

A Review of Blended Learning in Architectural Education Towards Attaining Quality Assurance

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Abstract

Architectural education has a very unique method of pedagogy, case studies, teaching and learning methods with the design jury and formalized assessment frameworks in the era of ever changing dynamics. Traditionally, blended learning means a combination of live, in-person classes with delayed “anytime, anywhere” online activities, as a blend of offline synchronous and online asynchronous activities. To assure the quality of academic architectural programs, it is necessary that Universities and Polytechnics maintain a critical attitude towards standardized policy in terms of Quality Assurance. The disquisition is based on educational arguments pointed out by literatures. Furthermore, the authors concluded by the qualitative analysis of various characters of Architecture, Classroom/Studio and Flexibility versus offline, online and blended learning systems in a selected University and Polytechnic in Bauchi state.

Keywords: Classes, Design, Educational, Flexibility and System.

Introduction

According to Rio, Samsu and Rudy (2021) blended learning system is a group of contemporary learning methods that began in the early 2000s. However, its existence turns out to be essential during the pandemics. When a conventional learning system offers only 1 learning method: conventional face-to-face meeting, a blended learning system gives varied and technology friendly methods: offline synchronous, and online asynchronous among learning spaces both in conventional and blended learning methods through a participatory approach. The availability of information & communication technologies (ICT) has great potential for a surge in E-learning techniques. However, traditional one-on-one tutoring, especially in the field of architecture, represents some sort of an impediment of applying E-learning approaches in the architectural design arena. This piece of research explores experimentally the possibility of integrating some ICT techniques –especially cloud technologies- in an architectural design studio context. It starts by providing a theoretical framework that addresses the theoretical concepts of E-learning, its different mechanisms and techniques, concepts of cloud technology and its applications. (Mohammed and Mahmoud, 2017). There are advantages and disadvantages to blended learning programs. Advantages in terms of incorporating the strengths of synchronous and

asynchronous learning are greater flexibility of time, meeting different needs, and learning styles, (Ho et al., 2006, and Vaughan, 2007). Earlier technologies, extended new modes of collaboration and sharing of information, social media and other ICT tools (Madrazo et al., 2016) in design practices. The disadvantages are potential struggles with technology, lack of motivation, insufficient time management skills and the expectation of less work (Vaughan, 2007). Fear of losing control in an online environment or lecturing identity may be disadvantages for course teachers. There are three factors affecting the success of blended learning courses: course design, communication (student-student interaction both in physical and virtual environment), and motivation (teacher encouragement and course organization) (King and Cerrone-Arnold, 2012). Both blended and problem-based learning architectural design studios can address design problems.

Objectives

1. Identify blended learning and quality assurance in architectural education.
2. Determine the missing blended learning and quality assurance in architectural education.
3. Provide adequate and appropriate feedback of blended learning and quality assurance in architectural education of a selected University and Polytechnic in Bauchi state.

Statement of the Problem

The traditional one-on-one tutoring, especially in the field of architecture, represents some sort of an impediment of applying E-learning approaches in the architectural design arena. Current possibility of integrating some ICT techniques –especially blended learning technologies- in an architectural design studio toward its compliance with the principles of sustainability in global and local context should be implemented at various Universities and Polytechnics of Architecture.

Literature Review

The COVID-19 pandemic has posed an exceptional challenge to all levels of education and, in particular, architectural academic education. Many forms of academic activity were relatively easy to convert to on-line classes. This applied to lectures and academic seminars. However, a particular challenge is to provide on-line, academic activity that requires personal interaction, such as laboratories and design assignments with various strengths and weaknesses (Marcin, 2020). Nicolai and Jacob (2015) narrated that the current practices after the global Covid-19 Pandemic experiences of mixing traditional, physical, location-specific and face-to-face modes of learning with online formats-altogether known as blended learning involves interaction with both people-peers and instructors-in physical and online manner. Architectural programs do not exclusively lead to the architectural profession. After graduation, Masters in architecture are engaged in a myriad of branches, varying from contracting firms, over real estate and consultancy, to local authorities,

policy making. Yet, the goals and content of architectural education have to comply with several regulations concerning the profession of the architect. Also, several professional boards and organizations of architects have explicit expectations towards architectural education. In architectural education, design is generally considered as the backbone of the program, the design studio being its central locus. The design studio has historically grown as a very specific educational model. It aims to the development of both professional and academic competencies (Sigrid, Johan and Dra. 2015). Also, Quality assurance is being mistaken as quality control. Both quality assurance and quality control are aspects of quality management. They are closely interrelated but defined differently. To tackle the issue of 'Quality Assurance in Architectural Education', the first thing is to focus on importance of 'Design' education as a main embodiment for overall achievement. It requires a setting of 'Design Studio' and there are numerous points & reasons why it should be done appropriate and adequately based on acceptable standards of global best practices (Junsuk, 2018). All the concepts x-rayed in this study are interrelated together and mapped up to build the conceptual framework in architectural education, developed by the authors as shown in Figure 1 below:

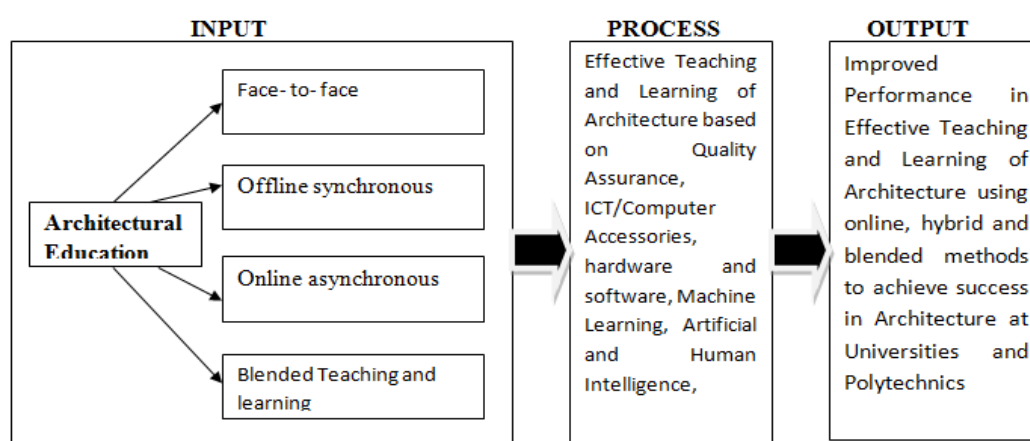


Figure 1: Conceptual Framework of the study.

Source: Developed by the authors (2023)

In the Figure 1 presented above, the architectural Education showcases the provision of Face-to-face, Offline synchronous, Online asynchronous with Blended Teaching and Learning will make Effective teaching and learning Architecture based on Quality Assurance, ICT/Computer Accessories, hardware and software, Machine Learning, Artificial and Human Intelligence, which will eventually produce improved Performance in Effective Teaching and Learning of Architecture using online, hybrid and blended methods to achieve success in Architecture at Universities and Polytechnics.

Methodology

The method used in this paper was taken primarily from interviews with University and Polytechnic school of architecture students, parents, teachers, practitioners, and academicians, as well as observations on the spaces and methods they use in blended learning systems based on 3 main points: blended learning system, valuable learning space, and students' characteristics in school of Architecture. The analysis of the result is as presented in the Table 1. below:

Table 1: Analysis of the Result

S/NO	CHARACTERS/LEARNING	OFFLINE LEARNING	ONLINE LEARNING	BLENDED LEARNING
1.	ARCHITECTURAL LEARNING	70% Theory: 30% Practical	50% Theory: 50% Practical	30% Theory: 70% Practical
2.	CLASSROOM QUALITY ASSURANCE	ADEQUATE	SATISFACTORY	INADEQUATE
3.	FLEXIBILITY	RIGID: A classroom or studio with many uses and enhances focus but limited versatility	HYBRID: Unlimited but tends to be ambiguous	FLEXIBLE: Versatile with collaborations between theory and practice, anytime, anywhere

Source: Developed by the authors (2023)

Results and Discussion

The relevance of blended learning in the selected University and Polytechnic in Bauchi state shows some characters in relation to theoretical and practical learning which has both positive and negative Quality Assurance implications and impacts to the existing architectural knowledge base as itemized below:

1. Flexibility: That learning can be done anywhere and anytime without being bound by a rigid space. It eases the students and teachers, as long as there is an internet connection, power and gadgets in that place.

2. Spatial Arrangement: Unlike the conventional paradigm, through the virtual class room and studio, students and teachers can arrange their digital space in such a way and can be used for many chances, not only for the learning process, but also for other things such as collaborations, online chitchats friends, or any other hybrid meetings.

3. Connectivity and Flow between Spaces: The virtual room might be split into several rooms inside a big room, like a private room to gather as a group as the case may be.

Conclusion

This study reviewed blended learning Architectural Education towards attaining Quality Assurance as variables were mapped up to build the conceptual framework for the study in the selected University and Polytechnic in Bauchi state. Findings revealed that flexibility of blended learning will ease the students and lecturers, as long as there is an internet connection, power and gadgets in that place, spatial Arrangement through the virtual class room and studio, students and teachers can arrange their digital space for the learning process, collaborations, online chitchats friends, or any other hybrid meetings and connectivity and flow between spaces of the virtual room.

Recommendations

Based on the findings in this study, the following recommendations are suggested thus:

1. Universities and Polytechnics should ensure adequate provision of ICT supporting facilities, purpose-built infrastructures (gadgets and buildings) in all schools of Architecture for supporting teaching and learning.
2. Managements of Universities and Polytechnics should employ qualified lecturers in the field of Computer related disciplines who will impart required practical skills into learners of Architecture.
3. Capacity building training workshop should be organized for Architecture academic staff on ICT/Computer studies/Education to enable them have up-to-date knowledge as new knowledge are discovered in the field from time to time.
4. Philanthropists in the community should also contribute their own quota to the development of the schools of Architecture in terms of provision of ICT gadgets to support blended learning and Quality Assurance.

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