MySE
MALAYSIAN Journal OF SUSTAINABLE ENVIRONMENT

STUDENTS' PERCEPTION AND PREFERENCE TOWARDS OPEN AND DISTANCE LEARNING (ODL) DURING COVID-19 PANDEMIC: A CASE STUDY OF STUDIO-BASED LEARNING

*Atikah Fukaihah Amir[1] & Ruwaidah Borhan[2]
*Corresponding author

[1,2]Centre of Studies for Landscape Architecture, Department of Built Environment Studies and Technology, University Teknologi MARA, Perak Branch, Seri Iskandar Campus, 32610 Seri Iskandar, Perak, Malaysia

atika250@uitm.edu.my,
aidah866@gmail.com

ABSTRACT

Open and Distance Learning (ODL) has been widely known to the academic institutions as one of the methods in teaching and learning since COVID-19 pandemic hit nationwide on December 2019. Since then, many educational institutions have started to consider conducting the classes through online platforms such as Google Meet, Cisco WebEx, Microsoft Teams and others. Design-based studio is one of the design stream classes, which practically uses studio classes physically to develop many creative design ideas, skills, innovation, solution, and is considered as the real value of design studio education. However, the studio classes were switched to online platform, and teaching and learning strategy needed to be modified to deal with this issue, dramatically. Thus, the aim of this study is to identify the most effective delivery method in teaching and learning for current best in educational practices. 14 sets of questions in Google Form questionnaire were distributed on week 14 to the students of Landscape Architecture. A total of 261 students responded out of 394 students enrolled in the Landscape Architecture Design studio. The students were in Semester 2, 4 and 6. The students were selected based on the large number of student's enrollment. The results showed that the students enjoyed learning using Whatsapp, Google Meet and Google Classroom as a synergistic medium

PENERBIT PRESS
UNIVERSITI TEKNOLOGI MARA

for critic sessions. The research suggests three stages of tutorial sessions to suit the needs of the student's preference.

Keywords*: Open and Distance Learning (ODL), Design Based Studio, Live Meeting Technology, Education, Learning*

INTRODUCTION

Today we are facing an education crisis. From late 2019 until today, the deadly and infectious disease known as COVID-19 has deeply affected and shaken up the global educations sector. The COVID-19 pandemic outbreak forces globally many schools or institution to remain temporarily closed for physical learning. With this sudden shift away from physical learning in classroom, universities had to rapidly shift to virtual and digital strategies. This pandemic has channeled the education sector with opportunity to pave the way for digital learning (Dhawan, 2020). There is a paradigm shift in the way educators deliver quality education through various online platforms such as Google Meet, Cisco WebEx and Microsoft Teams. E-learning methods have played a crucial role during this pandemic, helping universities facilitate student online learning distance (ODL) during the closure of universities (Subedi et al., 2020). Transitioning from traditional face to face studio classes learning to open and distance learning can be an entirely different experience for the students and educators especially in Faculty of Architecture, Planning and Surveying, which most of the classes are design stream that align with the studio-based learning. Studio based learning practically uses studio classes physically to develop many creative design ideas, skills, innovation, solution, and are considered as one of the vital design studio lessons. This was supported by Norazman (2019) that the physical quality in the classroom is an essential factor for having a fruitful learning process.

Nowadays, online learning or e-learning is becoming an approachable technique to students. Open and Distance Learning (henceforth ODL) is more inclined towards digitalizing the education. Some of the online platforms used so far include unified communication and collaborative

platforms such as Microsoft Teams, Google Classroom, Canvas, WebEx and Padlet, which allow the educators to create training and skill development programs (Petrie, 2020) with the options of workplace chat, video meeting and file storage that keep classes organized. Thus, a new hybrid model of education is emerging. Besides, this platform has given the digital divide to open and distance learning. This type of learning can be aligned with the objectives of the Fourth Industrial Revolution (4IR). The aim of this study is to identify the most effective delivery method in teaching and learning for current best education practice. Thus, the objective of this study is to identify the student's preference and perception of ODL and to propose a method for best ODL practices for studio based learning.

Synchronous and Asynchronous for Open and Distance Learning (ODL)

E-learning is defined as "a system of learning that uses electronic media, typically over the internet" and distance learning is defined as "a system of education in which people study at home with the help of special internet sites, and this system allows students to email their work to their educators". E-learning can be described as a new concept to modern education. E-learning is defined as learning and teaching online through network technologies to manage and deliver digital education. Therefore, open and distance learning can be divided into synchronous and asynchronous learning. The synchronous learning environment provides real-time interaction, which can be collaborative in nature incorporating e-activities (Salmon, 2013) such as an educator's lecture facilitated with a question and answer session, which requires simultaneous student-educator presence. On the other hand, synchronous open and distance learning provides an opportunity of educator-student and student-student interaction using a voice or text chat room and video conferencing, which facilitates face-to-face communication. In addition, a synchronous virtual classroom is a place for educators and students to interact and collaborate in real-time. Using webcams and class discussion features, it resembles the traditional classroom, except that all participants access it remotely via the Internet. Lessons can be recorded and added to the storage files. Thus, the synchronous open and distance learning happen in real-time.

Asynchronous open and distance learning is vice versa where it does not happen in real-time. It is executed to suit educators or students' schedule. Asynchronous can be described as a flexible open and distance learning environment. Asynchronous environment learning consists of study materials in various forms (texts, slides, videos, assignments for completion, recordings) by the educators and the students themselves can access the materials anytime as long as they manage to meet the given deadlines. Frequent methods of asynchronous open and distance learning include self-guided lesson modules, lecture notes, virtual libraries, pre-recorded video or audio content, links to internet sources, and online discussion boards. Students work through the study material themselves, and only occasionally interact with instructors through social media, WhatsApp, or email. Thus, the asynchronous open and distance learning is expressed by flexibility, pacing and affordability (Doug W., 2021)

Between synchronous and asynchronous ODL, both methods have their own pros and cons. Asynchronous online learning emphasizes flexible online learning such that students are not required to be online at the same time and generally facilitated by emails and discussion boards (Hrastinski, 2008). Meanwhile, synchronous online learning is currently gathering more attention than asynchronous online learning because synchronous online learning, with advanced technology, increases students' feeling of connection towards instructors and other students (Watts, 2016).

MATERIALS AND METHOD

There is a total of 17 out of 20 lecturers (85%) in the department who taught the students in the three course subjects selected for this study for March – August 2021 session. Thus, the research limitation was the question that has been answered by students might be influenced by the teaching style used by the different lecturers. Lecturers are given choices to conduct classes from any platform that they think is relevant for teaching and learning purposes, and no specific platform was set by the UiTM management. Thus, the answers given may reflected the varying styles of teaching.

Populations, Sample and Sampling Method

According to Qualtrics (2021), to determine a good sample size, the researcher should be aware on the population size, the confidence level the researcher aims to achieve, and margin of error (confidence interval) allowed by the researcher. In this study, the researchers knew that the population size of students undertaking Diploma of Landscape Architecture was 394 students. The researchers also selected the confidence level 99% and allowed margin of error to 5%. Thus, according to Qualtrics (2021) online sample size calculator, the necessary ideal sample size needed in this study was 248 students.

The total number of students undertaking Diploma Landscape Architecture course in UiTM Perak Branch (session 2020/2021) were 394 students. The researchers selected the students who undertook design based studio for Semester 2 (First Year), 4 (Second Year) and 6 (Third Year) namely LDA152 Planting Design, LDA250 Urban Design and LDA350 Independent Landscape Design. The selection was based on the higher enrollment of students in studio based learning. Moreover, the students who enrolled in Industrial training in Semester 5 did not have the same amount of credit hours as students who took studio design in this study. The researchers managed to obtain 261 respondents who voluntarily answered this survey, which was more than the sample size needed for this study.

Period of Study and Questionairre structure

The researcher prepared a set of questionnaire of 14 questions using Google Form, which were adapted from Md Saidi (2021) and Aziz (2021). The list of questions consist of close-ended and open-ended question. The form was distributed during a time frame ranging from Week 14 until Week 15 of study week. Study week is the last week of studio assessment and students will be able to do a comprehensive reflection on their study performance of the semester during this period. The form was answered in a week as to give the students time to arrange their thoughts and answer carefully.

The questionnaire set used Bahasa Malaysia to allow students to give a more detailed reflection in discussion part (at open-ended question). The

researchers used five levels of Likert Scale to measure the satisfaction index in close-ended questions.

RESULTS AND DISCUSSION

From the 261 respondents, there are 96 students (37%) from rural areas and 165 students (63%) from urban areas. Most of the students who are from the urban areas reported that they have satisfactory access to the Internet for ODL. It was supported by the statistics that 64 students (38.8%) in urban areas stated that they obtained satisfactory access to the Internet. Rural areas received moderately satisfied on the Internet access by 37 students (38.5%). To sum up, students have good access with Internet in both urban and rural areas.

Table 1. Internet Access Received by Students is Generally Satisfying in Both Areas

Satisfying level	Urban	Rural	Total
Very unsatisfied	4	6	10
Unsatisfied	14	22	36
Moderate	60	37	97 (37.2%)
Satisfied	64	23	87
Very satisfied	23	8	31
Total	165	96	261

Source: Author

After two years of ODL being conducted, students still prefer the face-to-face teaching and learning method. This can be shown by 185 students (71%) who prefer to attend the physical classes by following the Standard of Procedures (SoP) of the COVID-19 pandemic compared to their counterpart where 76 students (29%) who prefer the classes conducted through ODL. The data were supported by Mohd Talmizi (2021), who states that individuals with tertiary education were prone to engage with physical activities more frequently than those with lower education qualification. They claimed that they are aware of the health and social benefts of physical activities, and thus are more motivated to spend their time physically.

Course Subject and Response Rate

Based on the student's database, there were 126 students and placed in 10 groups who enrolled in the course subject of LDA350 Independent Landscape Design. The number of respondents were 102 students, and the response rate was 81%. In this code subject, students have a total of two hours lecture and eight hours tutorial per week. The tutorial session is generally known as critic session, where it is conducted twice a week (4 hours tutorial on Monday and 4 hours tutorial on Thursday).

Next, there were 127 students and placed in 9 groups enrolled in course subject of LDA250 Urban Design and the number of respondents were 103 students, and the response rate was 81.1%. In this course subject, students have a total of two hours lecture and six hours tutorial session. This critic session is conducted twice a week (3 hours tutorial on Monday and 3 hours tutorial on Thursday).

Another code subject LDA152 Planting Design is conducted once a week. The response rate was 72.7%, where 56 out of 77 students (in 6 groups) gave their response. This code has an hour lecture with four hours critic session. In conclusion, all subject codes offer a range of 3 to 4 hours tutorial per session. All course subjects received a good response rate, which were more than 70% response rate. Thus, this data collection is highly reliable to represent the analysis of this paper.

Student's Feedback

The class were conducted in ODL format for these 3 course subjects throughout the semester. Some of the classes were conducted through synchronous learning and some of it were asynchronous learning, depending on the lecturer's approach. Based on the data observation, 129 students (49.4%) preferred the class to be conducted using synchronous method, 84 students (32%) preferred the class to be conducted using asynchronous method, and 48 students (18.6%) reported that they do mind whether the classes were conducted through synchronous or asynchronous. The selection of either synchronous or asynchronous method by lecturers sometimes was affected by time limitation and the total number of students enrolled in this course.

The method of teaching in critic sessions varies, such as through live meeting technology, Google Classroom, Whatsapp, Padlet, u-Future under UiTM development system, Jamboard and e-mail. Based on the data observed, students were satisfied with the delivery method that had been conducted by lecturers. The most satisfying medium for critic sessions was mostly from Whatsapp group with 157 responses, followed by Google Classroom with 144 responses and live meeting technology with 135 responses (Table 2). The other applications that were seen as less important were Padlet, Jamboard, uFuture and e-mail.

Based on the responses received, the application of Whatsapp group, Google Classroom and live meeting technology especially Google Meet, were highly preferred by students due to their user-friendly interface and fast response by both parties (students and lecturer). Google Meet was also preferable for critic session due to its capacity to enable active participation among the students and lecturer in small groups. This feature is essential for students to be able to execute the direct action which must be taken should they make any mistake in the draft board. Google Classroom is the place for individual critic session and Google Meet is essential for sharing session with all students in one time. To sum up, Google Classroom is the platform to increase skill and knowledge of individual work and Google Meet can be utilized to increase understanding and a good platform for group benchmarking. Students will feel highly motivated if they see more examples or work samples shared among them.

Table 2. Critic session by using live meeting technology of Google classroom and Whatsapp are highly reliable compared to Padlet, uFuture, Jamboard and e-mail sessions.

Likert Scale	Live meeting technology (G-meet, Zoom, Microsoft Teams, Cisco Webex, Jitsi)	Google Classroom	Whatsapp	Padlet	uFuture / i-Learn	Jamboard	E-mail
Not very important	1	0	0	11	13	40	22
Not important	1	1	2	33	8	34	19

Less important	10	7	11	106	57	107	70
Important	114	109	91	76	98	56	87
Very important	135 (51.7%)	144 (55.2%)	157 (60.1%)	35	85	24	63

Source: Author

The same phenomenon can be observed with the general communication medium. Whatsapp and Google Classroom were considered as the most effective media for interaction between students and lecturers, followed by Telegram, Email, Facebook, Twitter and Instagram (Table 3).

Table 3. Satisfying Index on General Communication Preference

Likert Scale	Live meeting technology	Whatsapp	Telegram	Email	Facebook	Instagram	Twitter
Not very important	1	1	10	16	50	43	54
Not important	0	0	24	28	64	60	73
Less important	9	2	83	71	107	92	97
Important	88	75	85	82	33	45	27
Very important	163	183	59	64	7	21	10

Source: Author

Based on the data observed, most students were satisfied with the course objectives and content (44.1%). The course plan was also set accordingly with content (42.5%) and the course workload was given in suitable weightage (48.3%). The content of studio subjects was overall understood (48.7%) (Refer Table 4).

Table 4. Students are Clear on the Course Objective and Content, Course Plan, Suitable Workload and Understanding Level Towards Content

Likert Scale	Course Objectives and content	Course plan	Course workload	Student's Understanding level
Very unsatisfied	2	2	3	2
Unsatisfied	2	1	14	10
Moderate	55	57	77	51
Satisfied	115 (44.1%)	111 (42.5%)	126 (48.3%)	127 (48.7%)

Very satisfied	87	90	41	71

Source: Author

Students' perception towards academicians in terms of current teaching medium (107 responses), delivery method (102 responses), and time allocation (107 responses), were satisfactory. Furthermore, most of the information given by the lecturer was sufficient as claimed by the 100 respondents eventhough the tutorial classes of critic session were being conducted through ODL. The students reported that the academicians are well-versed with the usage of technology and committed in the teaching industry. Students' self perceptions were also observed, where they reported that they were satisfied with their own commitment (126 responses), understood the teaching and learning sessions (111 responses), and generally feel motivated to complete their studies (92 responses).

The mental health and environmental happiness of students were in moderate satisfaction index at 101 responses (38.7%). Followed by satisfaction index at 96 responses (36.8%), and unsatisfaction index at 64 responses (24.5%). Based on the data observed, the cause of unsatisfaction (unsatisfied and very unsatisfied) level in a subject code are affected by limited time given to complete tasks, mass lecture in the subject code that leads to unfocused attention towards students, unclear message by lecturer, tutorial or critic session need to follow timetable, timetable is too packed with subjects, Internet coverage byof the lecturer is low, no detailed feedback given by lecturer to every student (lecturer only gave general feedback to all students), and too much tasks in one subject. In summary, students' mental health and environmental happiness were in satisfying conditions. However, feedback from unsatisfactory level such as on improvement for the subject code need to be considered. Figure 1 and Table 5 shows the student's evaluation on the course subject, lecturer, methodology and content of the subject, time allocation, and students' mental health.
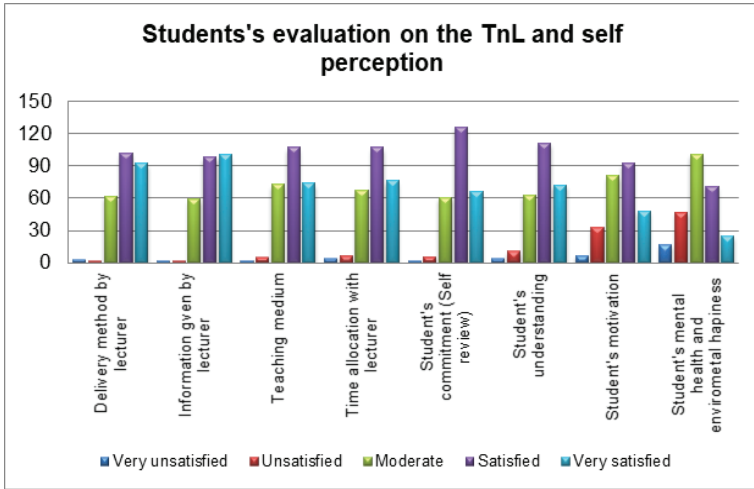
Figure 1. Teaching and Learning Assessment by Students and Student's Self-perception

Source: Author

Table 5. Satisfying Index for Teaching and Learning Assessment by Students and Student's Self Perception

Likert Scale	Delivery method by lecturer	Teaching medium	Time allocation with lecturer	Information given by lecturer	Student's commitment (Self review)	Student's understanding	Student's motivation	Student's mental health and enviromental hapiness
Very unsatisfied	3	2	4	2	2	4	7	17
Unsatisfied	2	5	7	2	6	11	33	47
Moderate	62	73	67	59	61	63	81	101
Satisfied	102	107	107	98	126	111	92	71
Very satisfied	92	74	76	100	66	72	48	25

Source: Author

CONCLUSION AND FUTURE RESEARCH

In conclusion, there are 7 main perceptions and preferences in learning design based studio which were:

a)In the COVID-19 pandemic, students prefer face-to-face learning at 71% compared with ODL at 29%.

b)For teaching and learning through Open and Distance Learning, synchronous learning are highly preferred at 49.4% compared to asynchronous learning at 32%, where students are allowed to arrange their time accordingly with other subject codes in synchronous learning and 18.6% students hold partial opinion on this.

c) Students enjoyed learning sessions that have been conducted through synchronous method, and by using these 3 platforms Whatsapp, Google Meet and Google Classroom as a medium for critic sessions or tutorial to ensure understanding between lecturer and all students. The platforms Padlet, Jamboard, uFuture and email are considered less important for critic sessions.

d)Whatsapp and Google Classroom are very important in general communication as compared to Telegram, email, Facebook, Instagram and Twitter, which are considered insignificant platforms for ODL.

e)Students (self-perception) are generally satisfied with their commitment, understanding and motivation towards study using ODL platform.

f)Most of the students expressed moderate satisfying index of mental health and environmental happiness.

g)Student who suffer (unsatisfaction and very unsatisfied) from mental health and environmental happiness are minor at 24.5%. The cause of this issue may be due to time management, mass lecture implementation that lead to unfocused attention towards students, unclear message by lecturer, asynchronous implementation, timetable is too packed, limited internet coverage, no detailed comment given by lecturer to every student, and too much task for one subject.

Studio-based learning has a range of four to eight hours critic sessions in a week. Based on the analysis of student's perception and preferences of teaching and learning, the researchers suggest to combine the usage of 3 platforms which are Whatsapp, Google Meet and Google Classroom to conduct the class. General instruction or informal discussion can be

delivered through Whatsapp group before and during the classes in order to give adequate preparation time to student. This ensures students know the type of task that needed to be submitted in the class. Since time management is one of the core issues, students need to submit their task in the Google Classroom during the first 1/3 of the time period and the lecturer needs to provide detailed feedback during two-thirds (2/3) of the tutorial session for every student (Figure 2). However, in this session, students can only view their personalized feedbacks given by the lecturer. After two-thirds (2/3) of the time, students and lecturer meet in Google Meet for discussion part, in parallel session. This third session is essential in order to ensure every students are notified and understandsall comments received from the lecturer. This also helps to maintain the spirit of working together in critic session and students can crosscheck the other comments that have been highlighted by lecturers to other students.
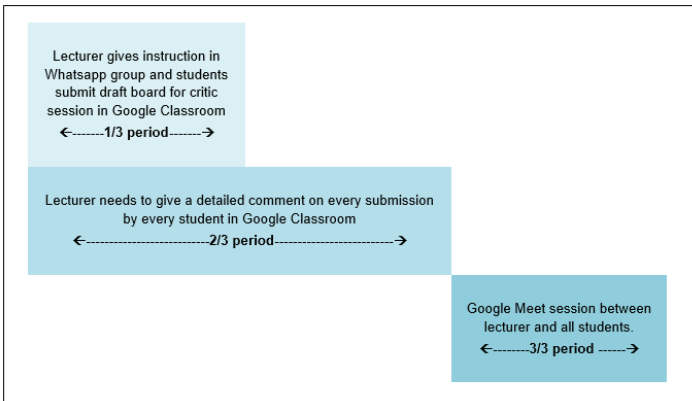

Figure 2. Combining medium for critic sessions or tutorial by using Whatsapp, Google Classroom and Google Meet platform
Source: Author

This approach fulfils both the needs of lecturer and students in teaching and learning process for design-based studio. A consistent comment or critic session can be produced for design-based studio of 3 to 4 hours (per session) with 15 students per group (per lecturer). A minimum of an hour for every platform for both lecturer and students needs to be fully utilized to achieve better teaching and learning towards open and distance learning (ODL).

In October 2021, Malaysia started treating Covid-19 as an endemic disease (Lee, 2021). Many organization and institutions are starting to open

the business as usual including education sector. The studio-based learning are allowed to be operated physically in the university by following SoP. In future research, the same questionnaire will be distributed on Week 14 and the data can be compared to study the difference of teaching and learning implementation. The data will be beneficial to enrich the study of students who are enrolled in studio-based learning.

ACKNOWLEDGEMENT

CONFLICT OF INTEREST

The authors declare no conflict of interest.

REFERENCES

Aziz, A. I., Omar, S. K., and Suhaimin, M. F., Rozman Azram. A. A., and Hanafi @ Mohd Ghani, M. (2021) Exploring students' preferences for open distance learning (ODL) during Covid-19 pandemic a case study among UiTM. *Proceedings of International Conference on Language, Education, Humanities &Social Sciences* (i-LEdHS2021), 22 February 2021, UiTM Cawangan Kelantan. 317-327. Avaialble at: https://ir.uitm. edu.my/id/eprint/44879/1/44879.pdf

Dhawan, S. (2020). Online learning: A panacea in the time of COVID-19 crises. *Journal of Educational Technology, 49*(1), 5–22. https://doi.

org/10.1177/0047239520934018

Distance learning. [Online]. [2020-11-5]. Available at: https://www. oxfordlearnersdictionaries.com/definition/english/distance-learning?q=distance+learning

Dough W. (2021). *Synchronous Learning vs. Asynchronous Learning in Online Education*. [Online]. [2021-02-26]. Available at: https:// thebestschools.org/magazine/synchronous-vs-asynchronous-education/

E-learning. [Online]. [2020-11-5]. Available at: https://www. oxfordlearnersdictionaries.com/definition/english/e-learning?q=e-learning

Hrastinski, S. (2008). Asynchronous and synchronous e-learning. *Educause Quarterly, 31*(4), 51-55. Available at: https://er.educause.edu/-/media/files/article-downloads/eqm0848.pdf

Lee, Y. N. (2021). *Malaysia will start treating Covid as 'endemic' around end-october,* trade minister says. Available at: https://www.cnbc. com/2021/09/07/malaysia-to-treat-covid-as-endemic-starting-end-october-trade-minister.html

Md Saidi, R, Sharip A.A, Abd Rahim N.Z, Zulkifli Z. A, Md Zain S. M., (2021). Evaluating Students' Preferences of Open and Distance Learning (ODL) Tools. *Proceedia Computer Science*. 179, 955-961. ISSN 1877-0509. https://doi.org/10.1016/j.procs.2021.01.085. https:// www.sciencedirect.com/science/article/pii/S1877050921001162

Mohd Talmizi, N., Ali, N. E., Teriman, S. (2021). A Review On Socio-Demographic Factors Influencing Physical Activities. *Malaysian Journal of Sustainable Environment, 8* (2), 75-90. Available online: doi: https://doi.org/10.24191/myse.v8i2.13237

Norazman, N., Ismail, A. H., Ja'afar, N. H., Khoiry, M. A., & Che Ani, A. I. (2019). A Review Of Seating Arrangements Towards The 21st Century Classroom Approach In Schools. *Malaysian Journal of Sustainable Environment,* 6(2), 21-47. Available online: http://www.myse.my/mysePaper/6.2_fullbook.pdf

Petrie, C. (2020). *Spotlight: Quality education for all during COVID-19 crisis* (hundred Research Report #01). United Nations. https://hundred. org/en/collections/qualityeducation-for-all-during-coronavirus

Qualtrics. (2021). [Online]: [30-9-2021]. Available at: https://www.qualtrics. com/au/experience-management/research/determine-sample-size/

Salmon, G. (2013). *E-tivities: The key to active online learning*. Routledge. ISBN 9780415881760

Subedi, S., Nayaju, S., Subedi, S., Shah, S. K., & Shah, J. M. (2020). Impact of e-learning during COVID-19 pandemic among nurshing students and teachers of Nepal. *International Journal of Science and Healthcare Research, 5*(3), 9. ISSN: 2455-7587. Avaialble at: https://ijshr.com/ IJSHR_Vol.5_Issue.3_July2020/IJSHR0012.pdf

Watts, L. (2016). Synchronous and asynchronous communication in distance learning: A review of the literature. *Quarterly Review of Distance Education, 17*(1), 23-32. Avaialable at: https://eric. ed.gov/?id=EJ1142962