

## Teaching Methodology for Interior Design Studio-I during COVID-19 Pandemic at Tishk International University

Sana Basil Mohammed<sup>1</sup> & Merve Sumeyye Taha<sup>2</sup> & Rand B. Mohammed<sup>3</sup> & Shino Abdullah  
Mamand<sup>4</sup> & DIman Aziz Mohammed<sup>5</sup>

<sup>1,2&5</sup> Interior Design Department, Faculty of Engineering, Tishk International University, Erbil, Iraq

<sup>3</sup> Mechatronics Engineering Department, Faculty of Engineering, Tishk International University, Erbil, Iraq

<sup>4</sup> Architecture Engineering Department, Faculty of Engineering, Tishk International University, Erbil, Iraq

Correspondence: Sana Basil Mohammed, Tishk International University, Erbil, Iraq.

Email: sana.basil@tiu.edu.iq

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**Abstract:** After the Covid-19 has been officially announced by the world health organization (WHO) as a global pandemic, the WHO has put some regulations to manage the pandemic by slowing the virus spread by meeting some health conditions such as quarantine, lockdown, wear a face mask, and social distancing. However, this leads to difficulty continuing education at universities and schools on campus and forcing the educational institute to find alternative ways to end the academic year. Online education was the only available option. At the same period, most universities worldwide start to switch from campus education to online education. The following step for the university after choosing the online education was to find a suitable environment to continue the education, such as selecting the appropriate method to deliver the lectures and the proper platform that meets the students' needs. In Iraq, higher educational institutes have transformed the educational process from face-to-face to online education. For example, in Tishk International University (TIU), online education has applied for the first time in all faculties, which was a big challenge for the academic staff and the students in some departments with practical courses more than theoretical courses. This paper will discuss the online education at the engineering faculty at TIU, in general. It will take the design course given to the first-grade students of the interior design department as a case study. This study will use the descriptive analytical approach by analyzing the case study of distance education for TIU during the spring semester of the academic year 2019-2020.

**Keywords:** Distance Learning, Interior Design, Higher Education, Online Teaching Design. Coronavirus COVID19 and Education, Case Study

### 1. Introduction

Interior design is a multi-faceted profession in which creative and technical solutions are applied within a structure to achieve a built interior environment. The interior designers combine creativity, problem-solving skills, knowledge, and aesthetic vision to develop functional, safe, aesthetically pleasing environments to meet the client's needs (MSU, nd). At Tishk International University, the interior design department is one of the engineering departments with four years of undergraduate study, and the graduates will get B.Sc. in interior design.

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The undergraduate research has eight semesters, and the courses are spreading across these semesters. The classes are divided into two types, the core courses are the practical courses, and the other are theoretical. The core courses are design courses, and each semester has a design course with a different concept. The design course is a more practical one. However, it has a theoretical part, where the instructor will describe the steps for the practical parts, with all the required academic information, by doing some activity such as making a model, drawing using drawing tools or software programs to apply design to the project. Thus, mixing the theoretical with practical is ideal for teaching design courses in the Interior design department. The design studio course is vital to shape students' architectural sensitives and develop their communicative ability and problem-solving skills (El-Latif, 2020).

Design studio courses are similar in all education institutes across the world. This course can be taught either by using the traditional method or online education. For the traditional way generally, the students will attend the design studio course where the academic instructors give critics and instructions by dividing the students into small groups of 12 to 20 students. The design project is usually the main part of the assessment activity of the design studio. At the end of the semester, the students were required to present their design publicly referred to the critics that they received during the semester from their instructors (Bender, 2006). While for online education and learning, which was examined for many years, different measures and assessment criteria were used to ensure the quality of online learning, online instruction, and online course plans (Hodges, 2020).

During the Covid-19 pandemic, education has suddenly changed from on-campus instruction to online education. For all practical and theoretical courses for all grades, which was an enormous challenge at TIU and most educational institutes worldwide, online education has been used for the first time to deliver information to the students as a complete alternative to face-to-face teaching. One of the challenges was choosing the suitable program and technique that could help provide the knowledge to the students closer to the campus education. This paper will study the design course for grade 1 students in the Interior Design department during the spring semester by analyzing the questioner to develop the methods and techniques for distance learning. In addition, this research paper will discuss some of the exciting studies about education during the Covid-19 pandemic and compare it with campus education.

## **2. Literature Review**

Several researchers from different countries have studied the effect of online teaching on Interior design courses during Covid-19. Such as Alshehri (2020) with his team talked about the experience of the medium-sized college in Saudi Arabia with the Covid-19 pandemic by converting the traditional teaching method to online teaching (Alshehri, 2020).

In addition, input was collected through questionnaires from instructors about remote working and learning experiences, particularly in computer science and engineering, management science, interior design, and applied linguistics.

Finally, has been produced some lessons learned from this period on education and the importance of e-participatory learning. Then, many studies from this experience on how to minimize the effects of the crisis are summarized. Also, in another article Hodges (2020) proposed an essential discussion on terminology and, more specifically, a word for this sort of education given in times of crisis: emergency distance learning.

Over the years, educational technology researchers, particularly in the online and distance learning subfield, have carefully defined terms to distinguish the highly variable design solutions developed and implemented: distance learning, distributed learning, blended learning, online learning, and mobile learning. Nonetheless, awareness of the critical distinctions has mainly remained isolated inside the worlds of educational technology and instructional design academics and practitioners. The highlighted part in this research is: Well-planned online learning experiences will differ significantly from courses offered online in response to a crisis or disaster. Educational institutions trying to continue education should understand these differences when evaluating distance education.

However, another study has been done in collaboration between the University of Petra and the University of Golf by Assel Alayash (2020) to study the suitable technological tools in interior design for distance education during the Covid-19 pandemic. In this emergency, the instructive institutions switched to 100% online teaching; most influenced nations constrained the stay-home policy, which causes laborers from numerous segments to proceed with their work from home. Students' case study at both universities has been taken to show how the crisis was handled in terms of syllabus delivery and evaluations and how the second half of the semester was completed, especially for interior design studio program. The study outlines some of the obstacles that come with these transitions. Some of the lessons learned from the crisis, such as instructors attempting to teach online, faced more difficulties and problems than those planning to teach in a traditional classroom. Furthermore, utilizing technology was used to enhance the distance education process, such as partnering with other global firms in an online learning environment, gaining access to various material, and improving contact because learning does not occur in isolation, particularly in practical courses (Assel, 2020).

Another work studied the suitable teaching methodology for interior design during the global covid-19 pandemic, which has done by Lina (2020). This study was done at Zayed University in the United Arab Emirates; the authors have studied the limitations imposed on society due to the Covid-19 pandemic. They were examined different potential solutions for a particular course, and they used VR (virtual reality) as a methodology. The gallery area of the university, which is familiar to students, was designed in a computer environment and had the opportunity to be exhibited online; thus, they tried a new method by overcoming the physical limits brought by COVID-19. This research also encourages to rethink education for pedagogy to discover new possibilities in interior design education.

Another study has been done in Prince Sultan University in Kingdom Saudi Arabia by Samaher (2020) about the effect of distance learning on senior interior design students during the Covid-19 pandemic. The author discussed the difference between the traditional method and the online teaching method to teach design courses. As a result, the author found the shift of practical sessions to an online format offers a unique chance to investigate the benefits of this educational paradigm for students. Many advantages were discovered in the findings of student perceptions and experiences throughout this shift. The results of students' perceptions and experiences throughout this transition indicated several benefits of employing a distance-learning technique for practical courses while also highlighting certain drawbacks. 'Senior interior design students' perceptions about distance learning in the shadow of COVID-19' aimed to improve course quality, which will impact student performance as a result (Samaher, 2020).

### 3. Case Study

A case study was created based on a questionnaire sent to the students, observing students' experience with online learning. This case study presents facts about the number of first-year students in the

interior design department and the design course. Second, we offer the situation before and after the onset of the crisis in terms of the scope of the curriculum and the percentage of grades assessed. Third, we present how the academic staff handled education during the crisis. Fourth, we offer our ideas on a sample lesson drawn from this crisis that may have to change the roadmap for the future of online teaching.

This study is divided into two parts; the first part will study the instructor experience of teaching during the Covid-19 pandemic, explaining the challenges that the instructors face during that time. At the same time, the second part is analyzing the results from the questionnaire that gave to the students to get the students' opinions about their experience during online education.

In the interior design department at TIU, the spring semester started after the students finished the final examination for the fall semester, which was at the end of February 2020. In that time, the spread of covid-19 has increased, and some of the countries, like Iraq, especially Kurdistan Region, started to put some traveling restrictions and stop on-campus education for all universities and schools, in that time the Grade 1 students were supposed to start the spring semester of their first year.

The spring semester, as mentioned earlier, includes both practical and theoretical courses. The design course is the essential course; however, during the fall semester, the grade 1 students started with some core courses related to design, as the introduction of interior design, they studied the design's elements and the principles of design, which helped to provide the basement for the design course that was supposed to be started in the spring semester, which means the students did not have this much experience with engineering drawings.

The next step after they stooped the campus education was the lockdown, which was started and continued for several weeks. At that time, TIU has decided to start online education to continue the semester and finish the academic year; the timeline for the spring semester is shown in Fig. (1). During that time, all the stores, especially the electronics and the stationaries were closed, which was the main reason for the staff and the students to face difficulty to provide the required equipment to continue the semester, as well as not all students, have laptops and access to fast internet, in addition, to provide the suitable environment. They faced difficulties in delivering the professional equipment from the staff side to deliver the lecture, so they used the essential equipment available with them.

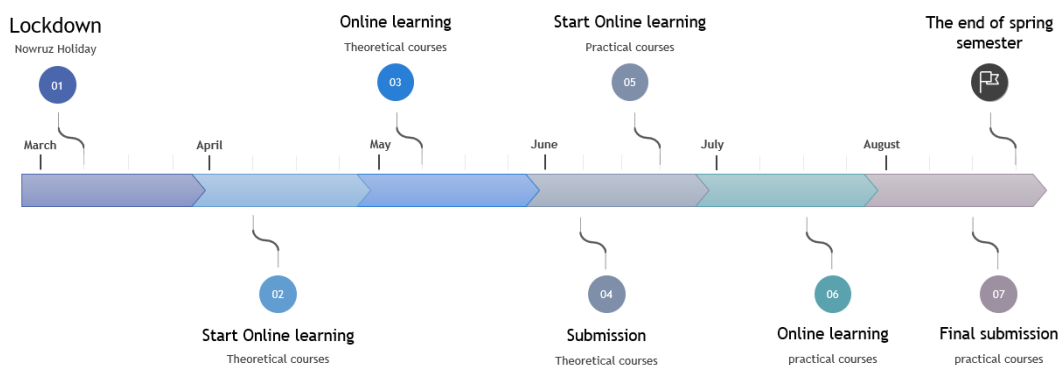


Figure 1: The timeline of the spring semester in TIU

During the first period of the pandemic, the TIU administrators and staff worked hard to find a suitable method to continue the semester to cover at least 75% of the syllabus, they started with arranging training courses for their lecturers about the methodology of online learning. The suitable platform that is going to be used, then the next step was to train the students to use these online platforms. The online platform was divided into two parts; the first one was a program that used to deliver the live lecture which was zoom, the other part was the program that used to upload the pre-recorded videos as well as submit the assignments and homework in addition to the online exam, Mercury and Edmodo were used, in addition to the official university website to upload the lecture notes, and SIS system to enter the marks with the student's attendance. Within few weeks, all lectures and students were ready to continue the semester. The weekly schedule was redesigned according to the time of the live sessions.

For the design studio course, the number of students was significant, so we divided the students into three groups, each group was under the responsibility of one of the course instructors, the critics, and the feedback was given to each student individually, each student require between 20-30 minutes to get the critic. The evaluation was given to each student by the all-course instructors to meet online using the zoom platform. And the plan was to give two lectures per week. The assessment for the design course during the online learning was different from the assessment for the fall semester, such as the class-works have been canceled because there were no live practicals. While 10% has been given to the participation of the students in the live session in addition to the homework, and 20% for group work, while 10% allocated for the first submission of the project (prelim), then 20% for the pre-final submission, and 40% for the final submission of the project. The design course has passed through three phases, as shown in Fig. 2.

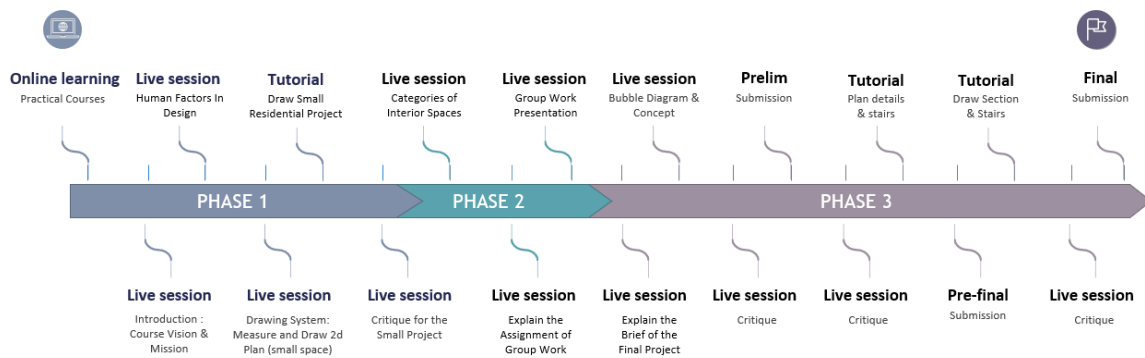


Figure 2: Diagram showing the three-phase of the design studio course and timeline of the phases

Phase 1:

For the first phase of the online education, the first lecture was about the introduction to the course, with the syllabus, course parts, and the assessment methods, as well as give an introduction of the meaning of the interior design in a way by focusing on the primary information including the basic standard to design a space that serves/meet the human needs. Following this introductory lecture, the students were provided with a recorded lecture about how to measure the small space, then how to draw the space on a paper using different scales, to help understand the human scale. Then a homework was required to be submitted by each student about drawing a small space from their home by applying all those skills learned during the previous session. After that, we gave another homework to improve their skills in drawing, which is a small apartment as shown as in Fig. 3

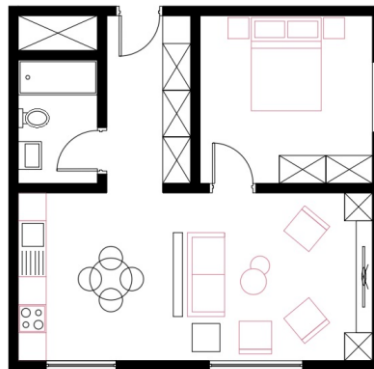


Figure 3: Floor plan of the small apartment

Phase 2:

The second phase of the online learning was very short, and it includes around three lectures. The following lectures were the beginning of study categories of interior design spaces, after the students were divided into several groups, each group includes 5 to 6 students; each group was given a task to check the design's books that specialized in design's standards with a deep study with details, to study the space measurements and functions in addition to analyze the purpose of these spaces as well as the furniture's dimension. Each group is requested to present their findings online for 15 minutes. After that, they will answer the questions and get critiques from the lectures. The evaluation was divided by three criteria: presentation, requirements of the submission, and analysis.

Phase 3:

During the third phase of online education, the lectures were about understanding the spaces and how they can be placed in any design based on the purpose, which was the second part of the semester. The last part of the semester, which was the most important part, about the main project, which included the entire interior design of the Architectural office, which had a view on the main road. Some required spaces must be included in the project design, as shown in table 1. The first step was applying the BUBBLE DIAGRAM; after that, try to sketch the idea that needs to be combined with the function.

Table 1: Design's project requirements

| No. | Name of the Space       | Area's range (m <sup>2</sup> ) |
|-----|-------------------------|--------------------------------|
| 1   | Reception               | 30 – 40                        |
| 2   | Exhibition Area         | 60 - 80                        |
| 3   | Meeting Room            | 20 - 30                        |
| 4   | Architect's Office Room | 50 - 80                        |
| 5   | Manager Room            | 30 - 40                        |
| 6   | Serving Kitchen         | 20                             |
| 7   | Restrooms               | 10 - 20                        |

Developing the idea of the project has progressed until the first submission, where each student received critic with a sketch to establish the project. During this time, some videos have also been recorded to teach the students how to draw different styles of stares. The critics' process has been continued until the prefinal stage, where the results for most of the students were satisfactory, but it required some developments. According to that, more videos have been recorded to show the steps of drawing the sections, stairs, and the other parts of the area, and this was a challenge for the students to understand the stairs and connected them with reality.

The main requirements for the final submission were the plan of the first floor and the ground in addition to sections until they managed to illustrate and render their design using special techniques, which was given in a separate course.

#### 4. Analysis of the Questionnaire

To analyze online learning, we did a questionnaire with Grade1 students, with a list of questions related to their experience and the difficulties the students face during online education. Thirty-eight students participate in this questionnaire which is around 69% of the total number of Grade 1 students. The age ranges of the participants, as shown in Fig. 4, were divided into two categories; 89% of respondents were 18-22 years old, and 11% were 23-29 years old, 71.1% of the participants were females, and the rest were males, as shown in Fig. 5.

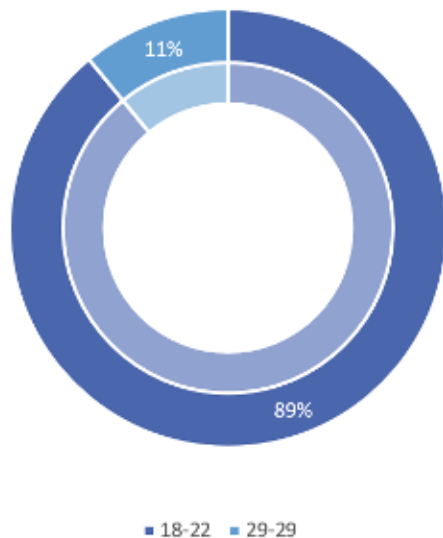


Figure 4: Age group

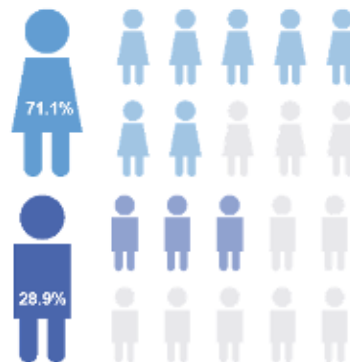


Figure 5: Gender type

The students have many challenges with online learning; according to the questionnaire, the main challenges for 68.4% of the participants were the internet issue; however, around 39.5% of the participants stated that communication issue with their instructors was the main issue, while the laptop issue was the main challenge for 26.3% of the participants. The lecture's engagement issue and the feedback were the main challenges for 23.7% and 13.2% of the participants, respectively, as shown in Fig. 6.

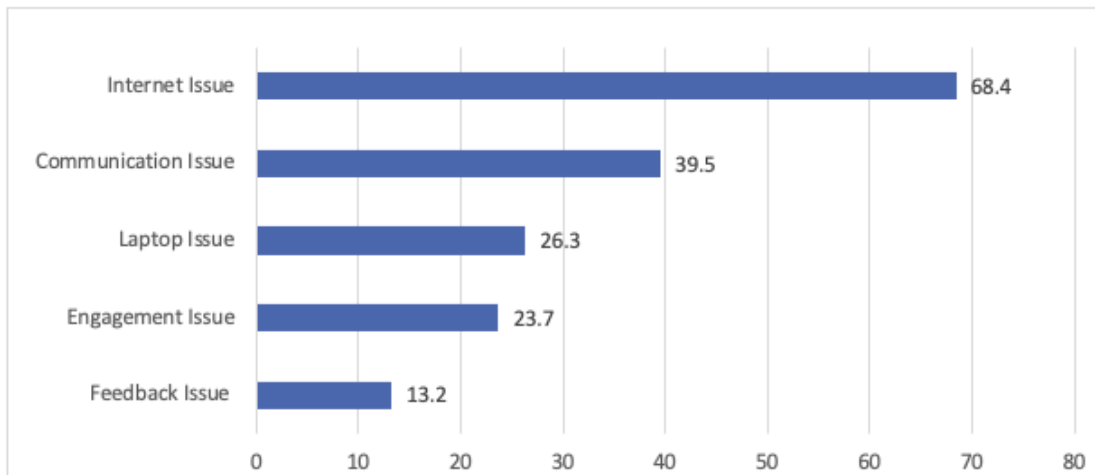


Figure 6: The main challenges for the students during online learning

During online education, several methods have been used by TIU to deliver the lectures and to communicate with the students, such as zoom, google meet, Edmodo, mercury system, and SIS system. One or more of these methods was based on the lecturer's knowledge and the course needs. To deliver the live lectures and get the feedback, 97.4% of the participants were used Zoom, and no one used google meet, as shown in Fig.7. However, according to the questionnaire, 76.3% of the participants in the questionnaire used Edmodo to communicate with the instructors and get the recorded lectures. In comparison, 55.3% used Mercury, and 42.1% used the SIS system.

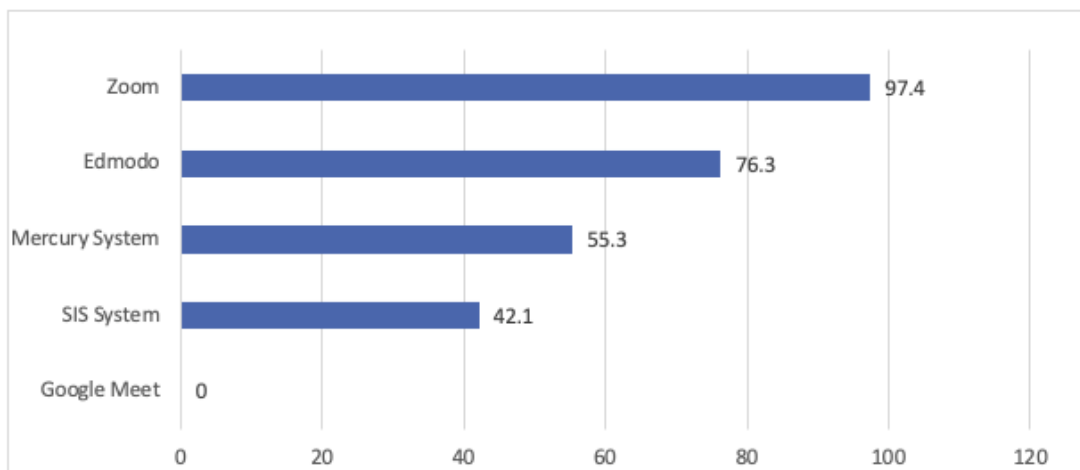


Figure 7: The using platforms during the distance learning for design studio course in TIU

One of the crucial factors to evaluate the online education was the student's understanding of the design studio course; as shown in Fig.8, 32% of the responded students to the questionnaire have excellent knowledge for the course, while 26% of the students have average expertise for the course. Other 26% of the students have insufficient knowledge of the course, with around 11% of the students have very poor understanding, and 5% of the students have a very good knowledge of the course.



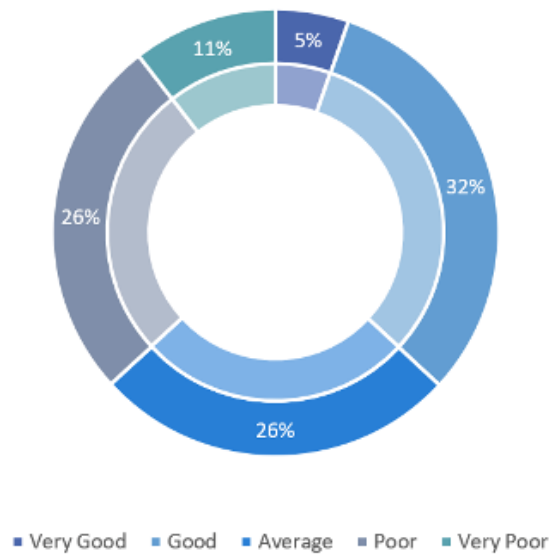


Figure 8: The percentage of the students' understanding of design studio courses during online learning

The other vital factor in evaluating online education is the students' interaction during the online session; as shown in Fig. 9, the total average of the very good, good, and average interactive was 71%; however, the lowest average for the poor and very poor interaction about 29%.

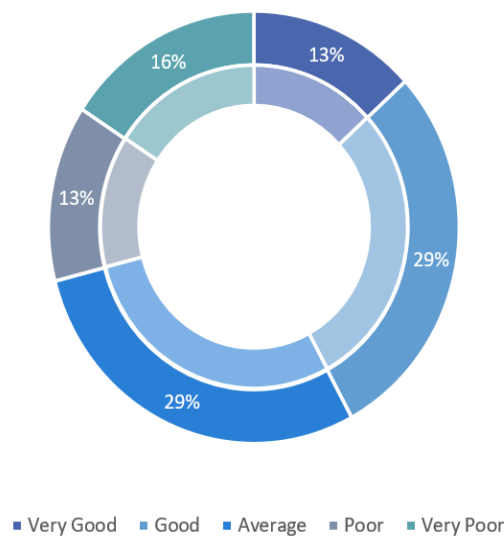


Figure 9: the percentage of the students' interaction in design studio courses during online sessions

For the methods were used during the online learning, more than half of the participants said the live session was more effective to get the knowledge, while 40% said the offline video, as shown in Fig. 10.

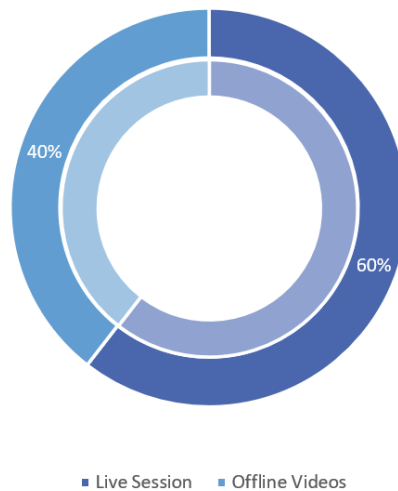


Figure 10: The suitable method, in students' opinion, to get the information during the online learning

The last question in the questionnaire was about the student's opinion if the online learning environment facilitates and supports delivering the design studio course effectively. The results show that around 68% of the participants did not feel the online learning was suitable for keeping the course effective. In comparison, 32% of the participants thought the online environment support the design studio course, as shown in Fig. 11.

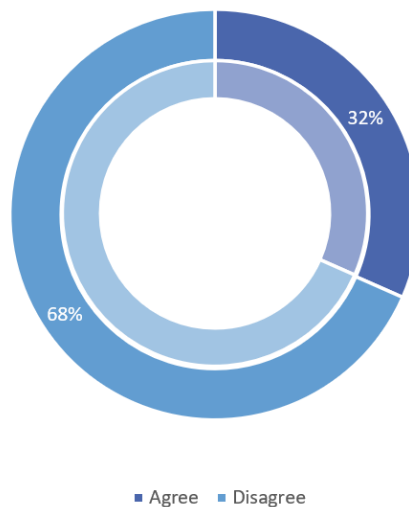


Figure 11: The online learning environment facilitates and supports delivering design studio courses effectively

## 5. Discussion

Covid-19 had a significant effect on most of the sides of our daily life, such as health, economics, education, and many more. In this research paper, we focused on the teaching during the Covid-19 pandemic, specifically at the interior design department at TIU. This study was focused on the students' opinions and the instructors; by giving a questionnaire to the students, based on the questionnaire results, the online study has advantages and disadvantages.

The main advantage for online learning during the pandemic was secure the health of the students the staff by minimizing the direct contact between them; online education also was an easy method to use, based on technology and different applications such as Zoom, Edmodo, etc. which can help to be used in future as an alternative method for campus education. The other advantage of online education was the flexibility it gives to the students and the instructors. Also, the students can get the information equally because the students can repeat the videos until they reached the data where this was not applied in campus education. Another advantage for online education is that it could be considered an economical learning method compared to the traditional way.

However, there are several disadvantages for online education; the first challenge was the difficulties that the staff faced to prepare the materials in a professional way, such as providing a suitable environment, the second challenge was the availability of electronics devices and the internet, which can be considered as a communication issue. However, the third challenge was the availability of personal computers with the students, which help them to participate in the lecture online. At the same time, the fourth challenge was involving the students in the online class and getting the critic and feedback about their design. The fifth challenge was providing the required material to build the physical module, which leads to canceling this requirement from the final submission requirements. The last challenge was the workload that was put on the students according to the submissions they have instead of exams, which makes the students not have enough time to focus on the design course.

This study shows the variety in the understanding level among the students for the design course, while most of them were at a satisfactory and acceptable level. The participation of the students in the online learning was satisfied, and the students, in general, were preferred the live session more than the recorded videos because they can ask questions and get the answers directly.

Working on developing the course contents in a way to match the online learning in a brief period showed the ability of the lecturers and the students to adjust themselves for any unpredictable situation. Also, it showed the power of developing the way to give interior design courses in a whole new way. This could lead to creating the traditional teaching method and the course contents to support the new form of teaching, called Hybrid Education.

## 6. Conclusion

The onset of the COVID-19 pandemic accelerated the use of online learning by different educational facilities. This is because face-to-face interaction was frowned upon; hence, the necessity of being the mother of all inventions led educational systems to think outside the box and ensure learning progressed. The problem with distance education is brought about when assessing its effectiveness. Does this mean that our students and teachers getting the best education experience using this method? Especially for practical courses. Findings taken from the Grade 1 class at TIU prove that students and teachers were not adjusting well to online courses when it came to practical classes as compared to theoretical ones. This is because practical courses require a hands-on approach to be fully effective. The role of face-to-face interaction cannot be downplayed because one does not need fast internet to get or give feedback, statements are not lost in translation, engagement, and overall communication is more active and livelier. Knowing the issues that largely play a part in efficient online learning, many questions arise as follows:

1. How can online learning be made more efficient for students and teachers?
2. What tools can be used to improve communication in distance education?

3. How can distance education be made fair for all students? (Those with poor internet connection and laptop problems)
4. Can distance learning be made a permanent replacement to face-to-face education?
5. How can practical courses be more efficient in distance learning?
6. In what ways does distance learning affect communication skills?
7. How can communication and interaction be improved in distance learning?
8. What protocol for education do schools have to ensure their progress despite emergencies?

All these questions prove that there is still much work to enrich the online learning experience for both teachers and students.

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