



Online Reading and Viewing in Higher Education: The Case of University Students in the Philippines

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Abstract

With the recent global pandemic brought by the COVID-19 virus, many educational institutions have transitioned to complete remote instruction to sustain students' learning, specifically on their online reading and viewing engagements. However, university students have different views about its usefulness and practicality. While many studies have dealt with students' reading attitudes, not much has been explored on university students' attitudes toward online reading and viewing during the COVID-19 pandemic. This study, therefore, aims to describe the attitudes toward online reading and viewing of university students in the Philippines.

Through mixed methods, the study shows that university students possess positive attitudes toward online reading and viewing despite their concerns in comprehending online materials and dealing with an intermittent internet connection. This study also poses some pedagogical implications for adolescent and adult literacy instruction.

Keywords: Online Reading and Viewing Attitudes, New Literacies, Cognitive, Affective, Conative, Learning Management System

Background

Higher education institutions (HEIs) in the Philippines have seen the possibility of using learning management systems (LMSs) as an alternative learning platform. In recent years, some private HEIs in the Philippines have explored and invested on using LMS to meet the educational needs of the 21st-century learners and develop their essential skills.

The present generation has been exposed to life's realities brought by advanced technology and the internet. Being born in the digital age, today's university students have needs that are far more complex than older generations. University students need to learn 21st-century skills necessary to thrive and succeed in today's world. One of the essential 21st-century skills that this generation needs to acquire is digital literacy. Hence, literacy in today's context is no longer limited to learning to read, write, and count. Nowadays, literacy involves knowing how to gather information digitally, understand these pieces of

information, and use information meaningfully with little supervision.

Digital literacy, which refers to the ability to acquire, understand, and use information (ALA, 2013), involves reading online texts called hypertexts. Designed as non-linear, hypertext reading requires discipline and concentration on the part of the readers who need to process embedded resources, such as hyperlinks, less sequentially. Readers' attitudes toward hypertext reading are equally important as it impacts their motivation and reading performance (Cairo, 2012).

Research has proven how attitude contributes to a person's success (Purves & Beach, 1972; Walberg & Tsai, 1985 as cited in McKenna & Kear, 1990). Undeniably, intelligence is important to easily learn a concept; however, it is the person's attitude, whether positive or negative (Conradi, Jang, Bryant, Craft, & Kenna, 2013; as cited in McKenna, 2001) that influences him to engage or disengage in the reading act. With readers' varied attitudes toward reading, it is important to look into the readers' attitudes when reading print or non-print, for recreation or for academic purposes (Conradi, Jang, Bryant, Craft, & Kenna, 2013; as cited in McKenna, 2012). Adolescents, for instance, are motivated to engage in online reading when they can interact with others in their social networks, and thus find a good reason for reading online (Moje et al., 2008). However, while today's adolescents are construed as digital natives, some adolescents, just like in Singapore, still prefer print over non-print books (Loh & Sun, 2018). Adolescent readers take pleasure in the tangible feel of books and the sense of progression that they feel as they turn the pages (Evans, 2017).

Some students in their early years enter school with positive feelings about reading, but this feeling gradually dwindles as they enter middle grades (Allred & Cena, 2020; as cited in Conradi, Jang, Bryant, Craft, & McKenna, 2013; McKenna, Kear, & Ellsworth, 1995; National Center for Education Statistics, 2015). Such is the 2016 study of the Progress in International Reading Literacy which revealed that 13 of 18 countries have decreasing students' reading attitudes due to the lack of available literacy materials at home.

Readers' view about reading – what it is, how readers feel about it, and what they do with it – must be seen as vital in informing instruction. Viewing, a visual literacy skill that enables a person to read and interpret visual images (Harrison, 2019) and non-textual information, is as important as reading. According to Kennedy (2010) in his TEDx talk, “to be visually-literate is as important as to be word-literate.” With the interrelation of attitude, achievement, and reading success (Poppam, 2005; Laurice, 2004; as cited in Avallone, 2005), academicians must ensure that students, regardless of their age, possess positive attitudes toward reading and viewing. These are the fuel that will drive learners to persistently process and interpret information amidst the challenges that they face during their online engagements.

While there were some studies that looked into the reading attitudes of grade

school students, little has been investigated on the attitudes of university students toward online reading and viewing especially in the time of COVID-19 pandemic. The utilization of e-learning platforms is deemed useful to supplement, if not substitute, classroom learning; nonetheless, some students and faculty have varied concerns concerning its application. With the increasing need to maximize learning using online platforms, this study intends to be a means to understand the attitudes of university students toward online reading and viewing as these can affect how they perform via e-learning platforms. As the global pandemic has not yet been fully resolved as of date, this study can therefore serve as the basis for the improvement of online literacy instruction in the tertiary level particularly in the continuous utilization of online learning modality.

Research Significance

In today's world where learning happens anywhere at any given time, it is essential to understand how university students view online reading and viewing as part and parcel of the recommended e-learning instruction in a higher education institution. As learning nowadays is not only confined in the classroom, the benefits of using e-learning platforms to achieve learning objectives should outweigh the hindrances. It is for this reason that this study aimed at discovering how university students look at online reading and viewing as means to facilitate learning. This study, therefore, identified whether online reading and viewing is deemed helpful for university students to learn the concepts and master the skills in various academic disciplines. In these unprecedented times, it is vital to develop an ecology of resilient readers who have a strong interest to engage in online reading as it fosters their literacy development (Larson, 2009; as cited in Larson, 2007, 2008; Worthy 1996; as cited in Seitz, 2010). Lastly, this study proposes to delve into knowing how the university, through its academicians, can further facilitate effective teaching and learning in light of university students' viewpoints on their online reading and viewing engagements.

Research Objectives

The study described the attitudes of university students toward online reading and viewing.

Specifically, the study aimed to achieve the following research objectives:

1. Describe the cognitive attitudes of university students toward online reading and viewing
2. Describe the affective attitudes of university students toward online reading and viewing
3. Describe the conative attitudes of university students toward online reading and viewing

Research Questions

The study aimed to answer the following research questions:

1. What do university students think about online reading and viewing?
2. What do university students feel about online reading and viewing?
3. What do university students intend to do with online reading and viewing?

Literature Review

Online reading and viewing which involve a variety of modalities, such as videos, images, video conferences, and online chats, are not isomorphic with offline reading. There is a difference between students' literacy experiences in school and outside the school environment. In school, students' literacy experiences usually involve the use of paper, pen, and print texts; whereas outside the school premises, students' literacy experiences go beyond print and usually involve the use of technology and the internet (Larson, 2009). It should also be noted that unlike reading in print, online reading and viewing highlight the demand of additional skills and strategies to interpret what is read and viewed, and carry out online research. This study, which examined the attitudes of university students toward online reading and viewing, is anchored on New Literacies Theory which supposes the use of multimodal technologies to learn skills necessary to adapt to the changing world (Leu, Kinzer, Coiro, Castek, & Henry, 2017).

New Literacies Theory involves essential elements for online reading and researching (Leu et al., 2017) that must be understood both by the academicians and students for them to be accustomed to this multimodal approach to teaching and learning. These elements include 1) a self-directed process of text and knowledge construction; 2) practices for online researching and comprehension processing – a) identifying the problem, b) locating, c) evaluating, d) synthesizing, and e) communicating information; 3) additional skills and strategies for online reading and researching; 4) online contexts for struggling readers; 5) support for adolescents who may not be fully skilled with online reading, viewing, and research; and 6) collaborative online reading and writing practices to increase comprehension and learning.

It can be gleaned from the essential elements for online reading and researching that for students to successfully learn via an online medium, they must be equipped with additional skills and strategies such as (1) reading to identify important questions, (2) reading to locate information, (3) reading to evaluate information critically, (4) reading to synthesize information, and (5) reading to communicate information (Leu et al., 2017). Viewing, which is another literacy skill of constructing meaning from non-textual materials (Barrot, 2016), is an addition to online reading skills that equally increase online learning possibilities among 21st-century learners. Understanding viewing materials such as videos

requires understanding symbols such as sound effects, scene cuts, dialogues, music, video speed, among others. Similar to reading, there are viewing strategies that are systematically structured before, during, and after viewing. Viewing strategies foster better understanding of videos and streaming content. Before viewing strategies includes 1) viewing purpose, 2) previewing, 3) predicting, and 4) connecting. During viewing strategies include 1) stopping, 2) clarifying, 3) questioning, and 4) inferring. After viewing strategies, however, include 1) summarizing, 2) analyzing, 3) creating, and 4) socializing extended responses (Heick, 2021). These skills and strategies are not entirely different from offline reading skills and strategies, but given the complexity of hypertexts and viewing materials that come from varied online resources and modalities, skills and strategies application is highly essential.

This study is also anchored on the Tricomponent Attitude Model (Schiffman & Kanuk, 2004) which states that attitudes are composed of three components: 1) knowledge (cognitive), 2) feelings (affective), and 3) action (conative). In the context of reading and viewing, university students' knowledge (e.g., *I understand that online reading and viewing are significant parts of an enriched virtual mode of learning*), feelings (e.g., *I like reading eBooks and/or novels assigned by the course facilitator*), and action (e.g., *I will keep myself engaged in reading online for learning*) about online reading and viewing were described to arrive at the essential understanding of their reading attitudes.

Online reading and viewing in academic institutions are commonly employed using a learning management system (LMS). LMS is a web-based technology that organizations, corporations, and educational institutions use for knowledge management. It involves e-learning practices that consist of 1) a server that performs the base functionality, and 2) a user interface that is managed by administrators, instructors, and students. Some educational institutions use popular LMSes such as Blackboard Learn, Moodle, and Schoology (Rouse, 2019). The use of technology in English language teaching likewise improves student learning process (Ajmal, Alrasheedi, Keezhatta, & Yasir, 2020).

The University of Santo Tomas (UST), a premier Catholic higher education institution in Manila, Philippines has been using Blackboard Learn as its e-Learning Access Program (e-LeAP) for several years (Academia, 2015). The University of Santo Tomas - Educational Technology Center (EdTech) launched UST Cloud Campus' Virtual Classroom powered by Blackboard Collaborate. BB Collaborate is a virtual classroom and an online collaboration tool that is designed for instructors to deliver more engaging, personalized, and flexible learning options for students. BB Collaborate contains interesting features such as online polling, virtual whiteboard, content sharing, lecture recorder, breakout sessions, and online video chat (UST EdTech, 2020). UST Cloud Campus is the online platform commonly used by the Thomasian academic staff to send handouts, lectures, recorded videos, links to online resources, and readings to their students. This online platform is gradually being used by the academic staff to engage more

with their students during online sessions using a virtual classroom tool.

Despite the promising support of LMS and other online platforms to schools in facilitating learning, several concerns on its effectiveness and practicality have emerged. In Huang's (2013) study, online reading gained positive feedback from first-year university students in Taiwan in which e-books increased students' motivation and improved their reading habits. However, the university students also felt that reading e-books caused eyestrain when dealing with lengthy texts. Positive attitudes of EFL learners in Taiwan toward an online reading program, called Extensive Reading Online (ERO) were also noted (Sun, 2003). Similarly, the study of Erguvan (2015) found that university students and instructors in a private university in Kuwait perceived Computer-Assisted Learning (CALL) as effective in improving students' reading skills. Similarly, online blended learning was found effective in improving the reading performance of university students in Indonesia (Hellystia, 2020).

However, the instructors recognized plagiarism as a major concern in applying CALL. CALL also made the instructors question their role in the classroom. Conversely, students observed the lack of variety in online readings which led to students' boredom. In the Philippines, Garcia (2017) found that engineering students' acceptance of LMS was based on fast connectivity and system interactivity (learner-interface, learner-tool, learner-task, learner-content, learner-instructor, and learner-student). Students were found to engage more in academic-related tasks using LMS if the internet connectivity is fast and the system interaction is useful to them. Internet connection was the same concern of university students in the Philippines in fulfilling online tasks which surfaced when the community quarantine was implemented as preventive measures against COVID-19. On March 17, 2020, Commission on Higher Education Chairman, Mr. Prospero E. De Vera III posted on their official website that he received complaints from university students having a difficult time complying with the school requirements using online learning platforms due to their poor internet connection (CHED, 2020). Additionally, the lack of familiarity with the use of technology and the lack of available resources for online learning contribute to the decrease in English reading habits of tertiary students in Pakistan (Mirza et al., 2021). Availability of resources, access, and costs are practical considerations that affect their preference to read and engage in digital texts (Evans, 2017).

In light of diverse concerns of students regarding the utilization of LMS to augment learning, this study aimed to identify the attitudes of university students in a higher education institution in the Philippines toward online reading and viewing. Through this study, university students' knowledge, feelings, and behavior about online reading and viewing are acknowledged which can be a source of strategic and effective delivery of online instruction predominantly in online reading and viewing.

Methods

The study utilized a descriptive mixed-methods research design to gather data on the attitudes of university students toward online reading and viewing. Following the form of explanatory sequential mixed methods design (Creswell & Creswell, 2018), the first phase of the study was done quantitatively while the second phase was conducted qualitatively. A survey questionnaire was devised to determine the students' attitudes toward online reading and viewing. The survey questionnaire was called the *Survey of University Students' Reading and Viewing Attitudes*. The research instrument was composed of three scopes of reading attitudes: 1) cognitive, 2) affective, and 3) conative. The survey tool was validated by two reading experts before its utilization. The quantitative phase was followed by the qualitative phase where in-depth e-interviews were used and a thematic analysis was done to further explain the quantitative data.

The data were gathered in a private higher education institution in Manila, Philippines. A total of 203 freshmen from randomly selected colleges/faculties in the university were requested to partake in the study as they were the group of students who experienced for the first time the full remote instruction in the university with no basis for comparison to their previous online experiences in the university. This is contrary to the upper year levels (sophomores, juniors, and seniors) whose responses may be influenced by their earlier online engagements in some, if not in all, of their courses in their former years. Power Analysis was used as a method to determine the representative sample from the population of various colleges/faculties in the university. Permission to undertake the study in each college and faculty was sought through their respective deans. Consent forms were likewise sent to the participants before data collection. Non-print survey forms were distributed to each college/faculty. In-depth e-interviews with 10 representative samples from participating academic units followed the survey. The responses of the study participants in the e-interview were subjected to thematic analysis which was used to validate the results of the survey. Both the survey and the interview results were analyzed using descriptive statistics specifically through measures of central tendency to arrive at a logical conclusion of the study following its scopes.

The results of the study served as the basis for recommendations in strengthening the e-learning instruction in universities with an emphasis on facilitating online viewing and reading in the academe in a pure online or hybrid approach.

Results and Discussion

Table 1: Cognitive attitudes of university students toward online reading and viewing

Cognitive Component	Mean	Standard Deviation	Interpretation
Total	4.44	0.13	to a great extent

Table 1 shows the results of the cognitive component of the attitudinal survey conducted among 203 student participants. The data show that student participants were significantly knowledgeable of online reading and viewing. Using a 6-point Likert scale (0-not at all to 5-to a very great extent), a mean of 4.44 shows that student participants were knowledgeable of the nature, requirements, and expectations in online reading and viewing as part of online learning. All 11 cognitive indicators were marked “to a great extent” which show the students’ understanding of online reading and viewing. Their understanding of online reading and viewing includes 1) the difference between online reading and viewing for academic and recreational purposes, 2) requirements involved, 3) significance of online reading and viewing, 4) the presence of online reading and viewing in pure online and blended approach, 5) the use of technological devices, 6) the necessity of having a stable internet connection, 7) duration of time for engagement, 8) the necessity for a conducive learning environment, 9) access to unlimited amount of information available online, 10) the contribution of online reading and viewing to the development of literacy and technological skills, and the 11) university policy to use its LMS for online reading and viewing.

Table 2: Affective attitudes of university students toward online reading and viewing

Affective Component	Mean	Standard Deviation	Interpretation
Total	3.71	0.26	to a moderate extent

Comparably, Table 2 shows the results of the feelings of student participants toward online reading and viewing. With a mean of 3.71 for the affective indicators, online reading and viewing were mostly liked by the student participants to a moderate extent. Three of the 15 affective indicators were marked “to a great extent” by the student participants with a mean of 4.14, 4.67, and 4.19 respectively. It reveals that university students greatly liked engaging in online viewing when it is done for leisure, when online viewing materials were personally chosen by them, and when using social media to gather information for their personal use. Apparently, the majority of the affective indicators were marked “to a moderate extent.” Eight of the 14 affective indicators include the participants’ fondness toward 1) online viewing for academic purposes, 2) online reading based on personal choice of materials, 3) online viewing materials required by professors, 4) use of social media for academic purposes, 5) use of university LMS for online reading, 6) use of other social media platforms for online academic reading, 7) use of university LMS for online academic viewing, and 8) use of other social media platforms for online academic viewing. However, the remaining three affective indicators were marked “to some extent” by the student participants. The data show that university students liked online reading to some extent for education and recreation, and when online reading materials were required by their professors.

Table 3: Conative attitudes of university students toward online reading and viewing

Conative Component	Mean	Standard Deviation	Interpretation
Total	3.75	0.04	to a moderate extent

Similar to student participants' feelings toward online reading and viewing, their behavior shows their intention to continue engaging in online reading and viewing to a "moderate extent" with a total mean of 3.75. This reveals that university students intend to relatively engage in online reading and viewing for educational and recreational purposes using the university LMS or other online platforms.

Table 4: Themes for online reading and viewing attitudes

Codes	Category	Theme
<ul style="list-style-type: none"> • Ease of use 	Cognitive	1) Accessibility
<ul style="list-style-type: none"> • Source of learning • Motivation to learn 	Cognitive	2) Learning resource
<ul style="list-style-type: none"> • Online articles • Recorded lectures • Supplemental materials • Online downloadable resources 	Cognitive	3) Learning materials
<ul style="list-style-type: none"> • For education and recreation • To get information • For relaxation 	Cognitive	4) Purposes
<ul style="list-style-type: none"> • Use of technological devices • Gadgets • Internet 	Cognitive	5) Technological tools
<ul style="list-style-type: none"> • Lack of clear, quality copies of online materials • Intermittent internet connection • Lack of instruction time • Power interruption • Lack of clear instructions 	Cognitive	6) Limitations
<ul style="list-style-type: none"> • Requirements for additional researching and reading • School requirements • Numerous readings • Difficulty in time management due to a number of readings 	Affective	7) Demands

<ul style="list-style-type: none"> • Draining and tiring • Lengthy reading materials • Unhappy • Frustrating 		
<ul style="list-style-type: none"> • Interesting • More enjoyable than academic reading • Liberating 	Affective	8) Inclination
<ul style="list-style-type: none"> • Prepared for materials for academic tasks • Utilizes online applications and search engines for learning • Knowledge of using online sources • Armed with good study habits • Financially ready • Emotionally unstable • Not ready due to familiarity with offline reading and viewing • Lack of readiness due to poor vision • Better with face-to-face learning • Not fully adjusted 	Affective	9) Readiness
<ul style="list-style-type: none"> • Caring for mental health • Studying with perseverance and hard work • Doing additional readings • Keeping oneself updated • Becoming more participative • Time management • Avoiding distractions • Scheduling for advanced reading 	Conative	10) Strategies to employ
<ul style="list-style-type: none"> • Engaging in online reading and viewing even when face-to-face modality resumes • For advanced study 	Conative	11) Future online engagements

<ul style="list-style-type: none"> • Source of additional information • Offers flexibility in managing one's time for learning • Prefers blended approach • Provides access to supplementary materials for better understanding • Use both printed and digital materials for learning • For convenience • Guarantees the safety of students in the time of pandemic 		
<ul style="list-style-type: none"> • Partition of readings into sections • Integration of more interactive and engaging activities • Utilization of online calendar • Application of organization tools in course sites • Updating the university LMS • Provision for downloadable files • Frequent student evaluation of the effectiveness of online instruction 	Conative	12) Recommendations

The second part of the study shows the thematic analysis of the structured interview conducted among 10 student participants. As the study was conducted during the COVID-19 pandemic, the interviews were done online. The thematic analysis was employed to support the results of the survey among university students.

Table 4 shows the themes generated from the interview responses. The thematic analysis was done based on the analysis of interview transcripts that underwent the process of coding, categorizing, and arriving at themes. When data saturation was reached, the themes were generated.

A total of 12 themes were generated from the qualitative analysis of interview transcripts. These transcripts were categorized according to the three attitudinal components, namely 1) cognitive, 2) affective, and 3) conative. Correspondingly, the

themes that emerged from the thematic analysis of university students' attitudes toward online reading and viewing include 1) accessibility, 2) learning resource, 3) learning materials, 4) purposes, 5) technological tools, 6) limitations, 7) demands, 8) inclination, 9) readiness, 10) strategies, 11) future online engagements, and 12) recommendations. Six of the 12 themes were based on the cognitive category, three on affective, while the other three on conative category. Cognitive themes include accessibility, learning resources, requirements, purposes, learning devices, and limitations of online reading and viewing. Firstly, university students found online reading and viewing accessible as the online platform enables them to easily view online resources available at their course sites. Moreover, university students thought that online materials serve as their source of knowledge and motivation to study. They were also knowledgeable about the learning materials included in online reading and viewing such as online articles, recorded lectures, downloadable online resources, and other supplemental materials. Additionally, they knew that online reading and viewing are done for education and recreation purposes where university students are engaged in both educational and relaxing activities. Another equally important knowledge they have for online reading and viewing pertains to the learning devices that support online learning. These include their understanding of the use of technological devices such as the computers/laptops, smartphones, and other similar devices, as well as the access to the internet to sustain their online reading and viewing engagements. They are also knowledgeable that their engagement in online reading and viewing has its limitations. They experienced poor quality of online materials provided to them, intermittent internet connection (Ullah et al, 2017), lack of instruction time, and power interruption which affected the quality of their online reading and viewing engagements.

Three themes of their attitudes toward online reading and viewing were under the affective category. These include 1) demands, 2) inclination, and 3) readiness. University students felt that there were demands of engaging in online reading and viewing such as requiring them to do additional research and reading, engaging in numerous readings, and forcing them to do other school requirements. This situation made them feel exhausted, unhappy, and frustrated. Because of the demands of online reading and viewing as part of online learning, their inclination was not in online reading and viewing for education, but for recreation. University students felt that recreational online reading and viewing was interesting, liberating, and more enjoyable than academic reading. The feelings of university students in terms of their readiness to engage in online reading and viewing were interestingly varied. There were some who claimed that they were prepared for online materials for their academic tasks, knowledgeable of online resources according to preferences, utilized online applications and search engines for learning, and armed with good study habits. However, there were others who admitted that while they were financially ready for online learning, they were emotionally unstable due to the pandemic

situation. Other university students also stated that they have not fully adjusted to online learning due to poor vision and lack of familiarity with online reading and viewing.

Comparable with the university students' feelings toward online reading and viewing, their behaviors were represented by three thematic themes: 1) strategies, 2) future online engagements, and 3) recommendations. Categorized as conative, the student participants' behaviors toward online reading and viewing were reflective of the strategies they intend to employ as they engage in learning. They intend to take care of their mental health as they engage in online reading and viewing. They likewise intend to work hard and persevere in their online reading and viewing engagements, and do additional readings, keep updated with online materials for reading and viewing, become participative, manage time for studies, avoid distractions during online learning, and to schedule time for advanced readings. Similarly, university students conducted themselves to engage in online reading and viewing even when face-to-face modality resumes in the future. They found online reading and viewing as useful to do advanced studies, get additional information, provide access to printed, digital, and supplementary materials, bring convenience, offer flexibility in managing one's time for learning, and to guarantee their safety while studying this pandemic. However, they still prefer a blended approach which combines online and face-to-face instruction. Hence, university students provided suggestions for better online reading and viewing engagements in the future. As they were concerned with numerous readings and viewing materials they encounter every day, they asserted their expectations to improve the online delivery particularly on online reading and viewing by dividing online readings into smaller sections, integrating more interactive and engaging activities, utilizing online tools such online calendar and other organization tools available in the course site, updating the university LMS, providing downloadable files like video lectures, and conducting frequent student evaluation of the effectiveness of online instruction.

Table 5: Descriptive statistics of university students' attitudes toward online reading and viewing

Questions	Mean	Standard Deviation	Interpretation
Cognitive Component Nos. 1-11	4.44	0.13	To a great extent
Affective Component Nos. 12-25	3.71	0.26	To a moderate extent
Conative Component Nos. 26-31	3.75	0.04	To a moderate extent

Table 5 shows the descriptive statistics of the attitudes of the university students toward online reading and viewing in all three components. University students exhibited positive attitudes toward online reading and viewing in terms of their knowledge of their

online engagements. They were found to be greatly knowledgeable about online reading and viewing with a mean of 4.44 and a standard deviation of 0.13. This shows that as students, they know the significance, purposes, technological support, and requirements of online reading and viewing. They know to a very great extent what is expected of them as students enrolled in an enriched virtual instruction, which involves online reading and viewing of course materials. Aside from their knowledge of the necessary technological tools and requirements of online reading and viewing, they were fully aware of the advantages and disadvantages of this online engagement. As they engage in online reading and viewing for academic and recreational purposes, online materials for reading and viewing become accessible to them which provide them with useful information. However, their online engagements posed some limitations which can affect the quality of their studies particularly in online reading and viewing. These include lack of clear quality of online materials and instructions, intermittent internet connection, power interruption, and lack of instruction time.

University students did not only possess knowledge about online reading and viewing as significant facets of remote instruction; they generally have a positive feeling about their online reading and viewing engagements. They showed positive attitudes toward online reading both for education and recreation to a moderate extent with a mean of 3.71 and a standard deviation of 0.26. Additionally, the results reveal that university students liked academic online reading and viewing less compared to recreational online reading and viewing. Interestingly, while students liked engaging in online reading for recreation to some extent and in online viewing for recreation to a great extent, they only liked engaging in online reading for education to some extent, and in online viewing for education to a moderate extent.

It is also important to note that while university students felt that online reading and viewing provide them with convenience and access to information, the disparity between their feelings about online reading and viewing for academic and recreational purposes is due to their concerns with the demands of online reading and viewing to university students like them.

Students' readiness to engage in online reading and viewing for education was seen as a contributing factor to students' feelings about their online engagements. University students were prepared financially and technologically, but they were unprepared physically and mentally as they were still adjusting in a purely remote instruction.

Despite the limitations in the online instruction as well as in the adjustments of university students toward this mode of instruction, their behavior toward online reading and viewing was found favorable to a moderate extent with a mean of 3.75 and SD of 0.04. They showed resilience in the current form of instruction by mentioning some strategies they intend to employ while continuing their online reading and viewing engagements.

The strategies of university students to fully adjust with the demands of online

instruction particularly in online reading and viewing also showed their intention to continue engaging in online learning. The accessibility and convenience that online modality brings them show their likelihood of staying connected as online learners; however, given the opportunity, they also preferred to engage in a blended approach where both nonprint and printed materials can be offered along with face-to-face instruction.

Being the recipients of online learning, university students also showed hope in improving the online instruction being offered in the time of pandemic. Proper delegation, organization, and updating of online materials for reading and viewing in the university course sites were the notable suggestions made by the university students.

Conclusion

University students' attitudes toward online learning particularly on online reading and viewing reveal their resilience to a rapid transition from face-to-face to virtual instruction. Despite their concerns and limitations in engaging in online learning, university students exhibited positive attitudes toward online reading and viewing. They showed awareness of the academic expectations in a virtual mode of instruction. Through online reading, they gain knowledge and feel the convenience in learning (Thi Nga, 2021). Similarly, students feel that online reading and viewing provide them with access to numerous information in the comfort of their homes. They also consider engaging continuously in online reading and viewing even when face-to-face instruction is re-implemented. It is also true for online viewing. They are fully aware of what viewing is, how it is done, and what they should do to engage in a meaningful online viewing. However, while university students are already familiar with the internet and other information communication technologies (ICTs), their new literacy skills need to be strengthened. These skills in new literacies are essential in ICT (International Reading Association, 2009) which even college students need to master to be able to thrive and succeed in rapidly changing academic approaches. Their new literacy skills can also be influential to increasing their positive attitudes toward online academic reading and viewing. As university students show concerns in understanding course content coupled with the considerable number of online readings required in their courses, the instruction necessitates skills enhancement in processing online information, both textual and non-textual. Specifically, university students need to develop reading stamina in processing discipline-specific texts to sustain their attention and energy while reading and viewing online. For this to happen, new literacy practices must be included in the curriculum to provide students with opportunities to process texts more effectively. Text length adds up to text complexity which affects reading comprehension (Mesmer & Hiebert, 2015, as cited in Shanahan, 2021). Given the complexity and length of college textbooks and other supplementary materials, online texts must therefore be given in logical segments to

prevent reading fatigue brought by the number of texts they have to process in one sitting. Segmenting online texts also leads the students to give their full attention to specific text sections while keeping themselves energized and engaged in the reading act. This organized manner of presenting online texts to university students would likewise provide them support and consideration to their internet capacity. Giving online readings in chunks also decreases the amount of screen time they have to devote to reading and viewing. New literacies equally support ICT by deepening the use of technologies for instruction. Teachers in all content areas must be involved in teacher training using technologies to address the needs of their students (Bruce, 2004; Grisham & Wolsey, 2009; as cited in the International Reading Association, 2009; Ullah et al., 2017). This way, the lack of propensity of students for academic online reading and viewing, loads of online readings, and the lack of organization of course materials in the learning management system may be addressed. Constant technologically-based training of teachers can likewise boost the confidence and competence of course facilitators in various disciplines which can be demonstrated in their online course delivery. Doing these will allow effective online teaching to happen resulting in students' academic progress (Kitishat, Al Omar, & Al Momani, 2020).

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