

The Impact of COVID-19 on Architecture Design Subject Performance Effectivity

Teuku Azhari^{1,*} Rasyimah²

¹ Faculty of Engineering, Malikussaleh University

² Faculty of Economic and Business, Malikussaleh University

Corresponding author: tazhari@unimal.ac.id

ABSTRACT

Corona virus outbreak imposed vast impact on various aspects, including the world of education. Having to adhere to government regulation, universities have been implementing online teaching. Such implementation impacted both the process and result of the study. Some challenges also appear in the architectural design subject on both students and lecturer. This study was intended to evaluate the impact of COVID-19-19 faced by architectural Engineering student of Malikussaleh University in learning architecture design subject. This study is qualitative by nature. It applied qualitative research procedures from research design, data gathering, data process, and layout. Population of this study was sophomore students taking *Architectural Design Studio* (ADS) subject at Architectural Engineering Faculty of Engineering Malikussaleh University. 24 students taking the class served as total population. They were all observed and involved in FGD. Research questions in this study were a) students' perception on their performance in architectural design studio subject, b) major problem in learning Architectural Design Subject during the COVID-19, and c) issues in managing the assignment from the lecturer. Study found that student found it was harder to study in online setting compared with direct class, interaction limitation caused issues of assistance but not so much of understanding, and managing assignment was easier in term of submission, but harder in consultation.

Keywords: COVID-19, Perception, Impact on learning, Student performance.

1. INTRODUCTION

Corona virus also called COVID-19 (Corona Virus Disease 2019) first emerged in the city of Wuhan, China late December 2019. The virus spread very quickly, including Indonesia, in just a few months. Countries took stringent measures in order to prevent further spread of the virus, yet continue live and livelihood. In relation to this, the Indonesia government implemented a Large-Scale Social

Restriction (PSBB) policy to suppress the spread of this virus.

Corona virus outbreak in Indonesia has vast impact on various aspects, including the world of education. Central and regional governments have enacted specific policies in accordance with the situation including closing all educational institutions and run the process via online approach. Online learning system was designed to minimized direct contact and

physical interaction among the students and teachers/ lecturers. Online learning brought intensive impact on both the process and result of the study. Some challenges also appear in the field in student, teacher/ lecturer, and the supporting facility. Faculty, including teacher educator, were asked to transition, create, and implement online teaching due to university closure, despite lacking of readiness, or formerly had little interest in online teaching. (Cutri, Mena, and Whiting 2020).

Online teachings are carried out to provide opportunities for all Indonesian citizens to enjoy education wherever and however the conditions are. Such situation of course, does not apply in Indonesian universities alone, The University of Melbourne, for example, advise students to move to activities that they can do while staying at home so as to continue learning, such as maintaining studies, reading a book, listening to a podcast, trying out a new hobby or skills, starting a virtual book or movie club, joining on online peer forum, etc. (Gamage et al. 2020).

However, online teaching process has both positive and negative sides. On the bright side, students have rooms for flexibility to study in term of location, means and facility, support access and system, time, and interval. Chandra (Chandra 2021) also noted 58.5% students' satisfaction rate taking their study using online modes. Meanwhile, a study by Amir et.al (Amir et al. 2020) showed various e-learning and online tools that are effective for teaching and learning. Many results also showed equivalent results between the two modes. Not only was online teaching effective to theoretical subjects, it has also been proven to be effective in laboratory subject. Gamage et al (Gamage et al. 2020) found that online learnings were as equally effective as tradition laboratories in increasing students' knowledge and understanding as they facilitate active, enquiry-

based learning. Undergraduate dental students claimed they could adapt to the new learning methods of distance learning and agreed on better efficiency when learning online (Amir et al. 2020).

In addition, students can get material easily and learn to evaluate their own learning at home according to the desires of our hearts. While lying down, while eating, and while joking with family. On the COVID-19 health protocol side, they still can study while implementing social distancing and staying at home/boarding houses. In addition, they can study either in a closed room or in an open room, besides that we can study freely without any time limit that is usually set for each course on campus so that it is easier for them to understand the material presented by the lecturer.

To obtain so, teachers/ instructors should play their role in discussion such as: enhancing the students' performance through some encouraging comments, directing the students to adhere to the required aspects of the discussion and reminding them of the evaluation rules when any off-topic case occurred, responding to the students' queries, evaluating students' discussion based on the evaluation criteria. (Afify 2019). Learning environment, additionally, affects the success of learning. (Azhari and Kurniawati 2021). Besides, lecturers have the flexibility to utilize various platforms available in the marker, including those are familiar among the students, such as Facebook as it was effective in providing platform for discussion component of the course (Camus et al. 2016).

On the low side, however, some challenges occurred when implementing online teaching and learning, both on teachers and students' side. Challenges may come internally from within oneself or externally and out of hands. Some students said they were not able to

save themselves and got lured with the internet and end up spending most of their time on social media, e-connecting with others which according to them is another way to cope with academic stress. (Chandra 2021). Such excuse is detrimental on several ways as they will sway away from the initial intention and purposes of online learning. Despite the fact that the availability of learning media and knowledge to use them positively impact outcomes (Azhari and Kurniawati 2021), the way students use them is also as significant.

Number of students lose focus when taking online learning. They, sometimes, found themselves surfing on Instagram, Facebook, or playing online games. Meanwhile, they spend less time on e-learning (subject-related websites) minimally or less than what they should have to. COVID-19 outbreak has disrupted learning activities and university life of students, and introduced anxiousness about when life will return to “normal”. (Gamage et al. 2020). Such situation has let to 61.7% students’ perception that online learning did not bring as much satisfaction as the actual classroom meeting did. (Amir et al. 2020). Chandra (2021) elaborated explanation on the matter saying that students experienced high level of stress from unprecedented pressure, low self-esteem, a poor concentration that impacted on their academic performance. Research also noted that students taking online class fell back on their test results substantially (Amir et al. 2020).

Online learning requires both material/explanation as well as assignment given online. For several reasons, this created issues for students. Some students do not understand lecturers’ explanation due to the lack of detailed explanations and internet connection. For instance, having no white board or other means of explanation used during the lecturer session, lecturers find it hard to match their level of explanation was they would during the offline

session. As an impact, students will find it hard to properly do the assignment due to their less understanding. On top of that, about 70% of teachers also agreed that students’ autonomous learning ability is weak and that they have no good habits of online learning. (Chang and Fang 2020).

Furthermore, on the instructors’ side, the main issue in online learning implementation was insufficient support for teachers (instructors) teaching online education, insufficient support for online technical services, unskilled students in utilizing learning platform and tools, in-proper evaluation methods, and unsuitable teaching strategy applied. (Chang and Fang 2020). Teaching and learning facilities are crucial and needs serious attention both from educators and education management to ensure smooth run of learning process and better outcome (Azhari and Sahputri 2021). Unfortunately, both facilities and skills in teaching are not easy to obtain. There is a need for bringing theatrical skills into teaching online (Mishra, Gupta, and Shree 2020). Their prior acknowledgement, also, would revert back to predominantly teacher-centered pedagogy (Cutri, Mena, and Whiting 2020) or less appropriate approaches in teaching the online class. Such situation will, of course, negatively impact the online teaching process and the benefits it should obtain.

Architecture is a field that focuses on designing and drawing. Architectural engineering students have plenty of assignments on weekly basis, more especially in *Architectural Design Studio* (ADS). In the current COVID-19 situation, assignments are assigned to be completed at home. Lecturers would provide details and instruction on the assignment for their students to do at home. Task and assignment are often long and tedious thus requires intensive consultation and assistance from professors/ lecturers. Consultation is rather

difficult as face to face meeting is strictly limited.

One of the subjects affected by online learning process is *Architectural Design Studio* (ADS). Requiring heavy design and drawing works, students taking SDA class felt the impact of online teaching process. Some students had difficulty understanding the material given because they could not meet face to face for more task assistances from lecturer. In addition to this, students taking *Architectural Design Studio* (ADS) subject was also affected by the closing of shops where they purchase supplies. Such concern, deserves more research to have more comprehensive and clear pictures on the impact of COVID-19 on the effectivity of students' performance taking *Architectural Design Studio* (ADS) subject. The study aims to unravel a) students' perception on their performance in architectural design studio subject, b) major problem in learning Architectural Design Subject during the COVID-19-19, and c) issues in managing the assignment from the lecturer.

2. METHODOLOGY

This study is qualitative by nature. It applied qualitative research procedures from research design, data gathering, data process, and layout. Population of this study was sophomore students taking *Architectural Design Studio* (ADS) subject at Architectural Engineering Faculty of Engineering Malikussaleh University. 24 students, 13 male and 11 female students, taking ADS class served as the total population. They were all observed and involved in FGD for data collecting process. Data finding was then laid out on thematic based to answer the three research questions.

3. RESULTS AND DISCUSSION

Result of the study is laid out based on thematic analysis and relevance to the discussion. Information gathered from the respondents have been classified for better and ease of understanding of the reader. Unveiling research question a) students' perception on their performance in architectural design studio subject, majority of students reported that it was challenging to perform well during the online learning. COVID-19 has impacted their performance due to online teaching model. 66% of the students, 16 students, stated that performing the task assigned by lecturer was problematic. Often, students confronted with issues while trying to comply with task and requirement assigned by in ADS by lecturer. Distance learning and indirect interaction resulted in ineffective teaching process and in-optimum results.

Issues occurred pertaining the implementation of online learning was responsible to students' learning problems. Students appealed that difficulty to communicate with lecturer as the main cause. Being distance in nature, communication became problematic and it was not easy to discuss the subject freely, as it would in direct meeting.

In addition, inability to consult the assignment also corroborated the problem. Often time, students need to consult, seek for guidance, and assistance with lecture to better conform with the assignment. Failure to do so hampered the smooth completion of the task. Comparing with direct meeting, an intensive 83% (20 students) felt that online learning in Architectural Design Studio class is

ineffective. Learning instrument that support online learning process also added up to the problem. Requiring more learning instruments to support teaching and learning process, online learning rely heavily on teaching media and application to ensure effective and meaningful process and results. More than 50% but no more than 60% of teachers agreed that “the provision of electronic resources for courses is insufficient”, “students’ learning space and equipment support are insufficient”, “online technical support services cannot keep up”, teachers’ teaching space and equipment environment support are insufficient”, and “school online instrumentation policy support is insufficient” (Chang and Fang 2020).

In responding to the second research question, ‘major problem in learning Architectural Design Subject during the COVID-19’ students claimed to face several issues, such as difficulties in searching related material for the class. Previously, during the direct meeting, students could communicate easier as they met with lecturer and did the task on site. Thus, issues were visible directly and lecturer was there to help. During online meeting, students often focused more on listening the explanation during the meeting session and did their assignment/ work later. Therefore, no one was available to help when facing the problem. In addition, internet connection often became culprit and made matter worse. Students had to move in search of better connection to look for additional and helpful material to complete the work or simply review material.

Communication during online class was not as easy as it would have been in direct meeting. Students said that, “communication was difficult during online class”. In direct meeting, all types of

expressions could be detected by lecturer and thus added to the information asked or shared. However, during online class, communication was not as easy. Delay due to connection lag, having to queue when asking question, and fear of missed information during connection lag and loss. Such situation was detrimental to learning and learning process. Students would hesitate to ask question for fear that they missed some points due to internet lagging. In addition, they also have to queue before having the time to ask. Despite having similar situation even in direct classroom settings, queuing in online meeting feels different. Students felt that their question might have been asked or addressed by lecturer when answering the question.

Some students did not or could not clearly listen to lecturer’s explanation due to internet lagging or simply because they were not paying full attention to it. Thus, they fear to ask especially when delayed due to waiting time. This had been repeating cases as many students claimed to have poor internet reception in certain areas and time. Telkomsel, internet provider, was reported to provide more stable reception yet pricey compared to some other providers. However, taking other provider may cost students with poor reception which in turn detrimental to their online classroom learning process.

Some students did not give their best in online class setting. Some of them were not fully ready and prepared for class. Some woke up just enough time before the class starts. Some have to attend the class in non-supporting environment for learning. Such situation, in turn, hampered learning

and results. Having the mindset of online classroom, some students were not fully prepared for class. They take their time and relaxed before the lesson is initiated. Some attend the class not ready and some attend the class late. Some students had to take the class in non-supporting environment for study. Some attend the class in a crowded café and some attend in nearby free internet station; both did not support learning properly.

Chang and Fang (Chang and Fang 2020) reported several factors that support online learning. In order to have meaningful teaching process, instructors should yield positive attitude and energy. Instructor (lecturer) should be a driving force in learning. They should try get the best of their students. In addition, stability and function of teaching platform used in online learning should be ensured. Having no direct contact with their students, teaching platform bridge the distance and gap between them. Should it be reliable, it can help facilitate good learning process and instruction. Thirdly is teaching strategy and method utilized in teaching. Having limited direct interaction and contact with students required subsidiary factor to ensure equal or even better teaching and learning interaction during online classroom. Instructors cannot rely only on lecture and monotonous talk in front of the screen. They need to be more innovative and creative and maximize various resources in teaching.

Third research question query on issues in managing the assignment from the lecturer. 54%, slightly more than half, of total participants reported having problem

when seeing lecturer for an assistance. As majority of both students and lecturers were not on campus, meeting became difficult. In addition, performing online assistance was not as easy due to limited direct discussion among them. However, 46% did not agree with their colleagues. They still believe that learning could run smoothly event set apart by distance. Online assistance was considered sufficient and was less demanding for both as they could “meet” lecturer anytime. In fact, 79% stated that online assistance was easier because they could just send the work online. Suggestions and feedbacks from lecturers were understandable and could be reviewed anytime if forgotten. This was, indeed, beneficial for all the students not to miss feedbacks and comments on their works.

Online learning loaded students with ample of self-study. Students had to do plenty of reading and projects in replace of their normal class. This, however, was not necessary impact in an increase in assignment. In fact, 46% reported an increased in assignment, meanwhile over half, 54%, described the amount of assignment was relatively the same. No significant upsurge occurred during the online meeting.

Interestingly enough, students equally split in opinion as for whether material were easy or hard to comprehend. This is, they said, has nothing to do with mode of learning, online or direct. Student level of understanding remain the same regardless the modes. When given under similar approach and methods, students understanding on certain topic is unchanged.

Also, they said, “depends on one’s intelligence”. Students with better cognitive ability would get the lesson better than those less. However, variation in teaching process did impact learning and comprehension. Appropriate approach increased students’ comprehension and retention towards learning and outcomes.

Students also suggested that, “lecturers have to open question session more, to provide rooms for discussion and clarification”. This statement was inline with another research saying that lecturer have to open more discussion and invite students to ask and participate (Alawamleh, Al-Twait, and Al-Saht 2020). Students’ participation during teaching, online or direct, could substantially impact their mastery. A more active and participating students were believed to retain more then those who were not. Thus, classroom discussion during the class positively impacted students learning process and results.

4. CONCLUSION

Most of the students of the Architectural Design Subject felt that they could not exert maximum effort and yielded maximum results due to online learning constraints, especially in doing the assignments. Limited interaction among the students and with the lecturer as well as poor internet connection and stability were claimed to be responsible to the problem.

However, despite the fact that many would prefer direct meeting, preference on online classroom was in fact still high. Many claimed to also benefit from online system, after some improvement in communication and interaction with lecturer.

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