

Awareness of
Senior High School Students
on Digital Literacy Skills:
A Qualitative Study

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Abstract: The current study investigates senior high school (SHS) students' awareness of the importance of digital literacy in times of uncertainty. Studies on digital literacy in DepEd Rizal have not been given sufficient attention. Hence, there is a dearth of studies showing whether students are fully aware of the digital literacy skills needed in distance learning. Consequently, an online qualitative survey gathered data from fifty (50) senior high school students presently enrolled in the different strands and tracks in the division. To better understand students' awareness of the needed skills, thematic analysis of Braun and Clarke (2006) was utilized. Students' qualitative responses were interpreted into several emerging themes. Results revealed that some students are cognizant of the digital skills they need to possess, such as critical thinking, online safety skills, and communication. This study hopes to provide implications to students, teachers, and curriculum developers.

Keywords: critical thinking; digital literacy; online safety; qualitative study; senior high school students

INTRODUCTION

The first lesson kids learned from their teachers was the basic method of reading and writing since literacy was prioritized in the educational curriculum. The advancement of 21st-century technology paved the way for digital literacy, which pertains to knowledge in using technology in today's world. Furthermore, Kapur (2020) believes the term is also used in different fields of specialization such as law, medicine, engineering, science, the arts, business, administration, and management. Moreover, Indrinal (2022) argued that technology altered people's perceptions of and values for things, particularly in education. Digital literacy is essential in today's information technology, where the world is already changing towards its digitalized era.

In the Philippines, the government has opted to implement quarantine protocols closing all educational institutions to prevent COVID-19 from continuous spreading. Digitalization in education stands up as it is the best option to continue the students' education while complying with the quarantine protocols. During the COVID-19 pandemic, Wulandari et al. (2021) report that digital literacy services effectively improve students' motivation to learn. Thus, despite the pandemic, the government still wants to continue students' education and see a silver lining despite these challenging times.

In response to COVID-19, according to Kumar and Raja (2019), digital learning is any learning supported by technology or by instructional practice that makes efficient use of technology. Therefore, digital tools have already been used for learning and academic purposes which they also pointed out that various digital tools accessible today allow for the cultivation of students' creativity and the expansion of where and how students learn. Furthermore, the web shows different tools to help digital learning, such as YouTube, Google Classroom, Class Dojo, Prezi, Edmodo, Edublogs, and Socrative. These opportunities from technological and digital tools

should enhance and promote more effective learning and teaching, especially in times of pandemic. Supporting this view, Redmond (2015) mentioned that digital media helps students gain information, skills, and mindsets to live, engage and prosper in the digital environment of the twenty-first century.

Moreover, senior high school (SHS henceforth) students with developed digital literacy skills are helpful for the future generation of technology. Along with these technological advancements, students use software applications like Canva, Microsoft Office, WPS, and others. They can be used to showcase their digital literacy skills that also enhance their language skills by producing critical content with images, videos, and other media output. Additionally, the digital environment that develops as an educational tool requires skills to embrace basic literacy for reading and writing in today's era, as well as the requirements of the students to have critical thinking skills such as analyzing the reliability of information and contextualizing, analyzing, and synthesizing what is found on the Internet (Fieldhouse & Nicholas, 2008). Thus, these skills are necessary for today's era where everyone is regularly exposed to the Internet. It is also essential that everyone knows these skills for the safety of digital users in a digitally enhanced environment.

Digitalization and new technology, such as the Internet, have given us millions of possibilities in various domains, but there is a downside. Web safety, online safety, Internet safety, or what is today known as Digital Safety, is concerned with the user's safety while engaging with digital technology (Lorenz, 2016). Therefore, the curriculum developer must enhance not only the digital skills of SHS students but also their awareness of safe practices in using digital tools.

It is primarily because digitally literate people have multiple literacies that allow them to use digital technology effectively and productively (Mohammadyari & Singh, 2015). On the other hand, SHS students should have various skills to be digitally literate where they can use different

digital technology effectively and innovatively, which can help achieve quality education in times of distance learning.

SHS students can benefit from digital technologies to improve their understanding of every word, text, and meaning delivered via digital literacy tools. It implies that such digital tools help them develop their digital literacy skills while promoting self-regulated learners' autonomy (Turula, 2017). At the same time, digital literacy tools empower SHS students in literacy as they grow with technology. Their skills develop through careful and detailed comprehension (Mudra, 2020). Over the last few years, the influence of digital technology in daily life has evolved (Bekker et al., 2015).

Since the digital era started with the advent of computers and communications technology, it must be acknowledged that these technologies are also changing over time (Cascio & Montealegre, 2016). According to Poushter (2016), computer, mobile device, and Internet usage are at an all-time peak. It is expected to climb higher as technology becomes more affordable, especially to people in underdeveloped countries. On the other hand, educational attempts to foster digital literacy appear to emphasize or give weight to different components of what may be deemed digital literacy based on the context of implementation (Weninger, 2020). Moreover, using technology allows learners to participate regardless of their circumstances. If they want to learn, they also need to interact, as e-interactions must be activity-based to encourage active learning (Hirumi, 2002). Thus, technology provides elements such as visual representation features that can lead to more productive use of rising datasets, beautification for learning and teaching, and increased interpretation among students and peers (Buckley & Nerantzi, 2020).

In the study of Indrinal (2022), he argued that governments worldwide consider developing and sustaining technical skills and competencies essential to a student's ability to interact with

twenty-first-century education. On the other hand, interaction with modern education is a vital component of a student's knowledge. The government should think about or give attention to developing and sustaining the students' digital skills.

In addition, Kapur (2020) also claimed that individuals might carry out their activities and tasks more controllably by embracing technology. Students should have digital skills to perform their functions and activities in a digitized education. Concurrently, according to Lorenzo (2016), most public schools in the Philippines lack comprehensive ICT (Information and Communications Technology) facilities, and most teachers are not digitally literate, resulting in low student and school performance.

Furthermore, Yang and Wu (2012) argued that students must comprehend the process of work created using digital media to build their digital literacy. On the other hand, students need to sustain their knowledge of digital literacy skills to keep pace with the continuous advancement of technology and the digital environment. Moreover, according to Tang and Chaw (2016), although today's students are typically thought to be tech-dependent, many struggle to do so adequately. Therefore, it is still necessary to further enhance the students' knowledge and awareness of their digital literacy skills to catch up with the constant advancement of digital technology.

However, many still do not have access to digital literacy due to the lack of available technology, especially low-income families who cannot afford necessities, including gadgets (Das, 2018), the Internet, and even the knowledge and awareness about digital literacy. As evidenced by research, the lack of opportunity provided by teachers for students to use ICT tools on their own, inadequate ICT tools, and difficulty teaching ICT practical lessons without demonstration were identified as the most common challenges of using ICT tools for learning (Indrinal, 2022). Despite the growth and advancements of technology, many still do not have the privilege of being exposed

to technology and learning the digital skills necessary to perform modernized and digitized education.

Several studies explored the impact of digital literacy and technology in the current century (Kapur, 2020; Mujiyanto & Suherman, 2017; Spires et al., (2019), including the student's digital literacy skills (Amanta & Fairuza, 2021; Amnie et al., 2021; Jara et al., 2015). However, there is a lacuna of studies on students' knowledge and awareness of digital literacy skills in the Philippine education context, especially in the current era where students face challenges and difficulties during the pandemic and rely on technology to continue their education. Thence, the increased availability and utilization of online media content for information gathering also put the student under pressure to organize and assemble information nonlinearly, typically incorporating visual media to synthesize it.

Purposefully, the current study aims to investigate SHS students' digital literacy skills. It builds a strong knowledge of students' use of technology and digital literacy in the present generation. Hence, this study allows analyzing the digital literacy skills of current SHS students from different strands and tracks in the Division of Rizal and how they can leverage them in the next generation of technology.

Research Questions

As the established research gaps are formed, the current paper would like to answer the following research questions:

1. How do SHS students view the significance of digital literacy in the age of online education?
2. How do SHS students enhance their digital literacy during the COVID-19 pandemic?

METHODOLOGY

Research Design

This study utilized a descriptive-qualitative research design. Descriptive-qualitative research is a broad investigation of particular events encountered by individuals or groups of individuals (Lambert & Lambert, 2012). Therefore, it is used in the study to provide a thorough analysis and understanding of students' experiences in learning during the pandemic (Nassaji, 2015).

Participants and Sampling

A total of 50 student-participants were purposely selected from different schools in the Division of Rizal. Their ages ranged from sixteen to nineteen, and most participants were male.

Table 1
Frequency of Student-Participants per Grade Level

Level	Grade Level	
	Frequency	Percentage
Grade 11	28	56
Grade 12	22	44
Total	50	100

These student-participants are SHS students who are (1) enrolled in SHS as grade 11 or 12 students, (2) tech-dependent most of the time during distance learning, and (3) have stable Internet connection during the conduct of the study. These students must be tech-dependent and have stable Internet connections to fully describe how digital skills helped them learn amidst the pandemic.

Data Gathering

The data were collected by creating a qualitative survey through survey administration software (SAS), such as *Google Forms*, with open-ended questions to provide detailed information about participants' experiences and opinions on their digital literacy skills. After gathering the needed information, the substance of the collected data was evaluated.

Data Analysis

This study used thematic analysis, a method for identifying themes or patterns in qualitative data (Braun & Clarke, 2006) which helps in gaining a thorough understanding of the students' opinions and experiences in their digital literacy skills. Furthermore, a proper thematic analysis also makes it simple to understand how findings are drawn and how conclusions are made about the participants, making the results more reliable.

RESULTS AND DISCUSSION

The qualitative survey results aimed at getting in-depth information about students' perceptions of digital literacy. Several recurring themes were found after a thorough analysis of the survey results.

RQ1: On students perceive importance of digital literacy in times of pandemic

The following were the top themes that emerged after analyzing the data. They are discussed thoroughly below.

Themes	Frequency	Percentage
Engages and motivates students' learning/performance	45	90%
Facilitates students' online collaborations	24	48%
Locates and utilizes online resources effectively/efficiently	24	48%

Theme 1: Engages and motivates students' learning/performance

The field of education has already embraced technology to make the teaching and learning process modern. Thus, it played a significant role in education when the COVID-19 virus hit the entire world. 90% of 50 student-participants claimed that digital literacy skills are needed to access quality education. As evidenced by the extracted responses below:

Tech-Student 1: "We acknowledge our skills as a tool for coping with the new education modality. We can cope with the new normal phase of learning."

Tech-Student 10: *"Digital literacy is needed if you are an online distance learning student. It helped me find answers to my activities, and it helped me understand my lessons more."*

Tech-Student 30: *"When we are doing our school work. Most of the time, we use various online learning tools and resources to complete the tasks that have been assigned to us, which includes digital literacy when using it."*

These extracts given by the three (3) student-participants confirm Grand-Clement et al.'s (2017) assertion that digitalization is gradually reaching the realms of skills and education. Technology is increasingly being employed in novel and creative ways to attain education, understanding, and abilities (Grand-Clement et al., 2017). Likewise, in the study Martinez-Alcala et al. (2021) found that even though there was a COVID-19 pandemic, the study showed that older adults improved their digital skills over time and jumped into the digital age. With this, people are constantly training themselves and acquiring digital skills as ICT evolves and rapidly expands, as they have become crucial tools in their daily life (Yu et al., 2017).

Conversely, digitalization in education effectively achieves various knowledge and skills, allowing learners to access the new academic settings easily. Thus, it has been utilized to acquire education in the new academic settings and modern ways. Therefore, students are being creative in their intellectual outputs because they use various digital tools that offer better features. Hence, it opened the gate for great opportunities for their learning and skills. It is just proof that digital tools and digital literacy skills help teach the current generation of students effectively and innovatively.

Theme 2: Facilitates students' online collaborations

In this pandemic, the realization of education is getting more proactive in making plans for moving forward and dealing with the new schooling setup. To be resilient, schools must consider teaching and learning continuity during and after the epidemic (Dayagbil et al., 2021). Forty-eight percent (48%) of the student-participants argued that digital literacy has helped them continue education even during a pandemic.

***Tech-Student 35:** "Digital literacy skills help us communicate with other people (students/teacher). It also helps students and teachers make the class easier in the middle of a pandemic."*

***Tech-Student 39:** "Since we are in a new set up of education, the only way that we can do, especially to students who had smartphones, is to use it to our studies to cope with this setup. Our skills in digital literacy can use to communicate, be innovative, acknowledge, and others."*

***Tech-Student 7:** "I communicate through the help of the internet and technologies. It is easier to look for any information you need."*

The student-participants' statements concur with the research by Dayagbil et al. (2021) that technology enables inventive and resilient solutions to counteract crises' disruptions, allowing individuals to connect and even operate remotely without face-to-face engagement. This finding is strengthened by Meyers, Erickson, and Small (2013, as cited by Maphosa & Bhebhe, 2019) that media technology is transforming education and this necessitates that members of the education society possess both technological capabilities and a grasp of digital device usage norms and practices.

Therefore, technology plays an integral part in the new digital education. Moreover, digital skills are highly required to utilize the digital tools needed in distance learning properly. Furthermore, it offers different solutions for distant learning and communication for more outstanding student-teacher education virtually using digital tools. Since the Philippine Government continues the education sector despite the pandemic, technology helps and provides an effective way to continue and maintain quality education despite these trying times brought by the pandemic.

Theme 3: Locates and utilizes online resources effectively/efficiently

Distance learning is the most efficient way of accessing education for students during and after a pandemic. Digital literacy skills can be beneficial in academics, particularly in obtaining information, communicating, and appropriately using it, as 48% of 50 student-participants state that they benefit a lot in distance learning by using digital literacy skills.

***Tech-Student 2:** "Digital literacy skills let you find, use & create information online in a productive & beneficial way."*

***Tech-Student 15:** "It makes me get through difficult times by improving my technology abilities, teaching me authorship norms like copyright and plagiarism, teaching me how to get Internet material, and social responsibility while communicating on social media with my teachers and classmates."*

***Tech-Student 19:** "Digital literacy has been a huge assistance to me as a student, especially in this time of distance learning, because it allows me to access information for academic purposes, which is a requirement for academic success."*

Adopting a similar position, Arafah and Muhammad (2022) argues that digital literacy is crucial for society and is also a step forward in education and culture. Therefore, digital skills help

modern students to achieve the required quality education. Moreover, it was discovered that when students use modern equipment, technology, and tools, their learning and engagement improve (Raja & Nagasubramani, 2018). Also, according to Greene, Yu, and Copeland (2014), being digitally literate requires the ability to organize, seek, analyze, and integrate digital information (as cited by Tang & Chaw, 2016).

Furthermore, digital tools can help enhance the student's digital skills and which they can leverage to learn efficiently using digital tools. Thus, digital literacy is also a pathway for better education and culture because people can easily connect using different digital tools.

RQ2: On students enhancing digital literacy skill

The top emerging themes for the second research question were the following:

Themes	Frequency	Percentage
Explores technological or digital tools	35	70%
Looks for opportunities to improve skills	32	64%
Uses frequently a technological tool	28	56%

Theme 1: Explores technological or digital tools

In the 21st century, technology has been a prodigious help to new-gen learners. Since the pandemic began, distance learning has become efficient, and learners' dependence on technology has increased. These three (3) participants from 70% of fifty (50) students stated that technology plays a role in partaking in a technologically developed environment.

Tech-Student 15: *“Yes, since it is an important right for people in an increasingly digital world. It educates people with the skills, information, and awareness that will*

enable them to participate fully and actively in today's and tomorrow's social, cultural, economic, civic, and intellectual life.”

Tech-Student 46: *“Yes, because digital literacy skills are what we and the future generation need, especially where digitalization is advancing. Therefore, we need to advance our knowledge and skills too, particularly in Digital Literacy, by having a subject that is focusing on the enhancements of digital literacy skills.”*

Tech-Student 7: *“Yes, because technology is automatically surrounding us every day, it is easy for us to learn how to use our skills in digital literacy by searching it on the internet. Also, we can apply it in everyday life and communicating.”*

The three participants' statements correspond with the findings by Shopova (2014) that the necessity of technology in daily life has been significant. With the necessary skills and abilities, students can now harness the potential of new technology and proactively participate in the economic, social, and cultural life needed in this contemporary society (Shopova, 2014). Thus, when it comes to developing digital literacy skills in digitized education, technological instruments have proven to be reliable and significant. Teachers can use these tools to promote students' soft skills and critical thinking to perform complex tasks (Christen, 2009). As a result, digital tools are required for the current distance learning and the future of education, where the curriculums will include digital skills. Therefore, the students may be adapting the digital tools quickly because they are capable and they have the knowledge and skills on how they can use the digital tools

Theme 2: Looks for opportunities to improve skills

Participating in a systematic program is a big help in improving students' digital literacy skills. It is also an alternative way to learn that can benefit everyone. 64% of 50 students-

participants stated that they learned a lot by participating in free webinars, enhancing their digital literacy skills.

Tech-Student 6: *“I participate in free webinars to enhance my digital literacy skills.”*

Tech-Student 48: *“In fact, free online training allowed me to learn different things about digital literacy skills.”*

These three statements from the participants correlate with the studies of Shopova (2014) that the educational system faced an urgent need to provide new educational mechanisms suitable to the needs of the learners to develop skills and abilities for practical use and understanding of digital technology as a basis for lifelong learning. Therefore, it shows that taking action is part of gaining knowledge. It is making the ability stronger in terms of being tech-dependent and a way of enhancing their expertise in digital literacy. Moreover, in K to 12 curricula, Media and Information Literacy was a fundamental topic under the Communication Learning Area in senior high school to further promote students' digital literacy (Baterna et al., 2020). According to Suminas and Jastramskis (2020), young people may be able to use many modes of communication with ease, but they may not be able to analyze and assess media information thoroughly. Media literacy teaches young people how to accurately grasp media content, critically examine media forms, and use media intelligently. Thus, it will help improve their skills in using different digital tools.

Theme 3: Uses frequently of technological tool

Due to the tech-dependent nature of the students, they are more likely to use different technological tools regularly, which can provide new knowledge regarding technology and lead to

the growth of their digital literacy skills. 56% of 50 Student-Participants claimed that they enhanced their digital and technological skills by using and exploring the technology.

Tech-Student 20: “*I personally read articles online that have interesting ideas about technological tools useful in our online classes.*”

Tech-Student 10: “*Using technology every day, I enhance my skills without realizing it.*”

Tech-Student 30: “*As an SHS student, I found it interesting whenever our teachers use new digital tools and other online apps in our classes which I think help me improve my digital literacy..*”

The three participants' statements lend support to O'Byrne (2012) study that there is some evidence that learning to be a developer and collector of media content helps students learn to be discerning readers of literary media. Hence, constantly using technological tools can teach students essential skills to be digitally literate. Furthermore, other study findings show that the effectiveness of technological devices confirmed and demonstrated that SHS students were responsible and educated on their own (Balbaguio et al., 2020). However, it is still necessary to ensure the students' digital literacy skills despite being digitally aware and to further enhance their knowledge by teaching new digital skills since digital technology keeps advancing.

CONCLUSION

Digital literacy is a vital skill that students need to develop as they move forward to a higher level of their education. In line with the findings, some SHS students are fully aware of the digital literacy skills they need to use and have in the new normal education. The awareness includes critically evaluating information seen online, which is necessary for their education where the information available online and technology is constantly evolving.

However, others still need to expose themselves to the necessary digital skills to keep abreast with the fast upgrades of technology. Hence, students must get accustomed to them. It is also for them to be globally competitive and future-ready.

In this small-scale qualitative study, the sample size and data gathering method limit the generalizability of the findings. It is suggested that the teachers shall use the results in crafting learning tasks that will utilize digital skills. This will help students further enhance the said skill. This current study hopes to elucidate SHS students' awareness of digital literacy skills, which will provide significant knowledge and guidance to improve the usage of technologies in times of distance learning. Eventually, this study will offer tremendous approaches to future digitized education.

ACKNOWLEDGMENTS

The student-researchers sincerely acknowledge the support of the following people:

To **Dr. Marvin B. Se**, Principal I, for always encouraging the teachers and students to engage themselves in research.

To **Ma'am Benja Ann L. Luna, OIC SHS**, and **Ma'am Vivian F. Abarro, Subject Group Head**, for always supporting the research endeavors of the SHS department.

To **Mr. Ramier P. Jubay Jr.**, Teacher III, for proofreading and providing critical comments to this research paper.

The authors would like to thank all the participants' engagement in this study.

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