

Conceptual Framework of Open and Distance Learning (ODL) for Studio-Based Architectural Design Courses

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Abstract: In March 2020, distance education was enforced as a proactive procedure to diminish the spread of the coronavirus. As a result, instructors of advanced and basic design courses were obligated to teach remotely. The emerging virtual studio culture and the unplanned experience need assessment and evaluation, as they may mark a shifting momentum to develop architecture education in unprecedented ways. A large body of research on online education has paid immense attention to the definition of distance and online learning, their types, and their efficiency. The aim of the research is to propose a conceptual framework of open and distance learning (ODL) for studio-based architectural design courses. This research explores various aspects that contribute to the success factors of ODL for studio-based architectural design courses which then forms the fundamentals to develop the conceptual framework of ODL for studio-based architectural design courses to improve the quality of teaching and learning process. This research is significant in enhancing the effectiveness of ODL and the teaching and learning of studio-based architectural design courses. This research will use a content analysis method approach from literature review study to identify the important aspects and success factors for studio-based architectural design courses. The research will contribute in developing a model to enhance teaching and learning experience through the ODL approach in the studio-based architectural design courses where high focus interactivity between teachers and learners is inherently unique. Overarchingly, this research provides insights on ODL as a future direction in teaching architecture.

Keywords: Conceptual Framework, Open and Distance Learning, Studio-Based Architectural Design Courses.

INTRODUCTION

By the end of the year 2019, the COVID-19 pandemic attacked the world and significantly impacted all aspects of life such as economic, social and environment, education notwithstanding. Many higher education institutions worldwide switched to open and distance learning (ODL) and put on-campus, or face to face classes, on hold. Despite the presence of distance and online classes before the pandemic, their utilization was marginal compared to the dominant on-campus classes. However, open and distance learning became an ubiquitous approach to address the challenges of the pandemic situation. ODL advantages are mainly related to openness, flexibility, volume, and accessibility.

However, there is a lack of research that address distance education in teaching studio-based architectural design courses. These courses embrace the culture of the architectural design studio which traditionally embeds the inherent unique requirements related to high focus interactivity between the instructors and students, as well as among the respective peers. For its practical nature, the in-studio approach is the most dominant acceptable way of teaching architecture. However, the COVID-19 circumstances have provided evidence of the possibility of teaching architecture in other ways.

PROBLEM STATEMENT

Most of the participants of the architectural design studio (students and instructors) have a broad understanding of the culture of the architectural design studio (Khodeir and Nessim, 2020). Therefore, the perceptions and descriptions that are influenced by the interactions that occur among these participants, the assignments, and the environment have been taken for granted rather than studied. Study is warranted because participants' perceptions have had a strong impact on the discussion surrounding the architectural design studio, and knowledge of students' learning experiences

in that setting is important since these experiences contribute to architectural student learning. Without understanding their experiences, it may be difficult to facilitate positive change in the architectural design studio environment (Ozorhon and Lekesiz, 2021). The COVID-19 pandemic which necessitates online teaching and learning further emphasises the need to understand how these kind of courses can be conducted using the ODL approach to enhance the teaching and learning experience in the studio.

Despite the growing importance of digital applications in studio-based architectural courses (de Araujo Lima, 2018), teaching architecture in an online format is rare due to the nature of the field. Most core courses in studio-based of architecture programs need high interactivity between the instructors and, students' in-presence interaction between the student and the instructor seem naturally suited to this requirement. The extent to which the ODL approach can model the reality of actual physical studio face to face approach to facilitate high interactivity between participants in the studio has not been much researched (Ibrahim et.al, 2021). The appropriate approaches need to be identified to make sure the studio-based architectural design courses do not lag behind on the currently open and distance learning process. Teaching architecture in an online format is rare due to the nature of the field.

Most core courses in architecture programs need in-presence interaction between the student and the instructor. What issues have distance education replacing face-to-face education raised, in terms of the architectural design studio? The major change in the transition to online education is the physical removal of the studio environment and participants (Yorgancioğlu, 2020). While the physical studio environment is a shared place equipped with social interactions, each student/participant in remote education is available in their personal space (Yorgancioğlu, 2020). The model is crucial in the light of technical difficulties, lack of training, and the psychological circumstances resulted from the uncertain situation in the ODL teaching process (Ibrahim, 2021).

This research will explore the context of teaching studio-based architectural courses focusing on the unique requirements of high focus and interactivity between instructors and learners and peers. Investigations will then be geared towards investigating how the various aspects of teaching studio-based architectural design courses and their parameters can be modelled

into a best practice ODL format taking into consideration, all the unique interactivity requirements of a traditional studio context. The model will then be validated by investigating the inter-relationship among the parameters and their respective variables with actual performance of students in their classworks including the relevant design projects.

LITERATURE REVIEW

The context of teaching studio-based architectural design courses focuses on the unique requirements of high focus and interactivity between instructors and learners and peers. Studio-based architectural design courses form the backbone of architectural education, where students synthesize and use the technical and theoretical knowledge gained in other courses. On the other hand, the traditional design studio is a physical space and has a pedagogical system. This system includes an education model based on learning by doing, in which students take part as reflective practitioners (Ozorhon and Lekesiz, 2021). In terms of recognizing a problem, exploring for an architectural purpose, handling contextual influences, and negotiating programmatic demands, the architectural design studio is the first environment where students are faced with problems of immense complexity (Caglar & Uludag, 2006). The nature of contemporary studio-based architectural design courses is based on students' experience on a given design problem. Because of this nature of the studio, the design-related skills and fundamental inclinations that are acquired in these studios influence the future designing actions of the students (Kararmaz & Civavoğlu, 2017). Design studios are active spaces where students take social and intellectual actions such as drawing, communication and modelling (Saghafi et.al, 2012). Also, design education is a very interactive process (Fleischmann, 2020). Studios are social learning areas where students interact between themselves and with the instructors. The architectural design studio's learning environment is a culture where instructors and students share their experiences (Yurtsever & Polatoğlu, 2020).

Due to its essentiality in preparing qualified architects, the learning and teaching strategies of design are found to be of substantial interest among researchers. For example, Soliman (2017) suggests three strategies for teaching design: group discussion, interdisciplinary teamwork and realistic design problem (Soliman, 2017). McLaughlan et al. (2020) propose

five strategies for optimizing student learning within architecture studio (McLaughlan, 2020). In her study of promoting learning urban design through photography, Elshater (2018) proposed six points that can be applied in teaching design: bottom-up teaching strategy, an active participation role of the students, exceeding the theoretical knowledge and emphasizing the psychomotor learning, reflections and implications through a thorough understanding and analyzing, bridging the gaps to an open end, and finally, the integration of various skills and disciplines (Elshater, 2018). According to the views of the various authors in architectural design courses, good strategies are needed in delivering knowledge to the students. Equally needed are the developing of good strategies and approaches to fulfill the requirements of ODL as well.

ODL is structured learning through synchronous or asynchronous communication. The basis of this learning format as a successful means is largely hinged on effective dialogue and communication between student and instructor and students' peer to peer interaction. ODL occurs for all who desire to learn regardless of time, space and location. Many in the field believe that it takes more self direction, motivation and dedication to be successful in distance or online education. "One common characteristic of the distance learner is an increased commitment to learning. For the most part, these learners are self-starters and appear to be highly motivated" (Simonson et.al, 2009).

ODL, sometimes known as e-learning, are two terms used interchangeably. However, ODL is more comprehensive and broader in scope, as it contains two components that are not representative of online learning: correspondence courses and satellite campuses (Sharma, 2004). On the other hand, online learning or e-learning can be defined in several ways. It can be defined in terms of its associated technology used to deliver it, delivery system, and the communication form and pattern (Sangrà et. al, 2012). Other definitions highlight the educational aspect of e-learning, rather than its tools or media. For example, Jereb and Šmitek (Jereb and Šmitek, 2006) emphasize that educational processes which highlight communication, technology, and mediums only mediate learning. As a comprehensive definition, Cidral, Oliveira (Cidral et. al, 2018) defines e-learning as "a web-based learning ecosystem" with content and communication tools for education and training.

Online learning can happen through the Internet, either asynchronously or synchronously (Mukhopadhyay, 2020). In both types, delivering the content of a course online will enable the students to join and follow the course regardless of geographic restrictions. However, in contrast to the asynchronous type, the synchronous type engages students in real-time face-to-face online meetings (Mukhopadhyay, 2020). Referring to Fig.1, other types of online learning include blended or hybrid, blended asynchronous or synchronous, and multi-modal. Blended or hybrid has a combination of in-class and asynchronously online delivery with a substantial portion of the course being delivered online. Blended synchronous is a combination of face-to-face and synchronously online classes. Finally, multi-modal combines synchronous and asynchronous online learning in one course. Massive Open Online Courses (MOOCs) is another type of online learning that is open for students regardless of their geographic and cultural background.

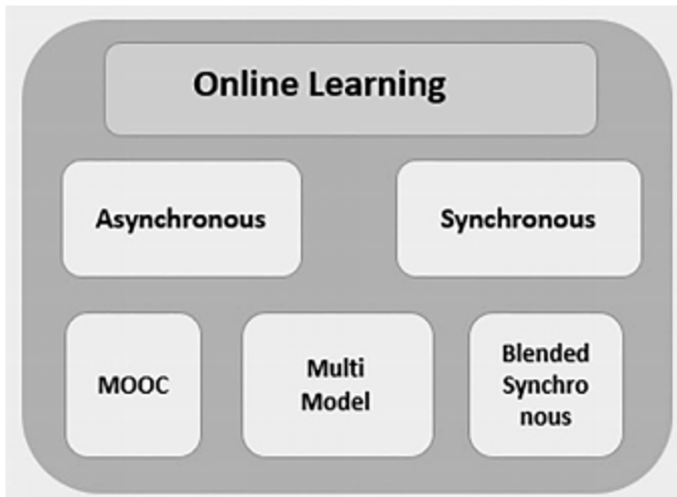


Fig. 1 Online Learning Delivery Method (Ibrahim, 2021)

RESEARCH METHODOLOGY

This research has used a qualitative approach by identifying the concepts used in the context of open and distance learning (ODL) especially for studio-based architectural design courses. The researcher had also conducted the preliminary research on open and distance learning for studio-based

architectural design through the literature review study, in order to get the information regarding the teaching and learning approaches of open and distance learning. A content analysis was also conducted to see the main concepts that need to be given attention, to ensure the quality of knowledge delivery can be improved, subsequently giving a positive effect even if the learning is not done physically and face to face.

CONCEPTUAL FRAMEWORK OF OPEN AND DISTANCE LEARNING (ODL)

The recent years have witnessed a big leap in architecture practices from manual skills towards digital applications (de Araujo Lima, 2018). This shift necessitates updating the curriculum to reduce the load of traditional manual skills courses in favor of extra digital-content courses. It also mandates improving the physical environment of the studio to be technologically oriented.

According to Bender and Vredevoogd (2006), using technology in the studio expands more students to participate in the design discussions and critique and allows teachers to guide students and not repeat information where many students can learn the system. The appropriate approaches need to be identified to make sure the studio-based architectural design courses do not lag behind in the currently open and distance learning process. Teaching architecture in an online format is rare due to the nature of the field. Most of the core courses in architecture programs need in-presence interaction between the student and the instructor. This research explored the various aspects of teaching architecture in distance-learning format due to the COVID-19 pandemic situation (Ibrahim et.al, 2021).

In this context, distance synchronous education programs have been implemented during the country's COVID-19 pandemic. In addition, a comprehensive teaching approach should be carried out so that students get the same benefits as face -to -face learning. This aims to create dynamism by editing a combination of different components in the studio process. Different exercises and methods have been introduced to support students' intellectual skills, especially in the first module of the two main modules. These methods can be listed as research, reading, writing, concept mapping, seminars, and workshops (Ozorhon and Lekesiz, 2021).

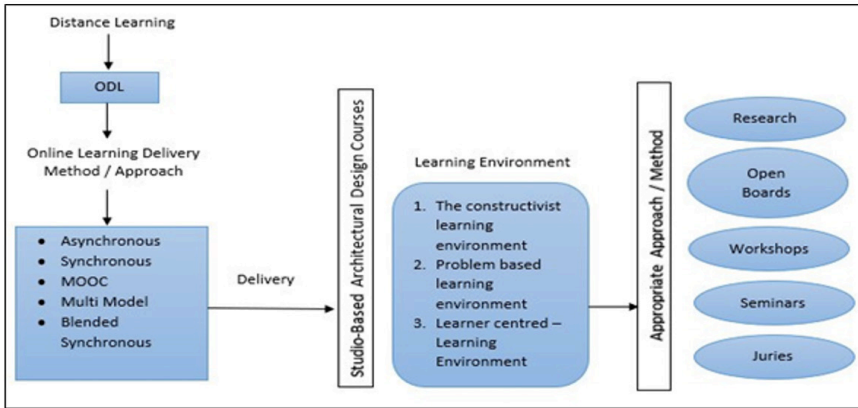


Fig. 2 Conceptual Framework of ODL Approach for (ODL) for Studio-Based Architectural Design Courses

Based on the above Fig. 2, this research have identified and explored the conceptual framework on this context of ODL for studio-based architectural design courses and need to comprehensively focus on the learning environment to make sure the appropriate method used can meet the requirements of both instructor and students.

CONCLUSION

This research have identified and explored the conceptual framework on this context of ODL for studio-based architectural design courses and need to comprehensively focus on the learning environment to make sure the appropriate method used can meet the requirements of both instructor and students. The research will contribute in developing a model to enhance teaching and learning experience through the ODL approach in the studio-based architectural design courses where high focus interactivity between teachers and learners is inherently unique. Overarchingly, this research provides insights on open and distance learning as a future direction in teaching architecture. This study can also help to identify the important components that need to be given attention, in order to ensure the smooth delivery of learning by ODL, especially for studio-based architectural design courses, thus contributing to the quality of national education in Malaysia as a whole.

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