

The Light Amidst a Traffic Jam: The experiences of Radiologic Technology students in Lyceum of the Philippines University-Batangas regarding Online Learning during the COVID-19 Pandemic

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Abstract – One of the primary sectors in the society that has been shaken by the global pandemic caused by COVID-19 is the educational system. The traditional face-to-face setup is not advisable to maintain physical distance as a preventive measure to fight the virus. The education system – like many other sectors – was forced to shift digitally. This qualitative research study focused to determine the experiences of radiologic technology students in Lyceum of the Philippines University- Batangas regarding online learning amidst the COVID-19 onslaught. Health issues are vital through this lifetime; at the present, the learning of potential medical professionals might restore to health the society in the future. The study held in the Philippines was indicative of selected medical student's involvement with global shifts currently occurring. Data were collected through qualitative interview questions through online platforms like Messenger and Zoom interview held consecutively as personal interaction is not possible during this time. A total of 9 radiologic technology students were interviewed. Student shares their own personal experiences and challenges during the online discussion. The recommendations, positive, and negative experiences of undertaking online learning as an aid for continuity and academic refinement of education is the main theme generated from individual interview among students. Responses lay out inferences in developing quality and effective education system. This research also discusses the student's suggestions to improve the quality of learning in online classes that can be used for future preferences.

Keywords – college, Coronavirus, education, internet, medical

INTRODUCTION

Coronavirus disease (COVID-19) is a contagious infection caused by a newly discovered coronavirus. It is a severe acute respiratory syndrome started in Wuhan, China affecting a huge amount of people [1]. Due to the prevalence of infection, the World Health Organization (WHO) announced the disease as a pandemic, which led different countries undergone social distancing, limitations on public gatherings and mandatory utilization of face masks [2]. However, the transmission of virus quickly spread around the globe affecting every aspect, including educational systems. Schools and universities shifted to online class from traditional education [3]. Traditional learning is the former educational system where books and blackboards were used by professors as a teaching method. Meanwhile, online education utilizes internet and different software to provide an online classroom environment [4]. This sudden transition incorporates methods of teaching which

are different from the accustomed way of learning which can be difficult for students.

According to Aucejo et al. [5], students face increased uncertainty in their environment, wherein health and financial sources were significantly affected during the pandemic. Concerning this situation, transition to online learning affects their academic performance and personal aspirations. Furthermore, Shim & Lee [6] mentioned that students cannot fully participate in online classes due to limited interaction between students and professors. The discussion with different group of students held in an online classroom enforced a lack of cooperation. In a recent study, Al-Rabiaah et al. [7] described that high level of stress indicates a negative impact on the health and student's way of learning during the pandemic. For medical students, student-patient interactions and effective acquisition of knowledge are important to enhance their clinical proficiency [8]. Moreover, Darras et al. [9] discussed that education for radiology residents' exhibit notable

challenges which includes limited engagement in laboratories and instructors. In contrast, Bdair [10] stated that online education offers flexible learning and accessible lecture materials which are easy to manage. In relation to this study, Sinclair et al. [11] reported that approach to an effective education is online learning, wherein self-paced was established. Furthermore, it utilized diverse content, which is significant for students' learning process, compared to traditional methods [12]. Unfortunately, the previous studies are limited for medical students abroad and mostly quantitative that does not include radiologic students' perceptions in the Philippines specifically at Lyceum of the Philippines University-Batangas. Therefore, the opportunity of medical students to engage in skill-based clinical learning is affected as much radiologic students experienced during the pandemic. Due to the COVID-19 pandemic, on 14 March 2020, traditional learning and classroom activities were interrupted in Lyceum of the Philippines University-Batangas. Online learning was implemented to offer continuous education to students at home using different platforms. The myLPU e-learning Portal is utilized to provide lectures to students and strengthen the online learning experience. The platform was utilized since 2017 as it provides effective method and engaging content for learning online.

OBJECTIVES OF THE STUDY

In this qualitative study the researcher's main objective is to determine the experiences of radiologic technology students in Lyceum of the Philippines University-Batangas regarding online learning during the COVID-19 pandemic. This study aims to describe the experiences of radiologic students to online class, identify the challenges encountered, and determine the recommendations in relation to their difficulties. Results have implications on the curriculum of radiologic technology students in Lyceum of the Philippines University-Batangas since recognizing student's insights through their involvement with the season plays a large impact in developing quality and effective education system. The data gathered at the present will be beneficial for the future providing an overview of the past. Furthermore, the study hypothesized that several factors influence the experiences of radiologic technology students

regarding online learning during the COVID-19 pandemic.

MATERIALS AND METHODS

Research Design

This paper utilized a descriptive qualitative study with the aid of simultaneous discussion with the participants [13]. Overall, the study occurred in an online interview to properly acknowledge the experiences of students.

Participants of the Study

The population was radiologic technology students from Lyceum of the Philippines University-Batangas with a sample of 9 respondents from first year to third year and exactly 3 participants were selected in each level. We utilized snowball sampling by selecting few students who identified other individuals [14]. The class presidents from each level served as the initial subjects since they have direct contact with their classmates and then, they recognized other students who can participate in the study. Each participant received an online consent form in accordance with their engagement in the study.

Instrument

Qualitative interview questions were adapted as the main instrument for this study. We utilized validated questions as the component for the discussion. This paper acknowledged the following questions based on the study of [13] and [6]: (1) what are your personal experiences while studying during the global COVID-19 pandemic (2) what features of remote learning currently in progress are you satisfied with, and why (3) what features of remote learning currently in progress are you dissatisfied with, and why (4) what features of remote learning currently in progress do you want to be improved, and why. Face-to-face interview was impossible during this time. Instead, we utilized online platforms like Messenger for the recruitment of participants and Zoom for the interview [3].

Ethical Consideration

The study was conducted in compliance with the ethical principles of the Research Ethics and Review Committee (RERC) of Lyceum of the Philippines University-Batangas (A1-2021-005) to avoid academic fraud and research misconduct. Informed consent was obtained from all participants which entails participation was voluntary. We

guaranteed the privacy of our participants by limiting the access of data within the group. Further, the interview questionnaire was subjected to review for data privacy implications based on existing laws and regulations pertaining to data privacy and protection by the Data Privacy Office of the Lyceum of the Philippines University Batangas.

Data Analysis

Munawar and Choudhry [15] utilized thematic analysis approach to analyze the data regarding a certain phenomenon. It portrayed comprehensive understanding of the experiences from interviewees to identify common concepts which are significant to the research objective. As a result, this type of analysis contributed to a deeper understanding of the experiences of the radiologic technology students in online learning during the pandemic. The interview session was recorded, and theme formulation was established to state common findings.

RESULTS AND DISCUSSION

The (A) positive experiences, (B) negative experiences and (C) recommendations constructed from the experiences of students served as a narrative analysis of the online learning experience of students who share the same insights during the COVID-19 pandemic. These themes depict the perceived positive experiences, negative experiences, and recommendations in developing online learning during the pandemic. Each theme was further organized into sub-themes. Quotations within each theme indicate verbatim remarks by the respondents, and pseudonyms are used to denote them.

A total of 9 radiologic technology students from first year to third year at Lyceum of the Philippines University-Batangas were interviewed. The sample participants composed of 5 males and 4 females, ages ranging from 18 to 21 years old. The results demonstrated were identified through the responses emerged from thematic analysis. It entailed a total of 32 codes, 9 sub-themes, and 3 major themes.

A. Positive experiences

Despite of this new approach of learning, more than half of the respondents believed that online classes offered a sense of value in their education especially during this time of crisis. The positive experiences of the students in online classes were

described into three sub-themes, (1) educational achievement (2) time utilization and (3) psychological well-being.

A.1 Educational achievement

The first sub-theme is educational achievement. It incorporates that learning materials in online classes and assistance from the professors are valuable to attain academic success despite the COVID-19 pandemic. Handing out relevant documents, was commended by the respondents as a vital advantage for learning. This is apparent in the following statements by the respondents:

“For me, when they provide learning materials such as PowerPoints and e-books... in face-to-face classes, usually you can only see the PowerPoints when the professor is discussing already but now, they are giving it ahead of time, so you can review it or to have an idea already.”
– R5

“I am satisfied with the way how dedicated our professors are. They are making efforts to make the students enjoy learning and they are doing their best, particularly in this kind of online setup.” – R7

A.2 Time Utilization

The second sub-theme is time utilization which involves that the half of the respondents was satisfied with improved time organization due to online classes that made evident in the following statements:

“We still have time to rest because we are not fully burdened with much workload.” – R2

“I can save time because during face-to-face classes, commuting tends to transport you to different places which are time consuming.” – R6

In addition, students mentioned the convenience and flexibility of online classes as they can access the learning materials at their own pace. This was mentioned through the following statements:

“It is gratifying because I can study where I want and at my own pace. I

can also study and review my lecture and materials as much as I need.” – R3

“I can go back to the lessons anytime and I can study on my own pace or when I am available since we can access the PowerPoints on our own.” – R5

A.3 Psychological well-being

The third sub-theme is psychological well-being which explains that students still exert efforts to achieve their goals. Respondents mentioned that it is valuable to instill growth within themselves. Seeking to adapt to a new kind of learning helps them overcome anxiety and uncertainties. Online learning is a technique for them to make progress independently. The respondents expressed the following views:

“I am doing my best in order to catch up, we should also exert effort to help ourselves.” – R8

“But all of those obstacles did not stop me from making an effort in this online class.” – R7

B. Negative experiences

Although, positive experiences conclude beneficial considerations still it does not outweigh the limitations of online learning. These are explained under four sub-themes: (1) network instability, (2) learning environment, (3) physical and mental challenges and (4) limited capability of the situation.

B.1 Network instability

The first sub-theme is network instability and considered as the primary concern of most students. The dissatisfaction of the respondents implies that online classes are ineffective. Connection disturbance affects the respondents’ commitment and enthusiasm for knowledge. The status of internet connection varies based on the experiences they have mentioned:

“For example, our professor is demonstrating a Cariñosa dance in our P.E subject, then suddenly he will be disconnected due to slow internet connection and as a result I cannot follow his teachings.” – R3

“During live exam it is difficult if you have slow internet connection. I am not satisfied with that way of set up.” – R7

Network instability varies according to the location and the network provider. Meanwhile, most students have trouble with their internet connection; it was different from one of the respondents.

“In terms of network connectivity, my internet connection was good.” – R4

B.2 Learning environment

The second sub-theme under negative experiences is the learning environment. Including the difficulties encountered by the students in a new kind of setting. Ideally a quiet, private, and distraction-free space is exceptional. Staying at home-imposed difficulties. Most of the respondents believed that surroundings affect one’s eagerness to learn as mentioned through the following statements:

“Sometimes, time runs out for me even at home, when given a task I tend to make requests of doing it soon or just let others do the chores.” – R1

“In online classes there are different distractions. For example, I need to study, but suddenly my parents will call and ask me to do something.” – R6

Remarkably, respondents were caught up by the distractions at home and find it challenging. They are piled up with responsibilities. Moreover, the respondents mentioned that staying at home entails comfort but, not a good environment to conduct classes.

B.3 Physical and mental challenges

The transition from face-to-face classes to online learning became the biggest challenge for students as they need to adjust to a new kind of learning technique. The students’ experiences regarding this concept were expressed in the following statements:

“Honestly, as per my own perspective both online and physical teaching are mentally draining.” – R3

“Being a medical student, I find it hard to study, especially with this kind of set up. Face to face is already tough and online class seems to be getting more difficult.” – R7

“It is challenging during this time, due to going out restrictions in addition to online class. I experience anxiety sometimes.” – R8

B.4 Limited capability of the situation

The presently occurring online learning situation entails limited interaction. Online classes incorporate difficulty in terms of communication as it provides restricted interaction between the students and professors. If digital communication is sufficient, online learning can be strongly preferable. Limitations described by the respondents were mentioned in the following statements:

“I still find it difficult to understand even if there are interactions, since only the topic itself is being discussed. Vital hospital experiences are limitedly mentioned.” – R4

“The professors might be having a hard time as well to discuss the lessons unlike in face-to-face set-up. The interaction is limited. Visual knowledge is insufficient, like the appearance of the features, and techniques that we need to know once we graduated.” -R5

Restrictions in terms of interaction affect the learning process of students. Most of the respondents agreed that personal interaction is a fundamental part of studying. Virtual sessions offer limited communication between students and professors.

C. Recommendations constructed from experiences

This content entails student's suggestions to improve the quality of learning in online classes and can be used for future preferences. It comprises two subthemes which are (1) professors' flexibility with the situation and (2) management improvement.

C.1 Professors' flexibility with the situation

The first sub-theme is the professor's flexibility with the situation. It encompasses the consideration from instructors regarding the deadline of activities and their style of teaching. The students suggest more comprehensive approach towards learning effectively. The following were expressed by the students:

“To be more productive. We prefer that the professors will be the one to teach us and not to conduct group reports.” – R1

“Hoping for our professors to be more considerate by extending the deadlines, because there are some professors who set their due date in just a short span of time.” – R2

“Maybe it is much better to improve the teaching style of the professors turning it into a more detailed discussion, especially in our major subjects.” – R4

“Professors should be more considerate to students who are experiencing internet connection problems and unexpected power outage and more.” – R7

C.2 Management improvement

The second sub-theme is management improvement. It is the recommendation to improve the platforms and policies implemented in online classes providing one-of-a-kind quality education.

“There are some students who are having trouble in LMS and sometimes when we are taking the exam the timer is continuously moving and it takes a lot of time to move at the next page. I prefer to have multiple items of the exam scrolled within a single page instead of answering each question by page. I would like to change this kind of feature.” – R3

Online platforms are valuable to ensure the continuity of the teaching and learning process. Students' suggestions in the development of the LMS platform will accumulate advantages to the learning experiences of the respondents.

“I suggest that they would create or implement another application, so that we can do different kind of techniques that are valuable once we graduated.”

– R5

Students recommended other applications that might be helpful to cope up with the lessons.

The transition from traditional learning to online learning became evident as social distancing was implemented. This sudden shift led to an unexpected impact on students education [16]. According to Martín-Sómer et al. [17], about 56.6% of students have been affected and 130 schools were forced to close worldwide.

The experiences entailed positive and negative factors, whereas recommendations were also acknowledged. The respondents believed that online class is a helpful approach. According to Ghanizadeh [12], online learning imposed various advantages as it obtain regulated mode of instruction and ease of educational assessment. Online learning helps them with their educational achievement with the help of the professors and teaching materials provided. The findings reflect the study of Shaik Alavudeen et al. [18], stating that online learning widens the opportunity to enhance knowledge. Students are provided with recorded class lectures helping to improve learning [6]. In relation to this result, Lovrić et al. [13] mentioned that students were satisfied with the professionalism of the teachers serving as their motivation towards success.

Another positive experience mentioned was time utilization. Online sessions allow them to save time in general because of flexibility and convenience. It was evident in the study of Hussein et al. [19], wherein 15 respondents stated that online classes helped them save time going to school. In relation to this, Khalil et al. [3] discussed that online learning allowed satisfied students to manage their own time resulting in improved performance. Online learning includes freedom and time-management capability, wherein they could constantly review recorded class lectures [6].

Respondents cited another positive experience which was the psychological well-being during the pandemic. Students were stunned at first with the changes from online classes. However, they mentioned the importance of academic achievement despite the pandemic. They

continuously exert effort and adjust to various platforms. As noted by Bdair [10], students became self-directed learners utilizing various strategies. Moreover, online learning helps students to become self-dependent, necessary among future healthcare professionals [20]. These statements served as a reliable finding that online classes imposed positive experiences.

However, as online classes' approaches, most students experienced difficulties. According to Mahdy [21], online classes have negative effects which reduced the progress of students. In relation, students studying in an online environment have limited supervision. These requires more effort to be engaged and motivated [22]. In our analysis, participants mentioned various restrictions in learning effectively, such as unstable internet connection, interruptions at home, and limited communication. These findings were also evident in the study of Ali et al. [23], wherein pharmacy students encountered difficulty in internet connection and learning management system.

One of the main negative experiences of the respondents was network instability. According to Azcarraga & Peña [24], since 1994, the Philippines officially connected to the internet, but it is still a problem today. Students had trouble joining virtual meetings due to slow internet connection and frequent disconnection. Subedi et al. [25] mentioned that 48.1% of the respondents were having difficulty because of slow internet connection. In relation, Casillano [26] discussed that students were hesitant with online learning because only few respondents have stable connection. Similarly, our findings demonstrated that most of our respondents have poor internet connection and only one student has good connectivity. The implementation of online learning in the Philippines inflicted difficulties on students that was evident in the study of Tria [27] stating that among Asian countries, the Philippines has the slowest internet connectivity causing challenges in conducting online classes.

Another negative experience mentioned was the learning environment. Al-Rabiaah et al. [7] discussed that students suffer from stressful conditions during distance learning leading to decreased motivation and concentration. The respondents tend to be distracted easily at home by doing household chores and assisting the family business. It is stated that home is not an encouraging

environment for learning since they encounter different forms of distractions [14].

Moreover, during the pandemic, physical and mental challenges were evident among the respondents. The implementation of social distancing and online classes became the source of anxiety. In situations like a worldwide crisis, fear with stress is acquired easily and self-control tends to be weaker [13]. In addition, Chen et al. [28] discussed that physical and mental health of students were affected due to home isolation and other features of online learning. These difficulties reduce eagerness to learn and attain educational achievement. These findings are also similar to Patricia Aguilera-Hermida [29], stating that staying at home entailed lack of motivation and negative changes in their mental health.

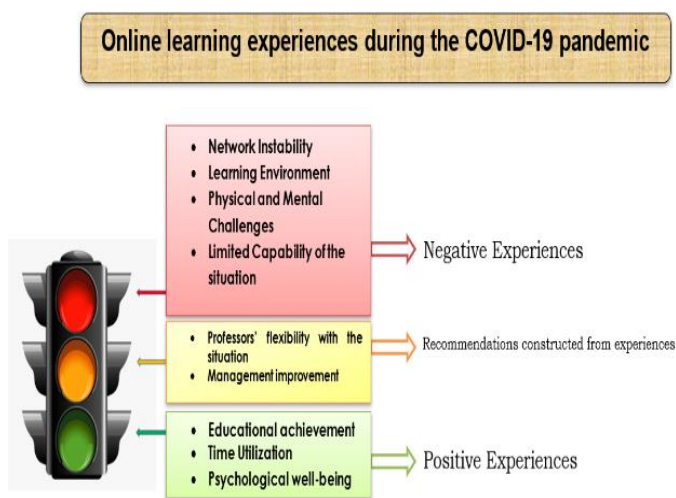
Another factor cited by the respondents was the difficulty in understanding the lessons due to limited interactions. Virtual meetings were not enough to understand the lessons explained. This finding was also observed in the study of Alqudah et al. [8], wherein most respondents agreed that online learning lack personal interaction and demonstration. Furthermore, Bouwmeester et al. [30] reported that class activities were a burden to students as comprehensive interpretation is needed.

In medical field, enough knowledge of different applications valuable in hospital setting is essential; however, students were deprived of such experiences as they cannot perform laboratories using actual machines. In relation to this, Dost et al. [31] reported that 82.17% of the students mentioned that online clinical teaching inflicted difficulty towards active learning. Similarly, Khalil et al. [3] mentioned that students emphasized the importance of clinical interactions with colleagues. Health allied profession requires a great extent of acquisition of clinical skills, thereby expansive teacher-student interaction has been a vital part of learning [32].

Furthermore, student's recommendations are acknowledged to lessen difficulties. Flexibility of the professors and improvement in the teaching methods are valuable. Similar to the study of Konrad et al. [33], stating that instructors need effective teaching methods to maintain engagement of students. Professors play an important role in the development of an effective learning environment and new teaching methods alleviating inadequacies [6]. As reported by Muthuprasad et al. [34], it is important to assess the subject and allot time to plan

a well-structured course. In addition, the reduction of numerous activities given guides them to focus on more relevant matters. Indeed, clinical applications are essential in the medical field; however, during this time, learning is incomparable and clinical experiences in laboratories with the professors are vital.

Lastly, management improvement was also mentioned, wherein online platforms should be developed. High-quality programs and course assessments should be improved [35]. The professors and the management play a key component to increase the satisfaction of students with online classes and encourage progress. Participants seek improvement on the methods and platforms implemented for quality education and future preferences. According to Daroedono et al. [36], concerns and suggestions must be assessed carefully in order to deliver a quality education. In addition, socially inclined performance is a prerequisite in the radiology field that is unobtainable for now but, the works we have today



may serve as guide and be useful in the following generations [9].

CONCLUSION AND RECOMMENDATION

This study concludes that experiences of radiologic technology students in Lyceum of the Philippines University-Batangas in online learning during the COVID-19 pandemic contain positive and negative experiences. Education cannot be put on hold as it is part of the necessity. This new kind of approach involves a constructive effect on the students and aids in their academic achievement. At the same time, challenges occurred for our respondents, which made it difficult for them to

adjust to the new learning system. In addition, the findings suggest that it is essential to develop the class methods and applications for a better online learning experience of the students. Meanwhile, the study has not heard of the faculty and institution's perceptions, but one thing is definite, all these changes are difficult for one another to cope up.

Determined by the results of the study, the traffic light model represents the findings and interpretation. The three main themes symbolized by a traffic light located centrally within traffic congestion. Relating the ongoing online learning into a traffic jam stopped by the red light depicting the negative experiences. Despite the delay constantly looking forward with the green light illustrating the positive experiences is the cue to move again. However, the go signal can never be really achieved immediately. The yellow light in the middle portrays the recommendations to be considered to fully carry on with swift acceleration.

The study was conducted at Lyceum of the Philippines University-Batangas and does not specify the insights of other universities in the Philippines and abroad. Moreover, this qualitative study was limited to nine radiologic technology students and does not indicate all the student's experiences in the institution.

Based on the experiences of our participants, we highly recommend strengthening the affirmative outcomes and focus on the grievance of the students. The institution should address the concerns of the students by putting more consideration and improve existing platforms. Nevertheless, deeper understanding from the students is also essential during the present situation.

The use of alternative devices reserved for back-up purposes and searching for locations good enough to stay connected should be taken into consideration. If financial capability allows, one must invest with postpaid Wi-Fi installation for a more stable connection. Moreover, surveys may be conducted among class members to evaluate the access of an individual regarding internet connection before scheduling examinations accordingly.

Furthermore, casting around to look for noiseless areas, conversely, settling a specific room dedicated for studying purposes may support students to re-establish concentration. Furthermore, proper management of priorities regulate good cooperation

with studies and home duties. Synchronous sessions to focus with schooling and asynchronous sessions to accomplish housework aids to the issues of the surroundings. Proper coordination with housemates at home is advantageous in maintaining a healthy learning environment.

In addition, reaching out for help is a good approach in solving such challenges. Fortunately, students have a privilege to appoint consultation with the Counseling and Testing Center (CATC) via tele-counseling or CATCTalkSeries through webinar series. Helping the growth of one's mindset provides exceptional support. Moreover, constant adjustment simply by waking up early in the morning combats lifestyle distress during the transition.

The pursuit in fueling knowledge-based learning during the pandemic should involve offline available supplementary videos and illustrations necessary to fill-in the drawbacks. Furthermore, due to limited communication persistent effort to connect with one another can aid in the sustenance of online learning despite the situation. The recommendations will somehow ease the agony of students despite the challenges. The study will serve as an eye-opener to enlighten the institution and generate a solution to sustain educational achievement. Lastly, this study may serve as a reference in future research ventures and as a guide relating to the same concept.

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