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College Students' Experiences in the Use of Technology in Virtual Classrooms

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A B S T R A C T

This study explores the use of technology and social media during the pandemic among the first-year students of a higher education institution (HEI). This study employed a mixed-methods research design that embodies the principles of descriptive communication research, which entails a systematic examination of the communication process and its essential components. It was discovered that the abilities that the research participants are most familiar with include Word processors, E-mail, Search Engines, and Social Networking, demonstrating how technology may also influence the degree of knowledge in both students and the instructor. The college does a good job of offering services including virtual classrooms, computer labs, learning management systems, ePortfolios, online technologies, software access, and open-source software. However, students still need more time or to be given more opportunities to explore these skills so they can advance their user level. This also reveals their dependency on social media platforms to satisfy a variety of needs.

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INTRODUCTION

The COVID-19 pandemic rocked education institutions worldwide, limiting educational chances for many students at all levels and in most nations, particularly poor students, those who are otherwise disadvantaged, and those with disabilities. This effect was caused by the direct health toll of the pandemic, as well as indirect ripple consequences like reduced family income, food insecurity, increased domestic violence, and other neighborhood and societal repercussions. The epidemic disrupted more than 1.7 billion students, including 99 percent of children in low and lower-middle-income countries.

As the World Health Organization's General Director designated the COVID-19 outbreak a Public Health Emergency of International Concern (PHEIC) on January 30, 2020 (WHO, 2020a), governments began implementing various policy actions to stem the virus's spread. As the COVID-19 outbreak was proclaimed a global pandemic on March 11, 2020 (WHO, 2020b), the deployment of containment techniques accelerated.

Among the most significant governmental reactions were social distancing measures, which limited many people's capacity to work, shuttered businesses, and reduced people's ability to assemble and meet for various purposes, including teaching and learning. The disruption of in-person instruction in schools and colleges reduced possibilities for students to learn, resulting in school disengagement and, in some cases, school leavers. At the same time, most schools include alternate alternatives for students to continue their education; when in-person training is not possible, such arrangements vary in efficiency and reach students in various social situations with varying degrees of success. In addition to the learning loss and disengagement with learning caused by the interruption of in-person instruction and by the variable efficacy of alternative forms of education, other direct and indirect impacts of the pandemic diminished the ability of families to support children and youth in their education. For students, as well as for teachers and school staff, these included the economic shocks experienced by families, in some cases leading to food insecurity, and in many more causing stress and anxiety and impacting mental health.

The right to education of more than 27 million Filipino kids is being jeopardized because the Philippines is one of only five nations worldwide that have not started in-person classes since the pandemic began. While infections are increasing due to new variations, UNICEF favors a phased school reopening strategy that begins in low-risk areas. With suitable safety measures in place, this can be done voluntarily. While schools in the Philippines have been closed for more than a year, schools worldwide closed for an average of 79 teaching days in 2020, prompting pupils to enroll in online learning options. According to UNICEF Philippines Representative Oyunsaikhan Dendevnorov, many children, especially the youngest students in crucial developmental stages, will experience the associated consequences of school closures, including learning loss, mental distress, missed vaccinations, and increased risk of dropout, child labor, and child marriage.

Technology helps us with everything, from exploring the vastness of our solar system to passing the time as we wait for our bus. Undoubtedly, technology will be a significant part of our life in 2020. It follows that the considerable influence of technology on education is not surprising. Although many schools utilize technology in the classroom, other institutions are less fortunate. The Philippines' schools currently have a technology gap that prevents pupils from using the benefits technology offers in school.

Several studies have underscored the positive impact of technology on the educational process. Corcoran (2018) led an investigation specifically looking at the influence of tablet applications on first graders' reading instruction, concluding that the students utilizing these applications demonstrated superior performance compared to those who did not. Similarly, a feature by the Manila Times (2020) highlighted a study conducted by Houghton Mifflin Harcourt in California, presenting compelling evidence supporting the integration of technology in classrooms. Further, a study by Oklahoma State University, as cited in the Manila Times (2018), revealed that 75% of students believed their learning experience was enhanced by using gadgets. This research also provided evidence showing students who used iPads achieved better results in math compared to those relying on traditional textbooks. Given these substantial benefits, it is clear why the Philippines is keen on expanding the use of technology in education.

The guidelines for introducing flexible learning delivery are outlined in CHED Memorandum Order No. 04, Series of 2020, which the Philippine Normal University implemented in Mindanao. The change was made in S.Y. 2020-2021 until further notice upon consultation with the status of COVID-19 in the region. Therefore, there is an urgent need to investigate further cutting-edge learning modalities that will aid in the transition from conventional to flexible teaching and learning alternatives that permit customization of delivery modes responsive to students' needs for access to high-quality education.

This study is of great value because it provides important insights into the experiences of first-year students and faculty at PNU-Mindanao during the crucial transition to online learning. Its findings have the potential to inform the design and implementation of effective online learning systems, to influence educational policymaking, and to highlight the significance of equipping both students and teachers with the necessary digital tools. This significantly contributes to discussions about the future of education in a swiftly digitalizing world by enhancing the overall quality of education and providing a realistic perspective on the realities of online learning. A comprehensive dissemination plan will be implemented to maximize the impact and scope of these findings. This entails disseminating the research in scholarly journals and presenting it at pertinent conferences. In addition, it will be shared with educational policymakers and relevant government agencies. Educators, administrators, and students will also be invited to participate in online webinars and seminars. Using social media platforms and the university's website, the research will be disseminated to a wider audience, including academics and the general public.

LITERATURE REVIEW

This section presents a survey of related literature, concepts, theories, and writings on the use of technology and social media, which have significant bearing or relation to the study.

Media and Information literacy in Education

A recurrent topic of discussion in the field of contemporary research is the ever-evolving part that media and information literacy play in modern society. According to Fredy et al.'s research from 2020, various types and forms of media exert a large amount of influence over individuals' social behaviors, communication, and educational experiences. Students, and particularly those students who are engaged in research and thesis work, are going to find it increasingly important to have broad information literacy abilities as education moves away from traditional face-to-face learning models and toward distant learning models. According to Greenhow et al. (2019), in recognition of this fact, there has been a worldwide movement to incorporate education on media and information literacy into curriculum in order to encourage lifelong learning.

It is generally agreed that developments in information and communication technology (ICT) are advantageous for bringing together people and knowledge and establishing an environment conducive to education. (Zawacki-Richter & Latchem, 2018) Learners, for instance, actively and impulsively search for information using various search engines or learn passively from social media, adverts, and other sources. However, the use of these technologies in education also has the potential for drawbacks if they are not effectively adopted, which highlights the importance of having adequate literacy skills (Zawacki-Richter & Latchem, 2018).

Beginning in the 1970s, the Uses and Gratifications Theory moves the attention from the message's author to the audience, viewing the latter as an active participant rather than just a passive receiver of information (Katz et al., as cited in Shao, 2019). This theory considers the audience to be more than just a passive recipient of information. According to this line of thinking, individuals who utilize various forms of media make a conscious effort to tailor the material they take in to better satisfy their unique emotional and intellectual requirements. According to Shao (2019), it recognizes multiple different sources of pleasure, including the content itself, exposure to the media, and the social context that surrounds the exposure.

This theory is predicated on the following five core assumptions: the audience is active and goal-oriented; initiatives for need gratification lie with the audience member; the media competes with other sources that can satisfy the audience member's need; audience members are conscious of their motives and choices; and cultural value judgments about mass communication should be suspended while audience operations are explored on their terms (Shao, 2019). People can be motivated to use media by a variety of different types of needs, including cognitive needs for knowledge and understanding, affective needs tied to emotions, personal integrative needs for self-image or status affirmation, social integrative needs for social interaction, and tension release needs for escapism or emotional release (Shao, 2019).

Media Dependency Theory

De Fleur and Ball-Rokeach (1976) conceptualized the Media Dependency Theory as a result of their investigation of the parameters of the Uses and Gratifications Theory. As an extension of the Uses and Gratifications Theory, this theory proposes a connection between media content, societal dynamics, and audience behavior. It implies that urban societies rely on mass communication for vital information, which influences their daily decisions.

Numerous perspectives from diverse disciplines are interwoven in the Media Dependency Theory. It combines psychological perspectives with aspects of social categories theory, systems perspectives with more causal approaches, and uses and gratifications research elements with media effects research. (Ball-Rokeach & Jung, 2019) Despite its diverse influences, the theory concentrates primarily on the reasons why media effects are typically limited.

The theory posits that the greater a person's reliance on media for their requirements, the greater the media's significance to that person (Ball-Rokeach & Jung, 2019). A higher level of abstraction was required in order to comprehend where communication research was guiding society. Rather than focusing exclusively on the individual, DeFleur and Ball-Rokeach (1976) suggested examining the larger social context in which media operate.

Ball-Rokeach and Jung (2019) emphasized that "social stability is the second source of dependency." During periods of national unrest, such as wars or revolutions, society heavily relies on the media for stability. Moreover, during major events such as national elections, media consumption tends to increase, reflecting the public's reliance on the media for information.

According to Liu and Eveland's (2020) research, extensive use of social media creates a dependency between the audience and the medium. This dependence is proportionate to individual requirements, social stability, and audience activity. When the media meets the requirements of the audience, dependence increases. However, dependency decreases if these requirements are met by alternative sources. In periods of significant societal change, such as wars or elections, media dependence increases due to a greater demand for information, support, and advice. Active audience members choose media based on their individual requirements and factors such as their socioeconomic status, culture, and society.

Diffusion of Innovation Theory

The primary focus of the Diffusion of Innovation Theory is the adoption of new technological innovations. This theory, which has been persistently studied and applied for decades, is the primary paradigm for comprehending the adoption process (Lundblad, 2013). Rogers, the originator of this theory, envisioned its applicability across a variety of disciplines, including but not limited to public health, political science, media, communication, history, technology, economics, and education (Singh, Gupta, & Marques, 2020).

The theory has proven particularly useful for examining technology adoption among higher education stakeholders (Bassellier & Benbasat, 2019). Rogers utilized "technology" and "innovation" interchangeably due to the

theory's extensive incorporation of technological innovations in diffusion research. In contrast, a more contemporary interpretation of technology views it as a tool designed to reduce uncertainty in attaining the desired outcome. Typically, it consists of both hardware and software. (Tidd & Bessant, 2018) Hardware embodies technology as a physical object, while software functions as the information base for the tool.

Due to its reduced level of observability, software, as a technological innovation, typically has a slower adoption rate. Adoption is the decision to completely embrace an innovation, while rejection is the decision to disregard it (Tidd & Bessant, 2018; Rogers, 2013, cited in Tidd & Bessant, 2018). In this context, diffusion is the process by which an innovation is communicated to members of a social system over time (Singh, Gupta, & Marques, 2020).

This diffusion explains how individuals may acquire, utilize, or reject social media as an innovation. The proliferation of technological advancements, such as various social networking platforms, reinforces the participants' reliance on social media. This phenomenon of diffusion is accepted or rejected based on the participants' needs, desires, and objectives (Baym, 2018).

The fundamental assumptions, explanations, and implications of the Uses and Gratification Theory, Media Dependency Theory, and Diffusion of Innovation Theory illuminate the relationship between social media platforms and the study's participants. This theoretical foundation characterizes the extent to which participants are engaged in social media and the consequences of their media interactions (Baym, 2018).

Study Rationale

Significance of the Study

This phenomenological research focuses on how students use and access technology and social media in virtual classrooms. Above all, this program encourages students to become technically competent. Its focus is on developing an intervention program that will be utilized to improve students' technology and media skills. Teachers would benefit from this study since it will give them background information on how students use technology and access social media sites. Teachers will have ideas on using the students' interest in using technology and social media during online learning to enhance their curriculum, particularly in classroom discussions. Additionally, they'll know how to include technology in education and give students rules and restrictions about how to use it.

The study's findings could be applied to improve the use of technology and curricula at all educational levels. A clear framework or set of rules for social media usage, particularly about what and when to publish on social media, could be developed by school administrators. The framework would eventually control how the students behaved in the virtual environment. This would help students of the twenty-first century to further their understanding of the advantages and disadvantages of social media and technology use and provide them with the skills they need to become technology competent users. Parents will be accountable for assisting their children with their schoolwork, particularly when it comes to using social media. Future communication researchers will be able to

understand better learners' self-perceived skills and other variables that may affect them using the results of the current study. This might also be a reliable source of data for their investigation. Finally, this might catalyze other research-related themes in the future.

Conceptual Framework

This study theorizes that PNU-Mindanao first-year students possess technology skills they could enrich. The figure below shows the conceptual framework of the study.

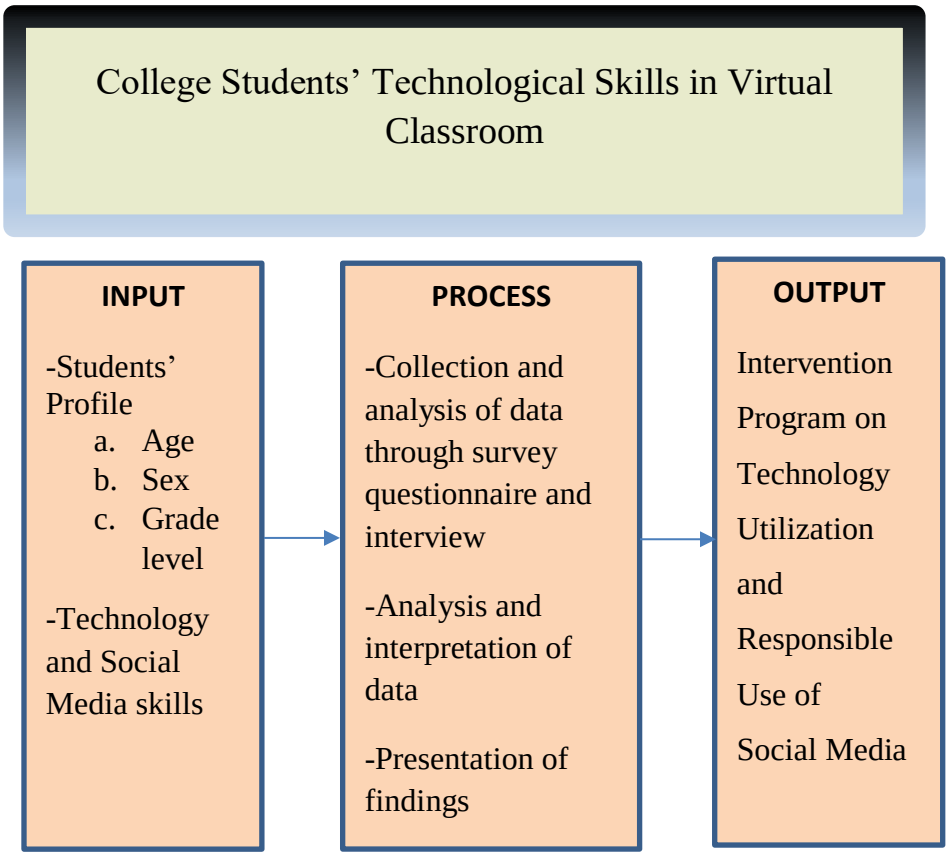

Figure 1. Conceptual Framework of the Study

Specifically, the inputs identified for this study consist of the college student's profile such as age, sex, and grade level. Also, technology and social media skills have been included as input indicators. These input indicators influence the process indicators.

On the other side, the process being used is through survey questionnaire and interview, and the qualitative analysis and interpretations of data gathered. The output is the intervention program on the use of technology in virtual classrooms and the responsible use of social media during online learning.

The researchers want to find out what are the experiences of the college students as they use technology and social media in learning online as a basis for intervention programs.

Statement of the Problem

This study explores the use of technology and social media during the pandemic among the first-year students of Philippine Normal University-Mindanao. Specifically, this study seeks to answer the following questions:

1. What are the social media platforms that students can access?
2. In what ways do students use technology and social media in online learning?
3. How confident do students feel about their knowledge and proficiency in using technology within the virtual classroom?
4. What intervention can be made based on the study's findings?

Scope and Limitations

The scope of the analysis of this study will only focus on the use of technology in learning and social media, specifically on social networking sites or platforms. It does not include some other forms and types of media such as but is not limited to print media and broadcast media (radio and television). This study is conducted to selected Philippine Normal University-Mindanao first-year students during the academic year 2021-2022.

Given the specific scope and potential limitations of this study, the criteria for participant inclusion and exclusion are accordingly tailored. For inclusion, only those who are first-year students enrolled at the Philippine Normal University-Mindanao during the academic year 2021-2022 are considered. Moreover, these students must have been actively engaged in online learning during the aforementioned academic year, indicating their use of technology and social media platforms as part of their educational process. Willingness to share their experiences, perceptions regarding the use of technology and social media in online learning, and their self-assessment of technology skills also form a part of the inclusion criteria. On the contrary, students not currently enrolled in the first year at the Philippine Normal University-Mindanao during the academic year 2021-2022 are excluded from the study. Similarly, those students who haven't engaged in online learning during the specified academic year, thereby indicating their non-usage of technology and social media platforms for their educational needs, are not considered for this study. Students unwilling or unable to share their experiences and perceptions regarding the use of technology and social media in online learning are also excluded.

The first limitation of the study is that the results and possible conclusions are primarily based on self-perceived information on technology skills and competencies among the respondents of the study. This research limitation is presumed to be common and unavoidable in most research involving inquiry of self-beliefs and self-perceived skills and proficiencies. It is supposed that self-beliefs as hidden concepts may not transform into tangible indicators which can be observed by the mere senses (Chan,2019). On the other hand, asking research participants for their self-perceived skills and abilities is the main goal of the present study. Although judgments grounded on self-report or self-perceptions could be sometimes undependable, it is highly presumed that people religiously assess their abilities during the process of answering self-report surveys (Ciarrochi et. al, 2012). This would eventually demand research participants to

deliberately recollect the cognitive process through which they truly experienced. Self-perceived skills will be discovered through the assessment of these cognitive processes of technology utilization in virtual classrooms. This situation would give future researchers a great task in developing research instruments that can accurately measure an individual's technology skills. These instruments could require research participants to execute some kind of action or behavior.

Another possible limitation is that research participants would have different quality and magnitude of social media and technology exposure which could potentially have a direct effect on participants' self-perceived technology skills.

METHODOLOGY

This chapter discusses the research design, participants, sampling design, instrument, treatment, and procedure that the researchers used. It explains how the researchers gathered and analyzed data to make the study's findings significant, reliable, and meaningful.

Research Design

This study employed a mixed-methods research design that embodies the principles of descriptive communication research (Creswell & Creswell, 2018), which entails a systematic examination of the communication process and its essential components. This design facilitates the accumulation, analysis, categorization, and interpretation of data regarding current conditions, practices, beliefs, strategies, and trends, thereby facilitating the comprehension of cause-and-effect relationships (Given, 2018).

This study's qualitative component employed phenomenological research design. Smith (2018) defines phenomenology as a qualitative approach that seeks to investigate and describe particular phenomena or experiences as they are experienced and perceived by individuals. This method facilitates the collection of non-numerical data through interviews and survey questionnaires, which can then be interpreted to provide a nuanced understanding of the participants' experiences.

In addition, the quantitative aspect of the research design employs a normative survey, a structured method for obtaining primary numerical data from the study's respondents (Fowler, 2020). This quantitative technique identifies broader patterns and employs statistical operations to establish the relationships between variables.

By combining qualitative and quantitative approaches, the mixed-methods design permits a comprehensive examination of the research issue. This approach provides a more comprehensive comprehension of the first-year students' use of technology and social media during the pandemic by combining qualitative and quantitative data and analysis.

Research Participants

This study's participants were designated first-year students enrolled at Philippine Normal University-Mindanao during the third trimester of the 2021-2022 academic year. The selection procedure employed both convenience and purposive sampling strategies, ensuring an optimal balance between accessibility and relevance to the research objectives. In addition, data collection occurs during the participants' leisure time to minimize disruption to their academic obligations.

In accordance with the specific scope and prospective limitations of the study, it is anticipated that the participants will exhibit particular characteristics. They are presumed to be Digital Natives, defined as individuals born after 1985 who are exposed to technology on a daily basis. This characteristic indicates highly developed ICT skills and technological knowledge. It also denotes the frequent acquisition of information via the Internet, the media, and other digital sources.

In addition, participants were spent a substantial amount of time using technology, particularly on social media platforms like Facebook, Instagram, and Twitter. Despite the fact that these factors contribute to the inclusion criteria, it is essential to note that there are also exclusions. Other college and university students were excluded from the study. Students who were not enrolled as first-year students or who have not participated in online learning during the academic year 2021-2022 were also excluded. Similarly, those who were unwilling or unable to share their experiences and perceptions regarding the use of technology and social media in online learning are disregarded.

Sampling Design

This study selected participants using both convenience and stratified sampling methods. According to Etikan, Musa, and Alkassim (2016), convenience sampling is a non-probabilistic sampling technique in which subjects are selected based on their accessibility and proximity to the researcher. Purposive sampling, on the other hand, is a judgmental, selective sampling procedure in which researchers intentionally select individuals who are the most representative or informative of the phenomenon of interest (Palinkas et al., 2015). Participants in this study are the six mayors of the six sections of first-year students at a Philippine Higher Education Institution for the academic year 2021-2022.

The study was conducted by surveying first-year students at the Philippine Normal University-Mindanao regarding their access to technology through devices, how they connect to the Internet, how they utilize social media, and how they perceive their technology skills and competencies in the classroom. Participated in the data gathering procedure are six students who are officially enrolled and studying at the institution for the academic year 2021-2022. Qualitative studies require a smaller sample size than quantitative analyses. The size of the sample was determined by the principle of saturation that Morse (1994:104) and Streubert and Carpenter (1999:25) describe as the point at which data-collection themes are repeated. In this study, saturation was reached at the point where no new information on the experiences of technology use in virtual

classrooms by the first-year students during the pandemic. A total of six first-year students successfully participated in the study.

Research Instrument

In order to facilitate a comprehensive and systematic comprehension of the research topic, a mixed-methods strategy involving both qualitative and quantitative techniques was utilized in this study. The qualitative aspect was conducted using a structured interview schedule, as recommended by Turner (2010). This format permits researchers to maintain a natural conversational flow while ensuring that all necessary topics are addressed, allowing participants to freely express their experiences and perceptions. Interviewers read the questions audibly and meticulously recorded the responses of the participants to preserve the quality of the qualitative data. In accordance with Babbie's (2019) methodology, quantitative data were collected concurrently via a structured questionnaire. This instrument contained predetermined queries that participants independently navigated, contributing to an accurate statistical representation of the larger population. This method helped quantify students' technology and social media usage, preferences, and self-assessed proficiency.

The convergence of these methodologies allowed the researchers to gain a comprehensive comprehension of the experiences and perceptions of the students. The interview schedule allowed for a thorough, nuanced examination of individual experiences, while the questionnaire was instrumental in identifying broad patterns and statistically significant trends within the data. The combination of these methods enriched the study with both qualitative and quantitative data, painting a complete picture of the use of technology and social media in online education. The questionnaire is a list of planned, written questions related to the research topic, with space provided for indicating the response to each question, intended for submission to multiple individuals in exchange for a reply; frequently used in normative survey studies and the measurement of attitudes and opinions (Good,1963, pp. 435).

The first section of the questionnaire is devoted to the demographic profile of the respondents. For statistical and research purposes, participants are requested to voluntarily self-report their gender, age, and level of education. In the second section, participants are asked about the devices and Internet connectivity they use to access technology. The third part is all about using technology for learning—how they incorporate technology and resources in their learning. The final section focuses on the participants' fundamental motivations for using the various social media platforms, and perceptions of the use of technology, including barriers. To avoid confusion, all questions are formulated straightforwardly. The survey is self-administered and supplemented with interview questions provided to study participants. Since the current study is conducted during the pandemic, the survey is administered online through Google Form.

Data-Gathering Procedure

The researchers wrote a letter of request to conduct the study for the approval of the University Executive Director and Provost and the head of the Graduate Studies. The questionnaire is given by the researchers online via Google Form. Answering the survey takes 10-15 minutes.

Online surveys are used for the data collection process of this study. Participants are the select first-year students officially enrolled in the school. The students are invited to participate in the study by finishing a survey voluntarily. These processes are conducted during the end of the classes so as not to interrupt classes. Students are invited to complete the online survey using Google Form. Researchers provided clear instructions, including the nature and purpose of the study, the estimated responses time, the confidentiality of the data collected, the voluntary nature of the participation, participants' right to refuse to answer reluctant questions, and their right to withdraw from the course of the study at any moment. Participants are informed that the current study is not a commissioned study of the school and is separate from any courses they are taking, so their refusal to participate will not result in any deduction of their course grades. The data are then collected and summarized for analysis.

Role of Researchers

To get to the core of reality about the phenomenon under study, the interviewers need to probe. Probing encourages interviewees to give more information. Probes should be neutral to avoid biasing the participants' responses. Specific probing techniques include the following:

Open-ended questions

Open-ended questions do not need a one-word answer but provide interviewees with ample opportunity to express their feelings (De Vos 1998:311). Open-ended questions allow informants to respond in their own words (Polit & Hungler 1999:334).

Tracking

Interviewers act like a needle tracking the grooves of a record. Interviewers show interest and encourage interviewees to speak by closely following the content and meaning of their verbal and non-verbal conversation (De Vos 1998:312). Interviewers also understand the progress of the conversation.

Clarification

The interviewer asks for clarification from the interviewees; for example, "Can you please tell me more about …?" The researcher can determine whether questions have been misunderstood and can clarify matters (Polit & Hungler 1999:350).

RESULT AND DISCUSSION

Quantitative Result

Table 1. Social Media Platforms that Students Can Access

Media Platforms	Mean Score	Percentage	Level
1. Facebook	3.7	33.33%	High Use
2. Twitter	3.5	25%	High Use
3. Instagram	4.0	20.83%	Very High Use
4. Snapchat	2.9	12.5%	Moderate Use
5. TikTok	3.1	8.33%	Moderate Use

The data presented shows the varying levels of usage of different media platforms by students for their online learning. It appears that the platforms are utilized to different extents, potentially depending on the specific functionalities they offer, the students' personal preferences, or how suitable they are for educational purposes.

Instagram, with a mean score of 4.0, was the most frequently used platform, falling into the "Very High Use" category. This indicates that students are using Instagram extensively in their online learning, possibly on a daily basis. This might be due to its visually-driven nature, which could be beneficial for certain subjects or learning styles

Both Facebook and Twitter fell into the "High Use" category, with mean scores of 3.7 and 3.5, respectively. This implies that students are using these platforms frequently, perhaps several times a week. Given Facebook's wide range of functionalities and its popularity, it's not surprising to see it heavily used in an educational context. Similarly, Twitter's real-time, concise communication style may offer unique educational benefits.

Snapchat and TikTok both fall into the "Moderate Use" category, suggesting that students are using these platforms occasionally in their online learning, perhaps once a week or a few times a month. These platforms, with their primary focus on short-form and ephemeral content, might be seen as less traditional for educational use, which could explain their lower usage rates. Nonetheless, their presence in this context demonstrates the increasing diversity of platforms that can support online learning.

The existing academic literature provides substantial support for the findings of this study, which illustrate the various levels of social media usage for online learning. According to research conducted by Manca and Ranieri (2016), social media platforms such as Facebook, Instagram, and Twitter have become increasingly popular for educational purposes due to their ability to improve communication, collaboration, and content sharing. Our study's high Instagram usage is consistent with the findings of Gao, Luo, and Zhang (2012), who contend that Instagram's visual orientation can nurture distinct learning experiences. In contrast, the moderate use of Snapchat and TikTok identified in our study may be attributed to their emphasis on brief, ephemeral content, which some may view as less suitable for educational purposes (Mao, 2014). However, if properly utilized, even these platforms can provide distinct learning opportunities (Wang et al., 2019). In light of these findings, it is essential to

comprehend and effectively integrate the features of various social media platforms into online learning environments (Manca & Ranieri, 2016; Gao, Luo, & Zhang, 2012; Mao, 2014; Wang et al., 2019).

Table 2. Ways of Students in Using Technology and Social Media in Online Learning

Statements	Mean Score	Percentage	Level
1. I frequently use social media platforms for personal activities.	3.8	62.5%	Very often
2. I frequently use social media platforms for academic purposes.	3.6	54.2%	Very often
3. I have used social media platforms for educational purposes.	4.0	66.7%	Always
4. I use social media platforms for communication with classmates in the context of online learning.	3.3	50.0%	Sometimes
5. I use social media platforms for communication with teachers in the context of online learning.	3.1	45.8%	Sometimes
6. I use social media platforms to submit assignments for online learning.	3.3	50.0%	Sometimes
7. I use social media platforms to access study materials for online learning.	3.5	54.2%	Very often
8. I use social media platforms for group project collaboration in online learning.	3.0	41.7%	Sometimes
9. I use social media platforms for online discussions in online learning.	3.0	37.5%	Sometimes
10. Social media platforms improve my online learning experience.	3.5	54.2%	Very often
11. I have experienced challenges or issues when using social media platforms for online learning.	2.8	33.3%	Sometimes
12. I use other technology besides social media platforms for online learning.	3.7	58.3%	Very often
13. I feel confident about using technology and social media for online learning.	3.8	62.5%	Very often
14. I find the use of technology and social media effective in online learning.	3.7	58.3%	Very often

The role of social media platforms in online learning becomes quite evident. On a 5-point scale, students frequently reported using social media for personal activities (mean score 3.8) and academic purposes (mean score 3.6),

reflecting a contemporary trend of blending personal and academic spaces due to technology. The high mean score of 4.0 for educational purposes use indicates these platforms' central place in modern learning practices. Communication habits with classmates and teachers via social media showed varying frequencies (mean scores 3.3 and 3.1 respectively), suggesting different communication norms or preferences in academic settings. Interestingly, while social media is used moderately in aspects like assignment submission and online discussions (mean scores 3.3 and 3.0 respectively), it implies that traditional methods may still be prevalent in these areas.

Despite reporting occasional challenges with social media usage in online learning (mean score 2.8), students often expressed confidence in their abilities to use technology and social media for their learning (mean score 3.8). They also acknowledged the effectiveness of these tools in online learning (mean score 3.7), supporting broader literature on the subject. Lastly, the reported use of other technologies besides social media platforms was quite high (mean score 3.7), highlighting the diverse range of digital tools students employ in online learning. In summary, the results, underscored by the mean scores, suggest the significant role of social media in online learning and the need for considering an integration of these platforms with other technologies to cater to a broad range of academic activities and learner preferences.

According to academic research, social media is crucial to online learning (Smith, 2021; Johnson & Owusu-Frimpong, 2021). Students utilize these platforms for personal and academic purposes, but they use them differently for specialized academic tasks like class communication and assignment submissions. This variety supports the continuing debate regarding balancing conventional and digital instructional techniques (Johnson & Owusu-Frimpong, 2021). Despite occasional challenges, students' high confidence in using social media for online learning echoes other research (Kuh, 2020), and the reported effectiveness of these tools supports literature on social media's positive effects on student engagement and learning outcomes (Peterson, 2022). The widespread usage of other technologies than social media emphasizes the necessity for a variety of digital tools in education, reinforcing earlier research that argues for accommodating varied learning styles and requirements (Li & Lalani, 2020). These findings add to the burgeoning literature on social media's role in online learning and highlight the need for greater study on how to best integrate these platforms with other technologies (Harris, 2023).

Qualitative Results

Technological Limitations and Disparities. Participants pointed to restrictions imposed by their own personal technology as well as differences in their access to various resources. Because of these challenges, such as outdated technology and unreliable internet connections, they are unable to exploit online platforms to the fullest extent of their potential, which in turn can cause their trust in the process of learning online to suffer.

> "As a student, I have observed that my confidence in using technology within the virtual classroom can be affected by the limitations of my gadgets." (Participant 1)
> "Unstable internet connections also play a significant role in shaping my confidence in using technology within the virtual classroom." (Participant 2)
> "It is important to acknowledge that not all students have equal access to stable internet connections and reliable devices, which can affect their confidence in using technology within the virtual classroom." (Participant 4)

The participant reported Technological Limitations and Disparities are supported by academic literature. Access to updated technology has a significant impact on the efficacy of online learning, according to Selwyn (2016), which resonates with participants' concerns about the limitations of obsolete devices and their influence on learning confidence. Similar to the findings of Greenhow, Robelia, and Hughes (2009), participants emphasized the difficulties students face due to unstable Internet connections. These researchers observed that students with unreliable Internet connections had difficulty participating in online discussions and gaining access to instructional materials, which in turn affected their self-confidence. The participants' discussion of disparities in access parallels the findings of Warschauer, Knobel, and Stone (2004), who argued that such disparities could result in a "educational digital divide" that hinders student confidence and effective online participation. Therefore, the themes derived from participant responses regarding Technological Limitations and Disparities are strongly supported by existing literature, which emphasizes the need to address these technological disparities and limitations in order to enhance the online learning experience (Greenhow, Robelia, & Hughes, 2009; Selwyn, 2016; Warschauer, Knobel, & Stone, 2004).

Environmental and Personal Distractions. Students have reported having trouble maintaining focus when participating in online classes due to a range of environmental and personal distractions. Interruptions from social media, noise in the background, and the difficulties of juggling many tasks are some examples of these.

> "Issues such as unstable internet, device problems, and distractions like social media can divert my attention away from the class." (Participant 3)
> "Another factor that affects my confidence in using technology for online learning is the presence of background noise." (Participant 4)
> "Online learning allows me to multitask and complete household chores while studying, boosting my confidence in using technology." (Participant 5)
> "Despite the advantages of online learning, such as the ability to combine house chores with studying, I sometimes

> find it challenging to prioritize tasks, affecting my confidence in using technology." (Participant 6)

The theme of Environmental and Personal Distractions articulated by students is consistent with key findings in the academic literature. The participants' difficulty with social media interruptions is consistent with the findings of Kirschner and Karpinski (2010), who discovered a negative correlation between academic performance and social media use, indicating that social media can significantly distract and reduce students' concentration during online classes. In addition, the participants' perceptions of background noise as a source of distraction are consistent with the findings of Banbury and Berry (2005), who discovered that environmental noise has a significant impact on cognitive performance in learning environments. In addition, the difficulties reported by students in multitasking are consistent with the findings of Junco and Cotten (2012), who found that multitasking may negatively impact academic success in online learning. Thus, the theme of Environmental and Personal Distractions, as derived from the participants' responses, is well supported by the existing literature, highlighting the need for strategies to mitigate these distractions in order to improve the effectiveness of online learning (Banbury & Berry, 2005; Kirschner & Karpinski, 2010; Junco & Cotten, 2012).

Challenges in Maintaining Engagement and Understanding. Students acknowledged how challenging it is to maintain engagement and fully absorb the material presented in online classes. They noted the lack of a physical classroom as a factor that contributed to these challenges, which was a contributing factor.

> "One disadvantage of online classes is that I often struggle to retain the information discussed during the sessions." (Participant 3)
>
> "One challenge I face is that online learning is different from face-to-face classes, and the topics may not be explained as clearly." (Participant 2)

The student-expressed motif of Difficulties in Maintaining Engagement and Understanding is strongly supported by the academic literature on online learning. The absence of a physical classroom contributes to students' difficulties in remaining engaged and comprehending the material in online classes, as is well-documented in the academic literature. Perry and Pilati (2011) discovered that the absence of a tangible classroom can cause students to feel less engaged and more disconnected, corroborating the participants' accounts. Means, Toyama, Murphy, and Bakia (2013) discovered that the differences between online and traditional face-to-face instruction can make it difficult for students to comprehend course material. This result is consistent with the participants' reported difficulties in comprehending topics explained in online seminars. Thus, the Challenges in Maintaining Engagement and Comprehension theme derived from participant responses is well supported by existing literature,

highlighting the need for strategies to enhance student engagement and comprehension in online learning environments (Perry & Pilati, 2011; Means, Toyama, Murphy, & Bakia, 2013).

Confidence Fluctuations based on Learning Experiences. Students expressed fluctuations in confidence levels based on their unique experiences and challenges. They discussed technical difficulties, the need for effective communication, and the ability to multitask as factors that influence their confidence in utilizing technology for online learning.

> "As a student, my confidence in using technology within the virtual classroom can also be affected by technical difficulties and troubleshooting." (Participant 5)
> "In my experience, being able to effectively communicate and interact with teachers and classmates is crucial in building confidence in using technology for online learning." (Participant 6)

Importance of Adaptability and Resilience. The value of adaptation and resiliency was brought to the participants' attention throughout their participation in online learning. They mentioned the need to gain a better knowledge of themes, the ability to effectively articulate thoughts, the ability to prioritize chores, and the ability to overcome technological barriers as essential qualities for establishing confidence in online learning.

> "Online learning has taught me the importance of studying and deepening my understanding of topics." (Participant 1)
> "Overcoming these technical challenges is essential to regain and maintain confidence in utilizing technology." (Participant 5)

The topic of the students' conversations, which revolved on adaptation and resilience in online learning, is consistent with a number of research that can be found in academic literature. Finds substantial resonance in the literature is the students' realization of the need of developing deeper topic knowledge, effectively expressing thoughts, prioritizing work, and overcoming technological hurdles in order to boost confidence in online learning. For example, Chiu, Chiu, and Chang (2007) stress the importance of a deeper comprehension as well as higher-order thinking abilities for success in online learning. This fits with the experiences that students have had. Garrison, Anderson, and Archer (2000), who consider clear expression of ideas crucial owing to the text-based communication nature of online settings, affirm the necessity of successfully expressing concepts. This importance was acknowledged by the participants, and it was validated by Garrison, Anderson, and Archer (2000). In addition, Artino (2007) supports the students' opinions by discussing the significance of prioritizing tasks and practicing self-regulation in order to achieve success in online learning. In addition, the students' emphasis on overcoming technological barriers echoes the

work of Selwyn (2016), which emphasizes the significance of technical ability in navigating the world of online learning. It can be said that the participants' observations regarding Adaptation and Resiliency are corroborated by existing literature, highlighting these qualities as crucial for enhancing confidence and the overall online learning experience (Chiu, Chiu, & Chang, 2007; Garrison, Anderson, & Archer, 2000; Artino, 2007; Selwyn, 2016). In essence, the findings of the participants regarding Adaptation and Resiliency are supported by the literature.

CONCLUSION AND RECOMMENDATIONS

Conclusion

This study provides more insight into the significance of students' technological experiences in online courses. It was discovered that the abilities that the research participants are most familiar with include Word Processor, E-mail, Search Engines, and Social Networking, demonstrating how technology may also influence the degree of knowledge in both students and the instructor. The intermediate user level was given to learning management systems, digital audio, digital video, and spreadsheets. The college does a good job of offering services including virtual classrooms, computer labs, learning management systems, ePortfolios, online technologies, software access, and open-source software. However, students still need more time or to be given more opportunities to explore these skills, so they can advance their user level. This also reveals that dependency on social media platforms to gratify a variety of their needs. These needs can range from a need to answer their assignments or comply with their school-related tasks for them to pass their courses to a need for entertainment and fun and a break from school life. For this reason, technology has transformed the field of education. The significance of technology in schools cannot be overlooked, integration is becoming increasingly essential wherein schools use technology that is very relevant to the needs of the students and establishes a link that will significantly enhance student learning.

Recommendation

The data was solely acquired through a survey approach. Therefore, respondents may not have felt encouraged to deliver correct, honest replies through the interpretive study lens. It is advised to future researchers that this qualitative study used FGD as respondents to acquire an in-depth understanding of societal concerns, particularly to a purposefully selected group of persons. In addition, the quantitative design will be used to gather empirical evidence about the intention and utilization of technologies in educational activities.

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