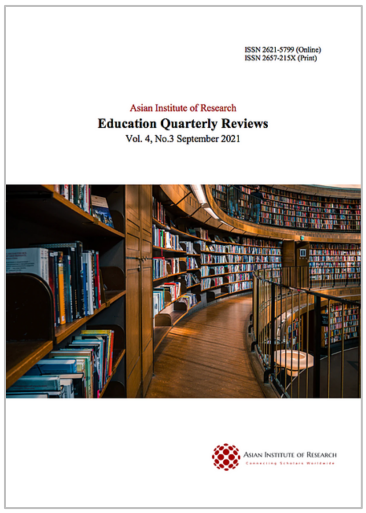

Education Quarterly Reviews

Hadji Omar, Junaisah M., Guimba, Wardah D., Tamano, Roseniya G., Sequete, Fernando R. (Jr.), Nalla, Adelyn S., and Mojica, Cherrilyn N. (2021), Meranao ESL Students' Experiences in Online Learning in Time of COVID19 Pandemic. In: *Education Quarterly Reviews*, Vol.4, No.3, 117-126.

ISSN 2621-5799

DOI: 10.31014/aior.1993.04.03.323

The online version of this article can be found at:
https://www.asianinstituteofresearch.org/

Published by:
The Asian Institute of Research

The Asian Institute of Research *Education Quarterly Reviews* is a peer-reviewed International Journal. The journal covers scholarly articles in the fields of education, linguistics, literature, educational theory, research, and methodologies, curriculum, elementary and secondary education, higher education, foreign language education, teaching and learning, teacher education, education of special groups, and other fields of study related to education. As the journal is Open Access, it ensures high visibility and the increase of citations for all research articles published. The *Education Quarterly Reviews* aims to facilitate scholarly work on recent theoretical and practical aspects of education.

ASIAN INSTITUTE OF RESEARCH
Connecting Scholars Worldwide

ASIAN INSTITUTE OF RESEARCH
Connecting Scholars Worldwide

The Asian Institute of Research
Education Quarterly Reviews
Vol.4, No.3, 2021: 117-126
ISSN 2621-5799

DOI: 10.31014/aior.1993.04.03.323

Meranao ESL Students' Experiences in Online Learning in Time of COVID19 Pandemic

Junaisah M. Hadji Omar[1], Wardah D. Guimba[2], Roseniya G. Tamano[3], Fernando R. Sequete, Jr.[4], Adelyn S. Nalla[5], Cherrilyn N. Mojica[6]

[1,2,3,4,5,6] College of Education, MSU Marawi City, Philippines

Correspondence: Wardah D. Guimba, College of Education, MSU Marawi City, Philippines.
Email: wardah.guimba@msumain.edu.ph

Abstract
COVID19 pandemic has compelled educational institutions to re-navigate their learning modalities to that of fully online learning, thus, generating a totally new experience for teachers and learners who are novices in the flexible or blended learning. This study, therefore, attempted to explore the students' experiences of online learning in time of COVID19 via in-depth quantitative method. A total of 171 students from secondary, tertiary, to graduate levels engaged in online learning were selected as participants using purposive sampling technique. The researchers-made questionnaire focusing on students' satisfaction and dissatisfaction with online learning, as well as their desired improvement, was distributed online to these students from which responses were collected. Based on the results, the most common environment and methods for participating classes were student homes and mobile phones (touchscreen/android). Students indicated that they are satisfied with the following features of online classes: selecting a quiet place for online learning, quality classes at home, and being with the family at home while doing online learning. In contrast, students are dissatisfied about the internet connectivity, not getting full attention from teachers, and have difficulty in sharing ideas. Areas that need improvement according to the students were closely related to the causes of complaints, such as improving network connectivity, microphone and sound quality, and smooth communication during online classes. These findings imply that students' educational environments are important and the quality of interactions can vary depending on the teachers and technology used. This study recommends that an improved and effective online learning system, maintaining academic achievement similar to traditional classroom teaching can be designed in preparation for any possible future crisis like COVID19.

Keywords: Online Learning, Students, Experiences, Technology, COVID19

I. INTRODUCTION

COVID19 pandemic has changed the lifestyles throughout the world. Social distancing has been mandated, and authorities have exhorted people to reduce travel as much as possible. Similar safety measures apply to education. The Philippines then led the development of learning and supplementary learning materials through the Learn at

Home menu on the Department of Education (DepEd) that recommends the use of Google meet, Google class, and Zoom platform for online learning, which various schools are currently using.
Colleges have sovereignty in decision-making, but protecting students and faculty from COVID19 is important. Rather than conducting face-to-face classes, colleges utilized online learning to protect the safety of their students and faculty. Administrators, faculty, and students are conforming to the innovative online learning environment in a range of ways.

However, online learning has not been implemented only as a response to the crisis. Ever since the increasing improvement of the internet and technology, learners were able to study regardless of their location. Thus, making online learning a commendable substitute to face-to-face learning (Stacey, Peter, & Barty, 2004). A subgroup of online learning like video-based distance learning, which facilitates two-way intercommunication between different classrooms using remote imaging, has been in widespread use since the 1990s (Jeong, 2010). However, unlike existing online courses, which are conducted by following planned course designs, education in colleges follows a form of emergency remote instruction. This is a substitute and temporary approach of teaching that derives in response to a specific crisis situation (Wang, Zhang, Zhao, Zhanh, & Jianh (2020), which strictly differs from typical distance education. “Subsequently, distance education serves as the distance in time and/or location between learners and learning resources while remote education is classified as spatial distance.

Distance education deals with distance within the context of different angles and strives to define it through transactional distance” (Bozkurt & Sharma, 2020). Nonetheless, according to Means, Bakia, and Murphy, (2014) effective online learning should consider several factors, including pacing, student-teacher ratio, modality, pedagogy, the role of students, the role of the teacher, online communication synchrony, the role of online assessments, and feedback. Considering present class designs are understood to be only provisional responses to the emergency needed for remote teaching, and with the greater authority given to administrators than professors in designing, developing, and implementing curricula, these classes do not indicate sufficient aspect (Affouneh, Salha, & Khlaif, 2020; Hodges, Moore, Lockee, Trust, & Bond, 2020).

Furthermore, both teachers and learners have the struggle to conform to emergency remote teaching, as it does not have an outline class design in the way that actual online learning does. Schools that are implementing emergency remote teaching should grant support this is easy to access, effective, and address factors of distance learning. These factors consist of interactions with students and their parents or guardians, prescribed infrastructure, the strength of the personnel to engage emergency remote learning, meeting the needs for learning, handling difficulty experienced by students and personnel, and the outcomes, achievement, and assessment of students and staff (Hodges et al., 2020).

In addition, the process of emergency remote teaching vary from college to college, and some colleges have now equipped with the online learning system, which has led to various perceptions of the process and effectiveness of learning among students, who are ultimately the consumer of education. Additionally, other uncertain changes in the surroundings may occur, such as warfare, regional competition, and other natural catastrophes. Therefore, the need to prepare and implement education using a remote imaging system should persist (Bozkurt & Sharma, 2020).

Review of Related Literature and Studies

Consequently, there were studies done focusing on online class experiences. The results of one of these studies indicate that academic achievements at online schools are better than those at similar traditional schools (Shoaf, 2007). Barnett-Queen, Blair, and Merrick (2005) found numerous students to be competent to learn in online discussion and that such discussions are not adherent to those in a traditional face-to-face meetings. Qui and McDougall, (2013) reported that in small online discussions, students do not spend a lot of time socializing as they would in traditional face to face classes, allowing them to remain fixate, and text-based online subgroup discussions lead students to focus on more discussions because they are all recorded. These discusses about the environment and understanding of online classes. Students have been found to be convinced with the flexibility they participate in remote learning, where they do not have to concern about what to wear for school, are not

burdened by commuting, and can accustom their progress to apply their own trot and schedule (Alexander, Truell, & Zhao, 2012).
For studies that take negative characteristics of online classes into account, findings indicate that students may misunderstand assignments when classes are not face-to-face, they have trouble when technical problems occur, and can be distracted by engaging in activities not related to classes, such as engaging in Facebook while taking online classes. Also, it has been noted that class problem may exist and the need for self-discipline and determination has grown (Alexander et al., 2012).

A study showed that unlike traditional education, students could not participate in online classes that require cooperation, and interaction between students and professors. Additionally, students cannot participate in discussions with varied groups of learners (Dumford & Miller, 2018).

A study of online discussion that was supervise with graduate students did produce positive and confident responses to online instruction but also reported that when given a choice, students preferred face-to-face discussions, and they considered online discussions to be a useful and helpful supplemental approach of having discussions but that they could not change face-to-face and direct discussions (Tiene, 2000).

As presented, there have been researches demonstrating both negative-positive aspects of doing online classes. Therefore, this study analyzed the experience of students undergoing online learning due to COVID19, focusing satisfaction, dissatisfaction, and the needs for improvement that can lead to further development in online learning.

II. METHODS AND MATERIALS

This study adopted a flexible and in-depth quantitative method.

Respondents

The respondents of the study were students who experience online learning during COVID19 selected by purposive sampling technique. A questionnaire was distributed online and a total of 171 students responded. The 171 respondents were 13 senior high students, 109 undergraduate students, 35 MA students, and 14 doctorate students. In total, there were 36 males and 135 females.

Research Process

To obtain the respondents' experience of online learning, a survey was conducted with questionnaire that contained the following three questions: "What features of online learning do the respondents are satisfied with?", "What features of online learning do the respondents are dissatisfied with?", and "What features of online learning do the respondents want to improve on?"

III. RESULTS AND DISCUSSION

Results

Use of Virtual platform (google class/google meet/zoom)

Locale of classes

A total of 215 responses were received to the question of what location students used to participate in online learning. They identified their homes as the most common location, with 161 responses (74.88%), followed by café with 25 (11.5%), office with 15 (6.98%) responses, dormitory with 13 (6.06%) and reading room with only 1 (0.49%) response.

Technology used to take classes

A total of 253 responses were given to the question of what technology students used for participating in online learning. Mobile phones (touchscreen/android) were identified as the most commonly used means, with 153 responses (60.47%), followed by laptops with 86 (34%) responses, personal computers/desktop with 9 (3.55%) responses and tablet/iPad with 5 (1.98%) responses.

Table 1: Areas of satisfaction in online learning

	SD	D	U	A	SA	Mean	INTERPRETATION
1. I can select a quiet place for my online learning	3 (1.8%)	20 (11.7%)	9 (5.3%)	117 (68.4%)	22 (12.9%)	3.79	AGREE
2. I am taking quality classes at home	7 (4.1%)	39 (22.8%)	18 (10.5%)	96 (56.1%)	11 (6.4%)	3.40	AGREE
3. I can be with my family at home while doing my online learning	2 (1.2%)	14 (8.2%)	8 (4.7%)	102 (59.6%)	45 (26.3%)	4.02	AGREE
4. I can save the time commuting from home to school because I do my online classes at home	1 (0.6%)	6 (3.5%)	6 (3.5%)	80 (46.8%)	78 (45.6%)	4.33	STRONGLY AGREE
5. I can take my online classes immediately after waking up.	2 (1.2%)	18 (10.5%)	13 (7.6%)	103 (60.2%)	35 (20.5%)	3.88	AGREE
6. I can make good use of my time in-between classes.	3 (1.8%)	19 (11.1%)	24 (14.0%)	110 (64.3%)	15 (8.8%)	3.67	AGREE
7. I have improved communication with my teachers through the chat window.	7 (4.1%)	34 (19.9%)	22 (12.9%)	98 (57.3%)	10 (5.8%)	3.41	AGREE
8. I improved expressing my opinions due to reduced pressure in face to face communication.	10 (5.8%)	34 (19.9%)	13 (7.6%)	99 (57.9%)	15 (8.8%)	3.44	AGREE
9. I can have one on one conversation in my online classes.	6 (3.5%)	27 (15.8%)	24 (14%)	105 (61.4%)	9 (5.3%)	3.49	AGREE
10. I am safe from COVID19 because classes are conducted online	0 (0%)	5 (2.9%)	3 (1.8%)	56 (32.7%)	107 (62.6%)	4.55	STRONGLY AGREE
11. Lecture contents in our online classes can be recorded.	2 (1.2%)	7 (4.1%)	10 (5.8%)	116 (67.8%)	36 (21.1%)	4.04	AGREE
12. I can immediately search additional references in my online classes.	1 (0.6%)	6 (3.5%)	10 (5.8%)	123 (71.9%)	31 (18.1%)	4.04	AGREE
13. I can talk comfortably in our online classes.	2 (1.2%)	26 (15.2%)	22 (12.9%)	114 (66.7%)	7 (4.1%)	3.57	AGREE
14. I have good communication with my teachers during remote learning.	5 (2.9%)	28 (16.4%)	18 (10.5%)	114 (66.7%)	6 (3.5%)	3.51	AGREE
15. Online classes save my travel cost, as I do not travel from home to school	1 (0.6%)	2 (1.2%)	8 (4.7%)	66 (38.6%)	94 (55.0%)	4.46	STRONGLY AGREE
GRAND AVERAGE						3.84	AGREE

Online learning experiences

Advantages of online learning

Students identified multiple advantages of using google class/google meet/zoom for online learning. A total of 171 responses, and one of the most commonly identified advantages was 'comfortable educational environment,' such as students who can select a quiet place for online learning with 68.4% (117), students can take quality classes at home with 56.1% (96), and students can be with family at home while doing their online learning with 59.6% (102).

'Time utilization' such as students can save time commuting from home to school because they can do online classes at home with response rate of 46.8% (80), students can take classes immediately after waking up 60.2% (103), and students can make good use of time in-between classes with 64.3% (110) were considered significant.

Other notable advantages were smooth communication such as students improved communication with teachers through chat window, students improved expressing their opinions due to reduced pressure in face to face communication and can have one on one conversation in online classes, as they could chat frequently through chat rooms, allowing them to speak comfortably with each other without needing to bother about what other people would feel of them. As well as, social distancing, data utilization, psychological stability and transportation cost reduction.

Table 2: Areas of dissatisfaction in online learning

	SD	**D**	**U**	**A**	**SA**	**Mean**	**Interpretation**
1. I get disturbed from my online classes because of internet problem.	2 (1.2%)	0 (0%)	9 (5.3%)	48 (28.1)	112 (65.5%)	4.57	Strongly Agree
2. I feel like I am not getting full attention from teachers in my online classes.	1 (0.6%)	15 (8.8%)	22 (12.9%)	106 (62%)	27 (15.8%)	3.84	Agree
3. I feel difficulty in sharing my ideas.	1 (0.6%)	15 (8.8%)	21 (12.3%)	115 (67.3%)	19 (11.1%)	3.80	Agree
4. I feel difficulty asking questions after class.	3 (1.8%)	19 (11.1%)	12 (7.0%)	114 (66.7%)	23 (13.5%)	3.79	Agree
5. I can't concentrate due to long period of time in my online classes	3 (1.8%)	17 (9.9%)	30 (17.5%)	106 (62%)	15 (8.8%)	3.66	Agree
6. Group activities are inconvenient in my online classes.	2 (1.2%)	12 (7.0%)	15 (8.8%)	94 (55%)	48 (28.1%)	4.02	Agree
7. Lack of sense of belonging and sense of fellowship	2 (1.2%)	26 (15.2%)	29 (17.0%)	87 (50.9%)	27 (15.8%)	3.65	Agree
8. I am more actively engaged in face-to-face classes than in my online classes	0 (0%)	7 (4.1%)	14 (8.2%)	62 (36.3%)	88 (51.5%)	4.35	Strongly Agree
Grand Average						3.96	Agree

Shortcomings in online learning

The most frequent complaint was 'network instability'. Students get disturbed from online classes because of internet problem which appeared 65.5% (112) responses as shown in Table 2.

Another complaint was 'unilateral interaction', such as students feel like they are not getting full attention in online classes with 62% (106) responses, feel difficulty in sharing ideas 67.3% (115) responses, and feel difficulty asking questions after class with 66.7% (114) response rate.

Another complaint was 'reduce concentration', such as students cannot concentrate due to long period of time in online classes with 62% (106) responses, group activities are inconvenient in online classes with 55% (94) responses; and lack of sense of belonging and fellowship with 50.9% (87) response rate.

Other complaints were reduced academic achievement where in students are more actively engaged in face to face classes than in online classes with 51.5% (88) response rate.

Table 3: Opinions on the improvement of online learning

	SD	D	U	A	SA	Mean	Interpretation
1. Network connectivity should be improved	2 (1.2%)	1 (0.6%)	0 (0%)	36 (21.1%)	132 (77.2%)	4.73	Strongly Agree
2. Teachers' microphone and sound quality state should be improved	1 (0.6%)	2 (1.2%)	3 (1.8%)	61 (35.7%)	104 (60.8%)	4.55	Strongly Agree
3. Sharing of recorded version of classes/uploading of recorded version	1 (0.6%)	2 (1.2%)	4 (2.3%)	71 (41.5%)	93 (54.4%)	4.48	Strongly Agree
4. Smooth communication with students is necessary in online classes.	1 (0.6%)	1 (0.6%)	8 (4.7%)	63 (36.8%)	98 (57.3%)	4.50	Strongly Agree
5. Teachers should provide opportunities for active feedback.	1 (0.6%)	0 (0%)	3 (1.8%)	73 (42.7%)	94 (55.0%)	4.51	Strongly Agree
6. Plan for fair calculation of grades should be presented	0 (0%)	1 (0.6%)	8 (4.7%)	53 (31%)	109 (63.7%)	4.58	Strongly Agree
7. The quality of online teaching materials should be improved	2 (1.2%)	1 (0.6%)	6 (3.5%)	71 (41.5%)	91 (53.2%)	4.45	Strongly Agree
8. Classes replaced by assignments should be improved.	2 (1.2%)	0 (0%)	11 (6.4%)	85 (49.7%)	73 (42.7%)	4.33	Strongly Agree
9. Activities with students in online classes should be improved.	2 (1.2%)	6 (3.5%)	21 (12.3%)	83 (48.5%)	59 (34.5%)	4.12	Agree
GRAND AVERAGE						4.47	Strongly Agree

Desired improvements in online learning

Students cited 'network stabilization' as an area for improvement, such as network connectivity should be improved with 77.2% (132) responses and microphone and sound quality should be improved with 60.8% (104) responses as shown in Table 3. In addition, 54.4% (93) responses expressed a desire to sharing of recorded version of classes/uploading of recorded version to activation of interaction such as smooth communication with students is necessary in online classes with 57.3% (98), teachers should provide opportunities for active feedback with 55.0% (94) responses, and plan for fair calculation of grades should be presented with 63.7% (109) responses. Other suggested included were the quality of teaching material should be improved, classes replaced by assignments should be improved and activities in students in online classes should be improved.

Discussion

Learning environment

Students' homes were the most common locale for participating in online learning during COVID19 pandemic. Students noted being able to learn in personalized space is a great advantage to distance learning. According to Earthman (2002), schools or classroom spaces that are too complex or are crowded can create various problems lowering students' academic achievement. The result of the study shows that the online learning environment is comfortable and convenient to most students, which can be an important element that can positively affect academic achievement.

To empower successful intellectual achievement, it is crucial to find how learners exercise different means for study (Surry & Ensminger, 2001). On the other hand, mobile phones were the most frequently used device for

classes. Learning outcomes may rely on students' approach to high quality media, and that can differ by economic status. Students face challenges because of poorly designed classes in crisis, and they become dissatisfied with the lack of perceived fairness in education and difficulty in obtaining educational resources (Affouneh et al., 2020). Thereupon, measures of developing access to necessary educational materials should be considered to ensure that students' academic achievement is not negatively impacted by their economic situation.

Satisfaction with online learning

Students who participated in this study were satisfied with the available and comfortable educational environment offered by online learning. El Mansour and Mupinga (2007) exhibited that one interest of online learning is that students can take classes from any location, so long as they have access to computer. According to Daymont, Blau, and Campbell (2011), students who adopt online classes were impressed on factors such as flexibility and convenience. This has similarity with the findings of this study that the ability to choose freely one's environment for taking classes is a great advantage for online learning.

In particular, face-to-face classes have the convenience of emotional content, efficiency, fluidity, comfort, ability to read non-verbal signs, and more immediate evaluation, while online classes have the advantages of allowing students to take their time to think and reflect to find and analyzed more in-depth information and being better suited for more introverted students (Meyer, 2007). Nonetheless, students understand the advantages of both face-to-face classes and online classes because free contact is made possible through a chatroom. Expression of opinions in the chatroom enables communication with the professor that can take place individually as well as communication with all participants, making intimate communication possible even with the value of media, and the certainty that communication practicing texts allows time to think is also premeditated an advantage.

Students were also satisfied with the fact that online learning allowed them to reduce their commuting time to school, and letting them use that time for other activities. Although students were unable to select freely their class time, they were still satisfied with the fact that they could purposely use the time they had once had to invest in commuting between face-to-face classes. In addition, some students reported that they can focus better studying alone. Wedemeyer (1981) demonstrated that independent, timely environments that fit the students and provided a sense of individuality and responsibility are major important characteristics of online learning (as cited by Simonson, Schosser & Hanson, 1999). Moreover, Buchanan (1999) stated that the qualities for success in online learning include independence, understanding of data, and the ability to manage time. These qualities may vary by student, but with advantages of online learning in relation to academic achievement as demonstrated in this study, it is important to provide students with necessary information and skills to better approach and take advantage of online learning.

Furthermore, students in this study showed satisfaction with real time online teaching because it made them feel like they were taking one-on-one classes. Hence, it is a new finding and a potential solution to the aforementioned issue. Therefore, the advantages of this form of teaching method for students are worth preserving for possible future combination with face-to-face classes.

Dissatisfaction with online learning and improvement

Students suggested improvements around areas of dissatisfaction, such as improving network instability, activating interactions through the improvement of unilateral interactions and conducting face-to-face for hands-on classroom activities.

The largest dissatisfaction in online learning according to students' experiences is related to network difficulties that disrupted their classes. In online learning, networks are both a means of disturbing educational materials and a means of promoting communication between the teacher and students or among students (Trentin, 2007). Therefore, networks are important to the online learning environment and one of the most significant areas of improvement.

Dissatisfaction with the interaction in online learning included poor interaction with the instructor as well as lack of effectively collaborating with classmates and a lack of possible feedback to be exchanged with students. According to Tu and McIsaac (2002), online communication can vary with typing skills. They added that because appropriate communication is difficult if typing is insufficient, teachers should access the levels of this skill in their classes. This determine the demand for additional, valuable resources that can be administered to students enabling to progress technical skills involved in online learning.

In addition, results show that interactions are determine more by the personal characteristics of the students than by the system of online teaching. As a result, teachers and learners consider themselves fulfilled with interactions only when they are able to master the functions of online platforms and exercise them seamlessly, cooperate actively, and invest sufficient time in communication. According to Kathleen and Christopher (2020), the most important driver of students' intellectual progress is their peers in the same class, and the online academic scheme thus comes at a huge loss. Therefore, measures to enable smooth interactions among peer through online media should be improvise, and teachers' dexterity to lead such interactions should be advanced.

Concentration is another significant argument that students object about, affirming that long classes and need of sense of belonging or fellowship drive to reduced levels of concentration. According to Wei (2020), adapting the pace of online classes can lessen concentration issue along with being able to deliver class content more effectively. Further, Kathleen and Christopher (2020) shows that in the case of online classes, not only are students incapable to achieve specialized skills, but also they cannot enhance their level of comprehension and do not feel that they are engaged in their classes. Therefore, innovative teaching methods should be pursued to create more effective learning environment in online teaching. The performance of teachers and learners are meaningful for improving the effectiveness of online learning. Students seek to be administered with the crucial tools for classes to take place in a practical environment that allows for smooth participation and active teaching.

Furthermore, online learning is challenging for both teachers and students. According to Trust and Whalen (2020), teachers also sense burdened and unaware for online schooling and endure from internet connectivity issues and vague educational policies, similar to their students. Therefore, to improve online learning, the difficulties experienced by both students and faculties should be understood, and ways should be sought to solve them.

According to Schlesselman (2020), the probable for forthcoming crises, requiring the implementation of online classes is high. For this reason, it is timely to prepare online learning environments where students can passionately cooperate in place of the poor class designs presently being used. In addition, Cavanaugh (2005) stated that online learning takes more time to strengthen, improve, and interact with than face-to-face classes. Therefore, a more systematic and effectively planned online learning system should be devised tackling the disadvantages of online learning presented in this study.

IV. CONCLUSION AND RECOMMENDATIONS

The contiguous data of students' experiences of online learning indicate that students have high interest in learning especially in utilizing this new educational system to perform well academically. To aid students learning and achievement, a proper academic environment and system that promote educational development must be prepared. Further, it is crucial to provide an easily clear, efficient manual for teachers and students, as they are unaccustomed with this academic approach, and make further progress in effective class designs, improving the disadvantages, strengthening the existing advantages and all mentioned in this study for a more successful online learning teaching moving forward.

In the light of the data and outcome, the following are recommended.

1. Further studies focusing on other variables about students' experiences of online learning due to COVID19 pandemic may be done;

2. It is further suggested to the future researchers relating their focus in this study to have a deep scope on matters promoting a better explanation of natures about students' experiences of online learning due to COVID19 pandemic;
3. It is highly recommended to the readers to observe all values and lessons in this study and take a deep comprehension on it. It is recommended to have further explorations to uplift the ideas that they meet in this research.

References

Affouneh, S., Salha, S., & Khlaif, Z. N. (2020). Designing quality e-learning environments for emergency remote teaching in Coronavirus crisis. *Interdisciplinary Journal of Virtual Learning in Medical Sciences, 11*(2), 1–3. https://doi.org/10.1080/10494820.2020.1739078.

Alexander, M. W., Truell, A. D., & Zhao, J. J. (2012). Expected advantages and disadvantages of online learning: Perceptions from college students who have not taken online courses. *Issues in Information Systems, 13*(2), 193–200. https://iacis.org/iis/2012/114_iis_2012_193-200.pdf.

Barnett-Queen, T., Blair, R., & Merrick, M. (2005). Student perspectives of online discussions: Strengths and weaknesses. *Journal of Technology in Human Services, 23*(3–4), 229–244. https://doi.org/10.1300/J017v23n03_05.

Bozkurt, A., & Sharma, R. (2020). Emergency remote teaching in a time of global crisis due to Corona Virus pandemic. *Asian Journal of Distance Education, 15*(1), 16. https://doi.org/10.5281/zenodo.3778083

Buchanan, E. A. (1999). Assessment measures: Pre-tests for successful distance teaching and learning. *Online Journal of Distance Learning Administration, 2*(4), 85–94. http://citeseerx.ist.psu.edu/viewdoc/download?doi=10.1.1.573.767&rep=rep1&type=pdf.

Cavanaugh, J. (2005). Teaching online—A time comparison. *Online Journal of Distance Learning Administration, 8*(1). https://www.westga.edu/~distance/ojdla/spring81/cavanaugh81.htm.

Daymont, T., Blau, G., & Campbell, D. (2011). Deciding between traditional and online formats: Exploring the role of learning advantages, flexibility, and compensatory adaptation. *Journal of Behavioral and Applied Management, 12*(2), 156–175. https://d1wqtxts1xzle7.cloudfront.net/4926841

Dumford, A. D., & Miller, A. L. (2018). Online learning in higher education: Exploring advantages and disadvantages for engagement. *Journal of Computing in Higher Education, 30*(3), 452–465.

Earthman, G. I. (2002). School facility conditions and student academic achievement. https://escholarship.org/uc/item/5sw56439

El Mansour, B., & Mupinga, D. M. (2007). Students' positive and negative experiences in hybrid and online classes. *College Student Journal, 41*(1), 242–248.

Hodges, C., Moore, S., Lockee, B., Trust, T., & Bond, A. (2020). The difference between emergency remote teaching and online learning. *Educause Review, 27*

Jeong, J. (2010). *A study on interaction methods and learning satisfaction of distance education by real-time video conference system.* Unpublished master's thesis Seoul: Sogang University.

Kathleen, A. J., & Christopher, F. B. (2020). Students' responses to emergency remote online teaching reveal critical factors for all teaching. *Journal of Chenucal Education, 97*(9), 247202485. https://doi.org/10.1021/acs.jchemed.0c00736.

Means, B., Bakia, M., & Murphy, R. (2014). *Learning online: What research tells us about whether, when and how.* New York: Routledge.

Meyer, K. A. (2007). Student perceptions of face-to-face and online discussions: The advantage goes to…. *Journal of Asynchronous Learning Networks, 11*(4), 53–69.

Qiu, M., & McDougall, D. (2013). Foster strengths and circumvent weaknesses: Advantages and disadvantages of online versus face-to-face subgroup discourse. *Computers & Education, 67*, 1–11. https://doi.org/10.1016/j.compedu.2013.02.005.

Schlesselman, L. S. (2020). Perspective from a teaching and learning center during emergency remote teaching. *American Journal of Pharmaceutical Education. 84*(9), 11–29. https://www.ajpe.org/content/early/2020/05/1 4/ajpe8142https://doi.org/10.5688/ajpe8142.

Shoaf, L. M. (2007). Perceived advantages and disadvantages of an online charter school. *The American Journal of Distance Education, 21*(4), 185–198

Simonson, M., Schlosser, C., & Hanson, D. (1999).

Theory and distance education: A new discussion. *American Journal of Distance Education, 13*(1), 60–75. https://www.tandfonline.com/doi/abs/10.1080/08923649909527014.

Stacey, E., Peter, S. J., & Barty, K. (2004). Adult learners in the workplace: Online learning and communities of practice. *Distance Education, 25*(1), 107–123. https://doi.org/10.1080/0158791042000212486

Surry, D., & Ensminger, D. (2001). What's wrong with media comparison studies? *Educational Technology, 41*(4), 32–35. https://www.jstor.org/stable/44428679.

Tiene, D. (2000). Online discussions: A survey of advantages and disadvantages compared to face-to-face discussions. *Journal of Educational Multimedia and Hypermedia, 9*(4), 369–382.

Trentin, G. (2007). Pedagogical sustainability of network-based distance education in university teaching. In E. P. Bailey (Ed.). *Focus on distance education developments* (pp.79–106). Nova Science Publishers Inc

Trust, T., & Whalen, J. (2020). Should teachers be trained in emergency remote teaching? Lessons learned from the COVID-19 pandemic. *Journal of Technology and Teacher Education, 28*(2), 189–199. https://www.learntechlib.org/primary/p/215995/.

Tu, C., & McIsaac, M. (2002). The relationship of social presence and interaction in online classes. *The American Journal of Distance Education, 16*(3), 131–150. https://doi.org/10.1207/s15389286ajde1603_2.

Wang, G., Zhang, Y., Zhao, J., Zhanh, J., & Jianh, F. (2020). Mitigate the effects of home confinement on children during the COVID-19 outbreak. *The Lancet, 395*(10228), 21–27. https://doi.org/10.1016/S0140-6736(20)30547-XReferences.

Wei, B. (2020). COVID-19 and online teaching in higher education: A case study of Peking University. *Human Behavior and Emerging Technologies, 2*(2), 113–115. https://doi.org/10.1002/hbe2.191. *T.E. Shim and S.Y. Lee Children and Youth Services Review 119 (2020) 1055787*

Wedemeyer, C. (1981). Learning at the back door: Reflections on non-traditional learning in the lifespan. Madison: University of Wisconsin Press.