEED]

"The approach here really requires patience because it is indeed time-consuming. The primary strategy is to access the Internet only at dawn when it is more robust and more stable, and that is what I do - I endure it. In the morning, I also research even if the connection is not strong." [IDI, P6-BSAB]

University students in Palimbang have developed a distinctive method for internet access, which involves staying awake late at night and waking up at dawn. They had noticed that internet connectivity tends to be more robust during these hours. It was a testament to the effects of the unstable internet connectivity in Palimbang that potentially hampers the students' continuous access to reliable Internet. This challenge experienced by the tertiary students not only endangers their well-being but also the learning productivity of the students. A 2023 study revealed that a significant number of medical students, nearly half, use their smartphones for more than two hours at bedtime. This behaviour was linked to poor sleep quality, increased time to fall asleep, difficulty maintaining sleep, and reduced sleep duration (Elsheikh et al., 2023). Another study in 2021 discovered that adolescents who spent more time on screen-based activities like social media, web surfing, watching TV, and gaming had more difficulty falling asleep and slept less during the night (Lund et al., 2021). These studies demonstrate that the strategy and adaptation employed by tertiary students in Palimbang were common to their situation. It underscores a global trend where students adjust their sleep schedules to accommodate internet usage, often at the expense of their sleep quality. This trend was prevalent among the majority of students.

Download Offline Resources

In light of the students' experiences, most of them resort to offline learning. They downloaded educational materials, allowing them to view educational videos and files without an internet connection. Given the unstable internet connectivity in Palimbang, this method has become a prevalent strategy among students to ensure uninterrupted learning. This approach not only circumvents the issue of inconsistent internet access but also allows for flexibility in their study schedule. The participants shared that:

"One technique I use is to download resources while researching. For instance, offline dictionaries like Merriam or Webster, so that in case I lose signal, I still have offline resources where I can get information." [IDI, P6-BSAB]

"I download files in advance because the Internet might disappear again later. So, I advanced my search for beneficial things related to the topic. Sometimes, I go to any website to advance access it; then, I consolidate the ideas I got." [IDI, P4-BEED]

Tertiary students in Palimbang had devised a resourceful approach to overcome the hurdles of unreliable internet access by using offline resources and alternative learning techniques. They procured educational materials and videos for offline consumption, enabling them to sustain their studies despite connectivity constraints. This dependence on erratic internet access presents obstacles in transitioning to the new educational landscape. This issue extends beyond teachers to encompass students as well. Students grapple with unstable internet connectivity considering the pandemic-induced shift to online learning. Koh and Daniel (2022) systematically reviewed teaching and learning strategies during the COVID-19 pandemic, underscoring that challenges stemming from infrastructure limitations and home environments persisted despite students' efforts to access online resources and employ coping mechanisms. A study spearheaded by Celina Sarmiento, a National Research Council of the Philippines (NRCP) member, examined 28,859 Department of Education (DepEd) teachers across different educational levels. The survey disclosed that many teachers, particularly those in rural locales, rely on mobile data, which offers less reliability than fiber optic connections. Through this, they have adapted by devising strategies to perpetuate their learning, such as downloading educational materials for offline utilization (Arayata, 2021).

Moving Places for Better Piso wifi Access

Another adaptation and strategy employed by the participants was that they often moved from one place to another in search of a stronger internet connection. There were barangays in Palimbang that had no stable data connection, so most students used Piso wifi or vending wifi to access the Internet. However, the vending wifi could be unstable, especially in the more remote barangays of the municipality of Palimbang. Hence, some participants moved to those barangays with stronger Internet than other barangays. The participants shared that:

"...I move to...another place because the Internet in Poblacion, Palimbang differs from ours. The towers differ, so you would travel to Poblacion from Kanipaan." [IDI, P6-BSAB]

"Sometimes, when I need a stable internet connection, I go to all the Piso Wi-Fi vending machines with strong Internet." [IDI, P1-BEED]

The tertiary students of Palimbang had devised effective coping strategies to deal with the challenges of inconsistent internet connectivity. All of the participants from the BEED and BSAB programs utilize those strategies. One such strategy was waking up late at night to use the Internet, taking advantage of the less congested network during these hours. Another strategy involves the use of offline resources. Students download resources such as lecture notes, research papers, or educational videos for offline use, reducing their dependency on constant internet access. Lastly, students often go to areas where the PisoWifi signal is more robust. PisoWifi, a popular public wifi service in the Philippines, was available for as little as one peso. Students travel to community centers or other public spaces offering this service to access the Internet. These strategies highlight the students' resilience and adaptability in the face of technological challenges, demonstrating their determination to ensure their education continues uninterrupted despite the hurdles. The coping mechanisms utilized by tertiary students in Palimbang were corroborated by various research findings, both globally and domestically. Studies by Costescu et al. and Mota et al. (2021), publications like Inquirer in the same year, along with Caragos (2022), and the work of Koh and Daniel (2021) as well as Arayata (2021), all reinforce the observed coping strategies of these students.

Seek Assistance for Internet Access

In Palimbang, tertiary students often find internet access prohibitive due to financial constraints. A number of these students were employed, but their work situations and pay scales differ significantly from those of working students in urban areas. Given that Palimbang is a rural area, it was not surprising that the basic wage was lower. Some of these students work as fishing assistants or in agricultural fields. Consequently, even a tiny expense for internet access can be a significant burden for them. Some students choose to reach out to those with the means or the resources to access the Internet. The participants understood the importance of internet access for their education and were proactive in finding solutions, even if it meant relying on the generosity of others. The participants shared that:

"I just connected to my uncle's wifi because they have Starlink and are in a remote area. My second choice is to connect with any of my friends who have data; I just hotspot them when I do not have money. We also do it vice versa because they connect to mine when they do not have Internet." [IDI, P4-BEED]

"When I cannot access the Internet, I borrow from my friends who can afford it. Sometimes I borrow a cell phone, and sometimes I borrow money for the Internet." [IDI, P6-BSAB]

In rural areas such as Palimbang, accessing the Internet posed considerable challenges and expenses due to underdeveloped digital infrastructure. Students resorted to various tactics to secure internet connectivity, including piggybacking off relatives' wifi networks, tethering from friends' devices, or frequenting public facilities like libraries offering complimentary internet services. These experiences closely mirrored those recounted by participants, who recounted relying on relatives' Starlink connections, sharing hotspots with friends, or resorting to library visits when other options fell short. Like these participants, working students grappled with the delicate balance of managing limited financial resources against the imperative need for reliable internet access. The Internet has become an indispensable tool in contemporary education. It provided students access to various resources, including online textbooks, academic articles, educational videos, and interactive learning platforms. These resources had the potential to enrich the learning experience, promote student engagement, and facilitate

personalized learning. This was why tertiary students found ways to access the Internet, even if it was expensive. The significance of internet access for students was immense. It served as a gateway to a vast array of information, knowledge, and educational resources, enhancing learning opportunities inside and outside the classroom (Internet Society, 2017). However, the absence of internet access could result in considerable differences in academic results (Asio et al., 2021). As such, ensuring that all students had fair access to the Internet was crucial, which was a pressing issue that needed to be tackled (Microsoft Education, 2022).

3.3 Implications of Internet Connection

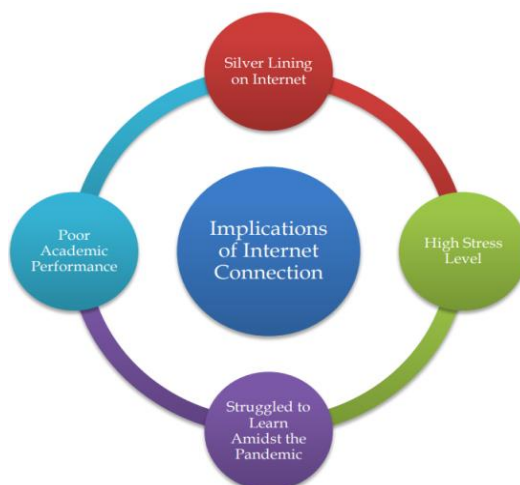


Figure 4. Students implications on internet connection

The advent of the Internet has significantly transformed the educational landscape, and students in Palimbang were no exception. The internet connection in Palimbang plays a crucial role in shaping the students' learning experiences. It is a gateway to a wealth of information and resources, enabling students to broaden their knowledge and skills. Figure 4 illustrates the various implications experienced by students in Palimbang due to their internet access. According to the participants' narratives, there were four primary outcomes related to internet use: difficulties in learning during the pandemic, increased stress levels, declining academic performance, and the positive aspects of internet access.

Struggled to Learn Amidst the Pandemic

According to the experiences shared by the students, the issue of internet connectivity in the municipality of Palimbang was a persistent problem that remained unresolved. This problem was exacerbated during the pandemic when the instability of the internet connection became even more apparent. Due to this issue, the students found accessing and participating in various online platforms challenging. The lack of a stable internet connection significantly impacted their academic performance as classes transitioned to virtual classes due to the pandemic. The situation underscores the critical need for reliable internet infrastructure to support online education. It also highlights the importance of addressing such issues promptly to ensure that students can effectively participate in virtual learning and achieve their academic goals. Thus:

"The Internet in Palimbang is a significant factor, especially during the pandemic when no PisoNet services were available. We had to rely on prepaid wifi, which was relatively weak due to the poor internet connection. What we did was wake up very early in the morning. Sometimes, our teacher would upload the discussion on YouTube, where we would watch it. As for the activities, we will submit them to Google Classroom. Despite the weak Internet, we could still use Google Classroom." [IDI, P1-BEED]

"It is tough... It is difficult because sometimes, due to the weak Internet, you cannot join the class at the scheduled time, so the Internet gets corrupted, and you are marked absent. Moreover, even when you can join, you sometimes cannot understand what the teacher is saying in the video because the Internet is so choppy due to its weakness." [IDI, P6-BSAB]

The global COVID-19 pandemic has profoundly affected the educational journeys of students across the globe, including those pursuing Bachelor of Science in Agribusiness (BSAB) and Bachelor of Elementary Education (BEED) degrees in Palimbang. As a result, students have expressed dissatisfaction with the educational experience during the pandemic, citing insufficient learning and diminished quality due to unstable internet connections. Different studies correlated with the shared experiences of tertiary students of Palimbang. Research conducted by Harvard University and Stanford University has brought attention to the significant repercussions of the pandemic on student learning. Their findings indicate that the impact of the pandemic on learning was not only unprecedented in scale but also disproportionately affected communities with high numbers of low-income and minority students (Kane & Reardon, 2023). The sudden transition to online learning, combined with the difficulties caused by unreliable or inaccessible internet connectivity, has presented substantial obstacles to continuing their education (Dayagbil et al., 2021). Additionally, a study conducted in the Philippines shed light on the difficulties and obstacles faced in maintaining continuity in teaching and learning within public higher education institutions due to the pandemic. This has led to hindrances in students' learning experiences, mainly attributed to slow internet connectivity (Dayagbil et al., 2021).

High-Stress Level

Students had expressed significant concerns regarding the negative impact of unstable internet connectivity on their well-being. The necessity to wake up early for online classes often leads to sleep deprivation and causes high levels of stress to the participants, specifically the BSAB and BEED students. This issue has been underscored in several recent studies. Participants shared that:

"The effect of the feeble signal here in Palimbang is enormous, especially on my health. I am stressed because sometimes I wake up from 1 am to 4 am to go online... to answer activities, and then our class sometimes starts at 7 am, so I am very spaced out... sometimes when I am already in school, I cannot listen anymore because I am sleep-deprived." [IDI, P5-BEED]

"It adds to the stress. If you are stressed academically, you will be stressed with the Internet, and there you have it. You are already stressed and lack sleep because you are waiting for a strong Internet connection." [IDI, P7-BSAB]

This implication on the student's well-being and high-stress level due to slow internet connection significantly tells about how difficult it was to access the Internet in the municipality of Palimbang. Those students needed to experience this because it might impede their learning due to lack of sleep, and this stress might cause other underlying problems in the mental health of the students. A study by Gierdowski (2021) highlighted the implications of poor internet access for students facing Internet and device access during their academic work. The study by Malipot (2022) revealed that 57 to 66 percent of respondents reported that their academic work was affected by intermittent internet signal, with about a quarter of teachers and students experiencing this issue daily. Mosleh (2023), conducted in the UAE, found that the rapid shift to online education due to the COVID-19 quarantine negatively affected students' physical, emotional, and mental health. These studies underscore the significant impact of unstable internet connectivity on students' well-being and academic performance.

Poor Academic Performance

The participants emphasized a link between the quality of internet connectivity in Palimbang and their academic performance. They faced significant challenges due to unstable internet conditions and the necessity to stay awake late at night or early in the morning, which they perceived had negatively impacted their school performance. This was a recurring sentiment among the participants. They shared that:

"Then, in terms of academics, sometimes because of the Internet, grades are dropping like you lack access to... because if I compare it to... to books rather than the Internet, it is just more accessible on the Internet, but unfortunately, it is weak." [IDI, P6-BSAB]

"What happens is it is very stressful because it would be okay if we were only dealing with one subject. For example, I am doing a thesis, and the signal is weak, but other activities are lined up. So what happens is that we can only focus on one activity, and because of that, our scores in other subjects drop. If the Internet was stable, everything would be easy to do, but because it is weak, it is hard to finish what needs to be done." [IDI, P4-BEED]

From the shared experiences and stories of the participants, it was clear that reliable internet access was crucial for students' academic development. However, the unstable internet connection in Palimbang has significantly impacted student performance, leading to subpar academic results. Despite these challenges, the students continued to rely on the Internet for their educational needs, highlighting its importance in today's digital learning environment—these experiences of students aligned with recent research. For instance, a study conducted in Ghana revealed that students with internet access improved academic performance more than those without. However, the study also noted that the mere presence of multiple sources of internet connectivity only guarantees immediate access to some of them (Amponsah et al., 2022). Furthermore, a study conducted by a research team from Rice University, Texas A&M University, and the University of Notre Dame found that increased internet access spending by Texas public schools improved academic performance and led to more disciplinary problems among students (Rice University, 2021).

Silver Lining on the Internet

Despite the participants' perception of the Internet in Palimbang as unreliable and of poor quality, they persist in its use, recognizing its necessity in their academic lives. Despite its instability, they find value in the Internet, underscoring its role as an essential tool for their education. Participants shared that:

"It is helpful because somehow, with the Internet, you can stay updated on what is happening in society and learn information, unlike before when there was no Internet. Even though the Internet in Palimbang is slow, I can still manage to do my requirements, albeit late, but at least I still get to try even though it is slow." [IDI, P4-BEED]

"The internet connection helps students a lot because sometimes we encounter things we do not know outside of school." [IDI, P7-BSAB]

Overall, participants voiced various challenges and outcomes regarding internet access in Palimbang. Despite encountering different disadvantages, such as unstable connectivity, high costs, the search for areas with strong signals, or sacrificing sleep for a better connection, all participants still recognized the benefits of using the Internet despite its unreliable condition. Despite its drawbacks, tertiary students in Palimbang remained grateful for the availability of internet connectivity, which enables them to continue their academic development. All these shared positive experiences of the participants regarding the Internet in Palimbang were supported by different studies highlighting the importance of Internet access for students' academic performance and cognitive development. However, challenges like unstable connectivity and high costs in rural areas like Palimbang can hinder its benefits. Despite these challenges, students recognize the value of internet access for their academic advancement; this was supported by the studies of Correa and Pavez (2016), Dow-Fleisner et al. (2022), Amponsah (2022), Nagam (2023), Pew Internet and American Life Project (2001), and Swansea University and the University of Milan (2020) that the Internet has become indispensable for students, serving as a fundamental resource in their academic endeavors. Most rely on it to navigate their educational journey, accessing a wealth of information and educational materials to support their learning needs.

4.0 Conclusion

The participants disclosed that internet access in Palimbang was a challenge due to its sluggish and inconsistent connection. Each participant vividly articulated their experiences, painting a picture of the erratic nature of the internet service in Palimbang. They shared stories of struggling with frequent disconnections, slow loading times, and the inability to rely on the Internet for consistent information access. This unreliable Internet has significantly impacted their online activities, from basic web browsing to more data-intensive tasks. The participants also revealed the profound impact of internet connectivity on the academic performance and emotional well-being of tertiary students in Palimbang. These issues were particularly pronounced during the pandemic when education shifted to a virtual mode. Despite the challenges, the students demonstrated resilience and adaptability, developing various strategies to cope with the unstable Internet. These included accessing the Internet during off-peak hours, downloading offline resources, and even going to areas with better connectivity. These strategies, however, were not without their drawbacks. The need to stay up late led to sleep deprivation, affecting their attentiveness in class, while the high cost of internet access added financial strain. The study also highlights the

emotional toll of these challenges. Frustration with the unstable Internet led to anger, with some students even throwing their phones. Despite this, the students acknowledged the Internet's transformative role in their learning process. They recognized its value in providing access to information and educational trends, viewing it as a crucial companion in their academic journey. It was also indicated that poor internet connectivity had profound implications on their academic performance, particularly during the pandemic when education shifted to virtual mode. Many students need help attending online classes and accessing necessary learning resources due to the unstable Internet. These unstable occurrences resulted in poor academic performance, with many students receiving low scores on their activities and overall grades. The lack of sleep from accessing the Internet at dawn and the slow connection that hindered timely information search further exacerbated the situation. The internet issues also caused emotional stress among the students, with some expressing anger and frustration to the point of throwing their phones. Despite these challenges, the students still found value in the Internet. They recognized its role in providing access to information and educational trends and considered it a crucial companion in their academic journey.

With this, recommendations were formulated based on the findings: (1) The national government, through the Department of Information and Communications Technology (DICT), should prioritize developing and upgrading internet infrastructure in Palimbang. This could involve the installation of more telco towers and the introduction of fiber-optic broadband services. (2) The Local Government Unit (LGU) of Palimbang could forge partnerships with Internet Service Providers (ISPs) to provide affordable and reliable Internet packages for students. It is recommended to negotiate with ISPs like Globe Telecommunication and SMART Telecommunication to improve their services in Palimbang and erect additional cellular towers to accommodate the entire population of Palimbang, (3) The LGU and SKSU should establish community internet centers equipped with high-speed Internet. These centers would provide students with a reliable place to access the Internet for their academic needs. They may purchase Starlink units since it would not need telco towers as it is a satellite-based internet, and (4) Telecommunication companies such as SMART, GLOBE, and DITO should focus on setting up more towers to improve internet speed and serve a more significant portion of Palimbang's population. Similarly, PLDT should consider expanding its fiber optic internet services to Palimbang. This would enable the broader community, including students and other Palimbang institutions, to access a more robust wifi connection.

5.0 Contributions of Author

The author exclusively conceptualized the outcomes presented in each section of this study, including everything from the data collection to the analysis of the results.

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7.0 Conflict of Interests

The author of this paper asserts that there are no conflicts of interest concerning the publication of this work.

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