



Teaching Architecture for Tertiary Students during Covid-19: Issues & Reflections.

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Abstract

The impact of the coronavirus disease 2019 pandemic has been a great concern on educational systems around the world. In coping with the hasty situation and having no other option, the Architecture School of UCSI university has swiftly changed their traditional to virtual teaching/learning method in adapting to the new educational environment. This article explores the major concern and alternative teaching methods and learning activities through online platforms in design courses. The outcomes showed positive and negative feedback by conducting a questionnaire survey among the undergraduate & postgraduate architecture programs throughout the School of Architecture & Built Environment, UCSI University.

Keywords: Architecture, Virtual Learning, Covid-19, Design Course

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1.0 Introduction

In 2020, as quarantine restrictions were imposed due to the COVID-19 pandemic, we remained at home. We see many pictures on social media of staff working from home, home-school studying, people having meetings via Zoom, Google Meet, Skype calls, and many more. Around 264 million children and teenagers are not in school (UNESCO, 2017), and this pandemic has made the situation much worse. As the COVID-19 pandemic spreads, there has been an increasing move towards teaching online because of shutting down schools, colleges, and universities for an indefinite time as the only option left (Martinez, 2020). Therefore, in the highly challenging need for an unforeseen current situation where informal education is also significantly impacted, now is the time to reconsider, revamp, and seriously revise our education system. However, because of having teacher-taught direct contact, it is a well-established principle that no pedagogical method will replace formal education's peak position. However, after the COVID-19 crisis, online education became a pedagogical change from the conventional system to the new teaching-learning approach from the classroom to Zoom or some other online platform, from face-to-face to virtual and from seminars to webinars.

1.1 Objective of the study

The Architecture Program aims to allow students to see the universal architecture, integrating materials, space, program, technology, climate, culture, and user lifestyle. Architects should, in that sense, be continually changing ways of working and expect to preserve a degree of versatility to respond to changes in society. Can the consequences of COVID-19 affect the way teaching takes place on a long-

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term basis in the future? The sudden transformation has proven to be an enriching experience born not out of desire but out of necessity, although the answers are not definitive so far.

Many people wonder how to build a long-term strategy for such concerns should this be imposed in the future, with the overwhelming complaints about working and studying from home and maintaining a steady routine throughout this period. Although this virtual teaching-learning adaptation is not by choice, and it was quite the challenge, modern technology has encouraged us to explore a new interactive way of teaching a design studio. Both students and educators were expected to interact and discuss more visually than verbally. It also allowed us to quickly draw up references, use online tools, and live to annotate simultaneously on the same drawing.

Figure 1.0 Research graphical abstract

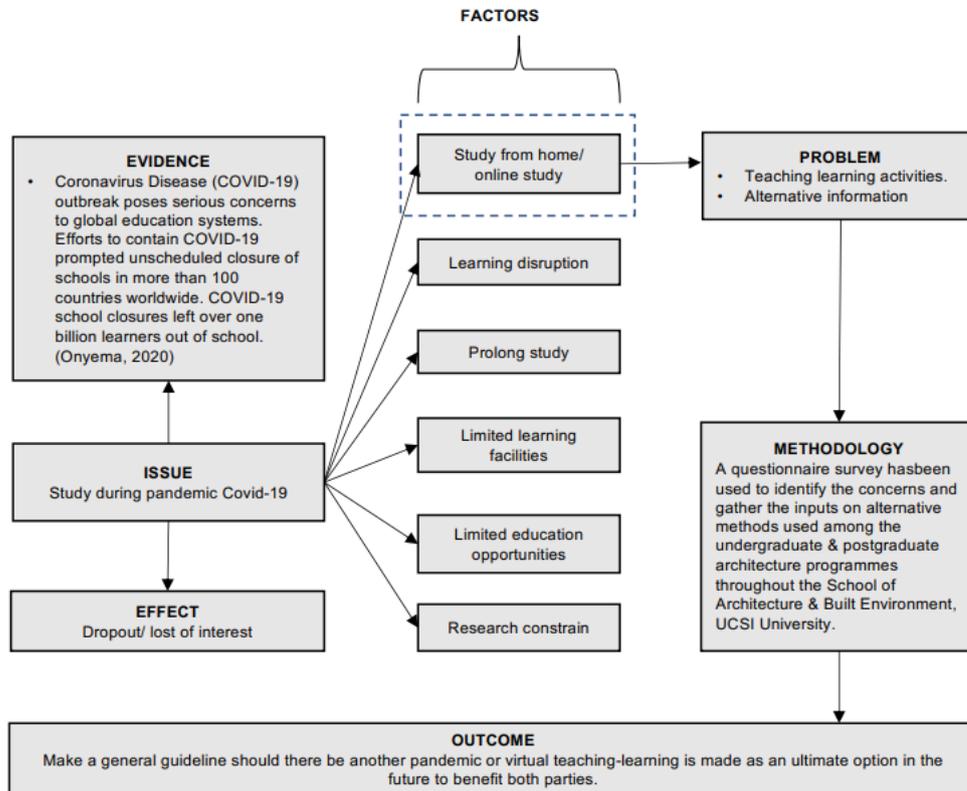


Figure 1.0: Research graphical abstract comprises of seven components (evidence, issue, effect, factors, problems, methodology and outcome) that emphasize on the finding the issue and impact of online learning in Architecture School, UCSI University.

2.0 Literature Review

E-learning and long-distance courses have traditionally been considered part of non-formal education. However, if the conditions continue over time, it seems that the formal education system will eventually be replaced. Two terms used interchangeably are distance education and online learning, also known as e-learning. Online learning or e-learning can, alternatively, be described in many ways. The delivery mechanism, the model, and the communication pattern can be described in terms of its associated technology used to deliver it. Other meanings have illustrated the educational component of e-learning rather than its instruments or media. Educational processes emphasize that communication, technology, and media only mediate learning (Eva & Branislay, 2006). Cidral describes e-learning as "a web-based learning ecosystem with educational and training content and communication resources as a clear concept. There has been a significant rise in architectural activities in recent years, from manual skills to digital applications. Cidral et al. (2018).

This reform allows the curriculum to be updated to reduce the load of traditional manual skills courses favoring courses with extra-digital content. In order to be technologically focused, it often includes enhancing the physical condition of the studio. According to Bender and Vredevoogd, the use of technology in the studio expands more students' involvement in design debates and feedback and helps teachers' direct students and not duplicate knowledge where many students can study the method Bender et al., (2016). The face-to-face in-studio technique is the most appropriate form of teaching architecture because of its real existence. The COVID-19 conditions, however, provide proof of the possibility of teaching architecture in other ways.

2.1 Online Education

With the help of technological resources and networks, online education is a general idea of teaching and learning online. Factors such as strong internet connections, learning tools, technical skills, affordability and access to technology impact online education's success. Platforms for online education are vital resources that facilitate inclusive education and online learning. Online education has its origins

in distance education and the advent of digital technologies that allow lectures, virtual classroom sessions, and other educational materials and activities to be delivered efficiently and effectively through the internet (Onlineeducation.com, 2020). Online education platforms can be maximized to bridge the gaps in education through the high penetration of the internet and mobile technology globally, thus reducing global illiteracy. There is a wide range of tools/platforms for online education, particularly in outbreaks such as the Coronavirus pandemic. (Onyema, 2020).

In the lecture, discussion, and critique session, it is necessary for students, particularly architecture students, to be involved in the virtual class. Engagement should be self-directed, task-oriented, goal-oriented to accomplish this, and between the study master and the student or between the students in groups themselves. Besides, student-centred, two-way conversation, ongoing appraisal and input, peer reflection, involvement with interaction should be successful learning, and this could be accomplished by various teaching methods such as group discussion, pair discussion, group presentation, sharing conference lectures in the conference room among all types of students. It is important to obtain feedback from the online classes' learners and positively and handle the negative points. (Milrad, 1998).

2.2 Learning from Home Challenge

Most students were pushed to study and learn from home by the Covid-19 outbreak. For students, studying from home is now becoming a new normal. However, this is not a new experience because, particularly concerning informal education, the home has long been a learning centre. According to the Education Task (2020), most university students also prefer to study in the comfort of their own homes. The learners tend to have everything at their disposal without having to leave their seats. The physical environment or the "ambience" of the space gives a great effect on the person using the space. Woolner (2010) states that the learning environment does not mean that we always have to think about the complete schools' services. Instead, the relationship between people and the surroundings of the learning area should be focused on. For many educators, learners and parents, the realities of obtaining formal education from home may be very difficult, particularly in developing countries where accessibility, accessibility and use of technology in education are not widespread. In addition to the cost of accessing online education, several other factors can also impede smooth home research, such as network problems, weak power supply, disturbances, poor digital skills, inaccessibility, and availability problems. There is also the issue of learning new technology that may involve learning from home and sounds from neighbors and communities that emanate internally or externally. (Onyema, 2020).

The Architecture School of UCSI University also has been affected by this drastic change in teaching and learning, as architecture education depends heavily on practice-based pedagogy. How do educators in architecture feel about online teaching? How is on-site education different from that? The problem is that online education might not be appropriate for practice-based architectural courses. It can be ideal for offering theory courses or conventional general lectures. However, in architectural education, some courses are best for teaching in-person, such as design studios and workshops. Educators were also worried that online environments would simplify contact between students and educators and communication between learners and educators. Online education makes learning an individualized process, eliminating the likelihood of student collaboration and self-help. This individualized learning process leads to an increase in the directions concerning the students' works and an increase in the sum of their work as they spend more time communicating their works than focusing on the work itself. There are two distinct forms of tutorials: individual online tutorials and meetings with all students. Students will feel more comfortable voicing their grievances in the individual tutorials. Simultaneously, educators strive to keep the class engaging with each other in the meetings because students still need to learn from each other. Students show their work, from being in the studio with physical models to online models, has changed, but the content is the same. Educators here think this approach has been successful. Mishra et al. (2020).

According to Mishra, they agreed that there are some difficulties felt within the implementation of the amendment process within the education system that has been arisen once the COVID-19 crisis; these difficulties relate to the novel views of online education and their technological complexities but in COVID-19 evoked a time, online teaching-learning became a colossal challenge to contend. Stakeholders are not doubtless acceptable change with the sudden academic amendment as they are not technologically competent to embrace the present scenario. Therefore, for successful implementation of the academic amendment (in this case, it refers to the shift from ancient teaching- learning strategies to online teaching-learning methods), the amendment's implications got to be self-addressed. Mishra et al. (2020).

3.0 Methodology

A questionnaire survey was adopted as the main data collection. One hundred forty-nine respondents, made up of educator and students, were given a questionnaires survey. Secondary data used for research are from newspapers, journals and media. The School of Architecture and Built Environment (SABE) has been chosen for this study. There are eight programs at the SABE; however, the survey has been conducted to educators and students from 3 programs named (1) Master of Architecture Technology (2) Bachelor of Science (Hons) in Architecture (3) Diploma in Architectural Studies. The compiled surveys are from the architectural courses range covering the Diploma Program for three semesters in January, May and October. In contrast, Degree and Master Programs have two surveys conducted in January and July. Overall, 15 design courses have been offered per semester.

3.1 Data Collection

"Student – Satisfaction Data" is the names given for the questionnaire survey developed. The method collects comprehensive information on issues and reflections on what students face in learning Design Studio during COVID –19 pandemic. The online surveys are developed

with Google Form and Course Networking (CN) poll, helping reach students. The four components in the questionnaire survey covers: (1) Method used for attendance records (2) Favorite platform (3) Feedback from students (4) Feedback from educators. Figure 2.0 shows the total number of respondents that were participated in answering surveys.

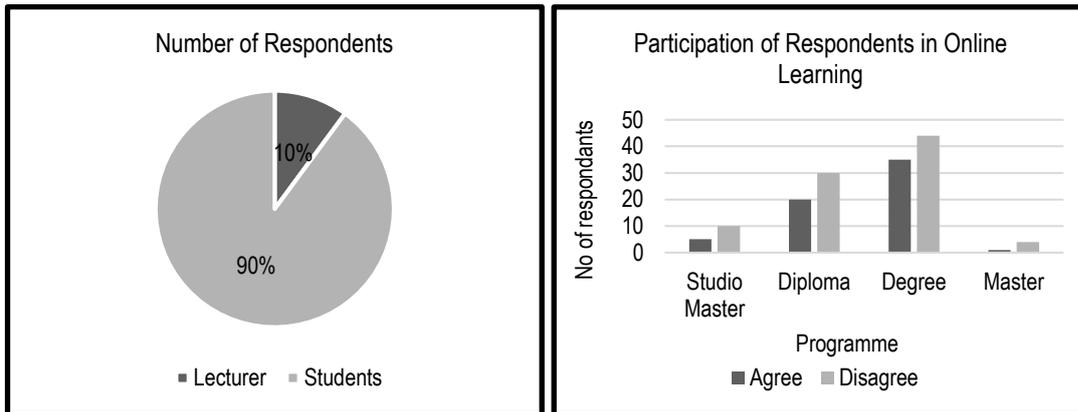


Figure 2.0: The numbers of respondents and participation of students in online learning based on Programme offered in School of Architecture, UCSI University.

4.0 Finding

From the survey, there are five (5) favourites platform is used during Design courses online classes named (1) Zoom, (2) Microsoft Team, (3) Course Networking, (4) Padlet and (5) MIRO. There are six methods to record the attendance of the students named (1) Student posting in forums, chat group & refection threads (2) CN quizzes (3) Zoom screenshot of attendees (4) ED puzzle participation screenshot (5) WhatsApp screenshot (6) Microsoft Teams.

From the student's feedback, (1) all participants are agreed on Design courses as the most difficult courses during the e-learning mode and requested intensive face-to-face interaction/tutorials courses after the Movement Control Order (MCO). (2) Model making is most challenging here as shops are closed, and materials cannot be obtained during the MCO. In most situation, models are likely to be the compulsory submission for Design courses. (3) The internet connection problem.

From the educator feedback, the difficulties are faced by them are (1) The internet connection problem, (2) Delivering technical information online, (3) Hard to monitor weak students, (4) Students more passive. The negative feedback outnumbered positive feedback. This outcome is anticipated as respondent and educator dealt with fully online teaching-learning for the first time in 2020.

5.0 Discussion

These findings provide a clear understanding of both parties' major concern, which are students and educators. It can be seen from the findings that most respondents faced difficulties for Design Studio and demanded extensive face- to-face tutorials be conducted after the Movement Control Order (MCO). Among other concerns raised by the respondents were the inefficient tutorials, irrelevant assignments using physical materials and interruption of internet connections. Figure 3.0 shows the preferred platform and capability of the lecturers in conducting online learning.

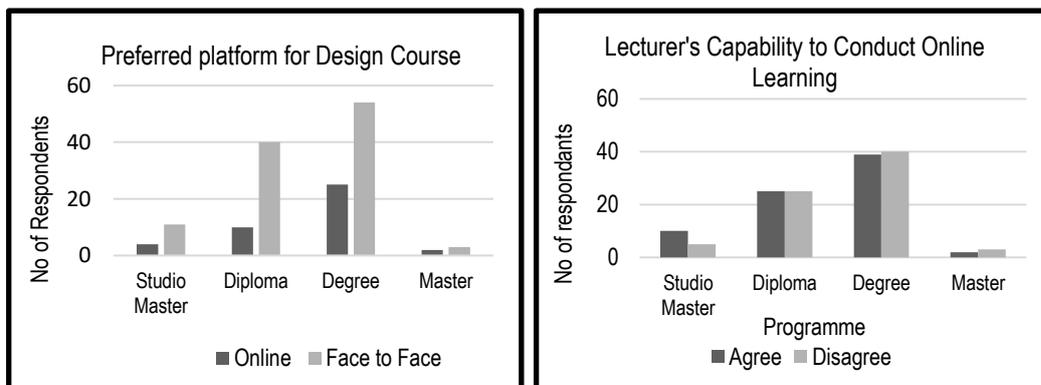


Figure 3.0 : Shows the preferred platform and lecturers capability in conducting online learning based on Programme offered in School of Architecture, UCSI University.

From the educator's perspective, the courses related to technical information are hardly delivered through online classes as a design tutorial requires sketches and verbal discussion on the ideas. Furthermore, it has been noticed that the relationship between students and educators became obtrusive, passive in which the second party found it hard to monitor their students' progression, especially the weak ones. Figure 4.0 indicates the numbers of students who can adopt online assessment and satisfaction with the infrastructure and learning facilities provided in UCSI University.

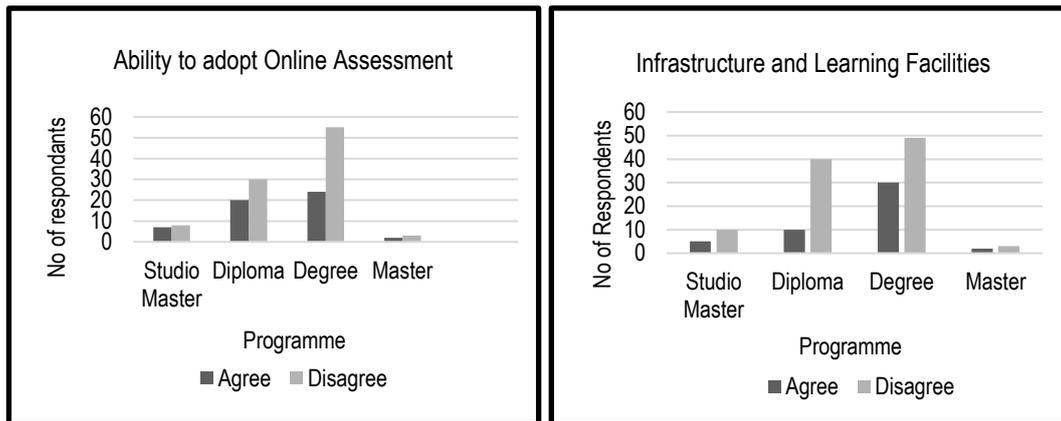


Figure 4.0: The numbers of students who can adopt the online assessment and satisfaction with the infrastructure and learning facilities provided in UCSI University.

In short, this study is beneficial to educators and university management so that both parties are aware of issues and concerns that have been encountered in this paper. For both parties, they may consider the feedbacks provided in this paper to improve the education quality by finding different and effective teaching methods in delivering information for studio courses. Undoubtedly, positive, and negative feedback gained here will help the management know, understand, and improve students' and educators' current online learning disputes.

6.0 Recommendation and Conclusion

These recommendations are based on the findings gained throughout the educators' feedback and students' current situations faced by both parties in the School of Architecture, UCSI University. Several aspects need to be highlighted in enhancing online learning. The following recommendations are summarized in three points, which are,

Point of Connection

In online categories, all students are connected simultaneously, observing identical screen and so, similar project. However, being nearly connected does not invariably translate into reality and being there. An effective tool for increasing the scholars' engagement with the category and the course is to search out connection's points. Usually, because the students work below identical transient, finding similarities or maybe contrasts happen oftentimes. Educators might mean the specifics of these connections and raise students to speak, typically throughout the category.

Two- Ways Communication

It might be typically difficult to create all the scholars' comments; the studio master will draw with them and manipulate the fabric during this new "studio" atmosphere. Having these two ways that comments permit each educator- students to be during much economic management of time and be ready to focus on spoken communication is crucial for the project's event because the alternative stuff is already there waiting.

Self-Discipline

Online education needs discipline. Distraction or procrastination is as so much as a click. Not sharing the area, and as an example, not feeling the pressure of the context, might be a risk issue for the event of a project. However, there are ways of serving to avoid eye diversion by mere parturition out the days. Professional could build a timeline, the maximum amount appealing diagrammatically as additionally specific within the relation between time, content, and production. Students do not seem to be invariably trained in time management and organization, and that they may generally miscalculate a way to be in good condition weekly. Thus, observing a minimum is not solely sensible in creating clear for what it takes to arrive at an honest final review. However, additionally, facilitate students to contemplate the model for organizing their times.

In conclusion, the research's first objective is achieved through the responses gained from 149 respondents from educators and students in survey questionnaires that have been distributed virtually. The comments acquired from both parties are expected to be used in future so that both groups can have successful learning/teaching processes even during the pandemic. From the results, it is also hoped that SABE top management can address the concerns that are raised in this paper by working collaboratively with respective educators to give the best service to students through enhanced online teaching methods. Concerning this, the faculty's top management

can help educators by providing more proper and better-quality facilities to conduct online classes. These amenities include supplying good and reliable internet access or connections, providing more free access to teaching software or applications such as Zoom, Padlet and much more software available. With some training on using those applications, making available spaces to conduct online classes such as specific recording areas and equipping the educators with sufficient, up-to-date, reliable, and useful teaching tools and gadgets for practical teaching purposes. This assistance also includes giving some allowance for internet bills spent by educators in conducting their online classes.

Lastly, another recommendation for the management is that a dependable and upgraded system for students' attendance can be generated. It ensures that educators do not have any strains in tracking students' attendance and participation in online classes. Daily reports with evidence on the students' attendance are needed to be uploaded by the educators in the previous semester. Thus, the existing system or platform provided was considered not useful and good to record students' virtual attendance, and it also requires high commitment from the educators. Overall, if we look thoroughly at the verdicts obtained from survey questionnaires, we can see that both educators and students struggle in online teaching and learning processes. Therefore, to have harmonious online teaching and learning activities in the upcoming semesters, certain things need to be fixed and improved by SABE management. It is for sure, will help to ease the inconveniences faced by SABE educators and students.

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Paper Contribution to Related Field of Study

This paper contributes to Architectural Education Fees.

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