RETHINKING ARCHITECTURE PEDAGOGY IN THE ERA OF PANDEMICS

Nasreen Kauser[1]

[1]*Faculty at Dept of Architecture and Interior Design, University of Nizwa. Sultanate of Oman*

Email Id-
nasreen.dummi@unizwa.edu.om

Nazreen is an Architect, Habitat designer and an Academician with 16+ years of experience in teaching and industrial sectors, Graduated from Malnad college and BMS College of Engineering for my Bachelor and Master degrees, at present working as a Faculty in *University of Nizwa* in Sultanate of Oman with over seven years of teaching in Sultanate being involved in various research and publications in national and international conferences. Her Industrial experience in various projects in India, such as Residences and Apartments, Educational Institutions, Public buildings, Bus shelters, Commercial buildings, Residential and public Landscape design, all types of Interior design etc.

Abstract

Conventionally architecture education is always an interactive process that involved group working with collaborative teaching and learning to develop students creative skills. The sudden shift to digital media and distant learning by the sudden urgency of Covid 19 Pandemic with the closure of educational institutions and the students stuck at home, confronting many obstacles by the students and teachers as well while teaching and learning through Emergency remote teaching (ERT) process. The challenges faced by the virtual learning in Architecture courses were tried to address at the most, though the unprepared teachers struggled during this unexpected urgency and change, it was a stressful situation for both students and the educators. This research paper attempts to understand the influence on architecture education in three different stages i.e, pre-pandemic, during pandemic and post-pandemic stages. Further, deliberates on developing framework and strategies to the process of shifting the teaching and learning mode from face-to-face to ERT. The deliberations are discussed and presented in detail through a case example of University of Nizwa, Sultanate of Oman.

Key words: *Syncronous;Asyncronous;Elearning;Emergency remote teaching ;Distant learning*

1. Introduction

"We want that education by which character is formed, strength of mind is increased, the intellect is expanded, and by which one can stand on one's own feet". "You cannot teach a child any more than you can grow a plant. All you can do is on the negative side - you can only help. It is a manifestation from within; it develops its own nature - you can only take away obstructions". "Education is the manifestation of the perfection already in man. All power is within you; you can do anything and everything. Arise, Awake and Stop not till the goal is reached.

Swami Vivekananda

Conventionally architecture education is always an interactive process that involved group working with collaborative teaching and learning to develop students creative skills. The students need to interact, discuss and debate in design studios with their teachers and other students. The sudden shift of conventional way of design studio teaching and learning to digital media and distant learning by the sudden urgency of Covid 19 pandemic with the closure of educational institutions and the students stuck at home resulted in the confrontation of many obstacles by the students and teachers as well while teaching and learning through ERT process. The challenges faced by the virtual learning in Architecture courses were addressed at the most, in spite of unprepared teachers struggling during this unexpected urgency and change; it is a stressful situation for both students and the educators. This research paper attempts to understand the influence on architecture education in three different stages i.e. pre-pandemic, during pandemic and post-pandemic stages. Further, deliberates on developing framework and strategies to the process of shifting the teaching and learning mode from face-to-face to ERT. Virtual learning in architecture is not a new phenomenon, many architecture schools around the world have been offering courses in virtual media, but noticeable point here is E Learning in normal situations is different from E Learning in emergency situations, carefully understanding the impact of this virtual classes for skill based courses like Graphics, Free hand sketching, Engineering drawing etc. Knowledge and Value based theory courses, Digital courses like BIM and Design courses etc.also to understand whether face to face interaction on campus is more effective or face to face

online. Weather the rate of interaction between student teacher has increased or decresed, Is there a need for the reorientation of architectural education which can be runned in any critical pandemics or emergency closures, in this paper the author has tried to understand the current trends and future directives and vision for Architecture design education. Solutions to effective teaching during pandemic requires creative thinking to get best from individual students. This study uses the data collected from literature study, self experience in ERT during Covid 19 pandemic in Spring 2019/20 at department of Architecture and interior design at university of Nizwa in Sultanate of Oman and discussion with other architecture faculties in the department and their observations.

2.A view at Architecture Education in Pre Pandemic times

This part of the paper, the author talks about Architecture Education in Pre Pandemic, explores the conventional architecture education having the mix of activities, Events, Workshops, Seminars, Exhibitions, Group works, Field/Site visits, Documentation works, face to face Jury critics, Competitions, working with international collaborations etc with the physical connection of students to their work and educators resulted in a healthy, active teaching and learning, the main aim of design studios was to develop students visualization, ideas, concepts and imaginations with practical context.

RETHINKING ARCHITECTURE PEDAGOGY IN THE ERA OF PANDEMICS

Figure 2.1 Showing the amalgamation of various activities and events in Architecture education in university of Nizwa.
Source : Author

3. ERT during Covid 19 lockdown

In this part of the study, the process of shifting the teaching and learning mode from face-to-face on campus to ERT at University of Nizwa, is considered as a case study. one of the leading higher education institutions in the Sultanate of Oman accredited by Oman Academic Accreditation Authority (OAAA). The University offers over 30 undergraduate majors and 6 masters programs to a student body of nearly 6500 both Omani and international students from Egypt, Syria, India, Pakisthan, Bangladesh, Ethiopia, Iraq, Iran Tuneshia, Libya etc, With faculties coming also from many different countries. During this crisis, Architecture studios at the University of Nizwa quickly adopted the virtual learning environment by the training and support provided by the university's CIS Center for information system department to all the faculties on Moodle, Eduwave, E learning, Big Blue Button (BBB) etc. apart from these the faculties of Architecture are using virtual platforms like The ZOOM, GOOGLE MEET, SCREENCAST O MATIC, digital pen and the touch screen computer to sketch on the drawings to provide instant feedback for design courses, social media platforms like Skype, Whatsapp Facebook, Instagram, Youtube channels were used to communicate effectively, both the methods of Synchronous and asynchronous were implemented as an alternative media supporting the traditional studio based learning for architecture courses as well as the entire university. Teaching assessment plans (TAPS), academic calender were modified by giving extra marks for students attendance and participation to make the ERT more effective, deadlines were postponed for Design oriented courses specially for Thesis projects and for beginner studios who were just introduced with the concept of drafting and design, Weekly status for faculty and students readiness and weekly status of ERT were collected from each faculties. Surveys were conducted on course and instructor evaluations. Inactive students were been contacted by the course teachers and student advicing center just to understand their situations in pandemic and encourage them to participate in E learning. Its really challenging for both students and educators, difficult to understand the design by only means of digital media, the quality of design

RETHINKING ARCHITECTURE PEDAGOGY IN THE ERA OF PANDEMICS

have reduced, Covid-19, worldwide Quarantine, self-isolation, lockdown, curfew, and the sudden closure of the academic universities and institutions have influenced the normal progress of the educational process, specially for architecture students who found difficult to convey their true talents without proper tools and materials with them. The digital oriented courses like the BIM faced several obstacles and technical problems as it needs a very good IT skills to install the software and use the computer aided softwares specially rectifying the problems at time of sudden shut down of internet or crash, some students were relying on computer labs who don't even have laptops with them, theory courses may have a good teaching effectiveness though its tedeous for educators to keep students without getting distracted online, but student learning effectiveness might have gone down as per the observation made by many faculties.

Online quizzes, assignments and projects were conducted in theory courses but the problem of plagiarism arises here. Coming to the design courses some of the faculties feel teaching design courses completely online is not effective as the evaluation and criticism has to be done on 20" computer screen is difficult as compared to evaluating on the sheet. some of the students showing no interest in design process and frustrated with the workloads. Analyzing the remote architecture design studio problems which could be related to the sudden shift from conventional methods of studio culture, the architecture education has to proactively address the changing world with reorientation of architecture education system. On the other hand self motivation is also a biggest requirement during pandemic for both faculty and students as work from home is a biggest challenge with all the household chores, it's a real struggle expecting 100% efficient work done by students spending hours in single room is unimaginable.

Figure 3.1 showing the screen shots and photos during the process of ERT in Architecture education in university of Nizwa.

Source : Author.

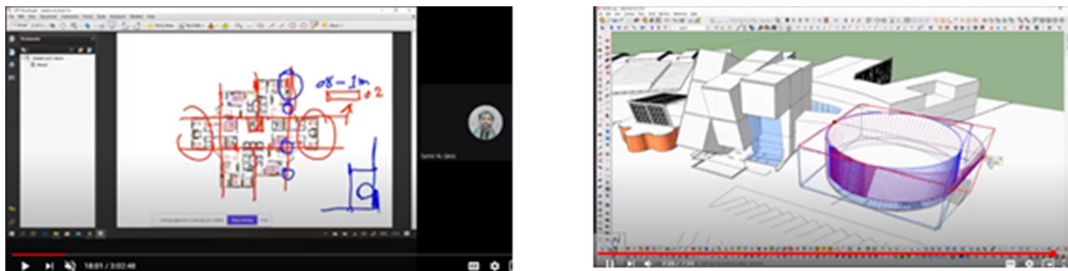RETHINKING ARCHITECTURE PEDAGOGY IN THE ERA OF PANDEMICS

Figure 3.2 showing the screen shots and photos during the process of ERT in Architecture education in university of Nizwa.

Source : Faculties of Architecture @ UNIZWA

4.   Architecture   Education   in   post Pandemic

"Tough times require tough measures". In post-pandemic society, the academe has the biggest role to play and formulate better methodologies by looking into the strenghts and weeknesses\shortcomings as experienced during ERT in Covid 19 pandemic. This is a confusing time for everyone globally forcing to reconfigure the educational system in the short-term and potentially long-term as well. Perhaps this difficult period will mark a positive culture shift in the Architecture education. Its important to reasses redefine the architecture education system and it's a time for taking intelligent and collective action to promote students participation, A student centric perspective is an essential and first step for the effective learning. Preparing students for the unknown, uncertain and unpredictable future and to motivate and develop their abilities, awareness of responsibilities, involvement in self studies, learning attitudes, time management and students have to be directed to self-research, self judgement on their designs. research and teaching may also manifest student centred activities, such as problem based learning, where the students become responsible for exploring and developing their own concepts and ideas by rational thinking rather than

enforcing for final presentation. encouraging team work among students and peer reviewing each others works helps in active enjoyment while teaching-learning. Apart from studying the maximum credits hours per semester, vacational programs and online collaborative studios for collective learning where several colleges and students can come together gives a good exposure for teaching-learning for both students and educators and can allow for the possibility of collaboration and exchange of concepts and best practices among each other.

Coming to the teaching methods, asyncronous and syncronous teaching which was a best practice quickly adopted by almost all educators should be incorporated in the curriculum along with the conventional studio based teaching to support each other more effectively in design education in post pandemic, Distant education courses should be identified and carefully designed and developed to offer better and timely solutions for all students. Restricting no. of students in the class depending on social distancing by increasing sections is required as the teaching is carried out by a single faculty unlike other universities in other countries have multiple faculties for design courses which requires individual discussions for effective interactive sessions with every student. As

RETHINKING ARCHITECTURE PEDAGOGY IN THE ERA OF PANDEMICS

remote work might continue in post pandemic, we should only expect the reliance on software and technology utilizing digital tools for maximum productivity and communication while travelling less, but the design courses can be carried out with 50% of classes for online consultation and rest 50% on campus for evaluation, for the effectiveness and to produce quality architectural designs with maximum details which was lagging during lockdowns. Theory courses sync well in online teaching but to reassure effective learning by students, quizzes and exams should be conducted on campus. Turnitin softwares should be used to get authentic assignments by the students and not a copy paste versions.For the purpose of facilitating and supporting the educational process adequate support system and access to resourses and services online should be provided, effective teaching can happen through any medium by adopting and inventing new methods and tools. Continued learning in the post Covid-19 education requires collaborative understanding, support, and compassion.

5. Conclusion

Keeping in mind the changing Architecture educational practices due to various interruptions by pandemics or any kind of natural disasters in future, Educators and course designers must be able to apply self-learning theories to create assimilative learning environment in online education. Learners should be ready to learn anytime, anywhere, any platform and with any company even while the students may face technical, psychological barriers and emotional challenges due to the effects of pandemics, hence a student centric perspective is an essential and first step for the effective learning rather than teacher based, the gap in online atmosphere between teacher -student should be addressed effectively with an empathetic approach, the Table 5.1 summarizes various deliberations on developing framework and strategies suitable for all critical pandemics.

Table 5.1 Deliberations on developing framework and strategies for post pandemic architecture education.

Source: Author

Type of Era	Type of courses offered	Mode of teaching/ learning & exams	Effectiveness in teaching and learning in different time periods	Recommendations / Frameworks and strategies for Post pandemic and suitable for all critical Pandemics.
Pre Pandemic	Skill, Knowledge, Digital and Design based courses	On campus conventional methods of teaching/learning, and exams	Effective teaching and learning, Rate of interaction between student teacher was good	✓ A student centric perspective rather than teacher based to create assimilative learning
Pandemic Spring & Summer	Skill, Knowledge, Digital and Design	E R T Syncronous and Asyncronous.	Quickly adopted the emergency situations by teachers and	✓ the gap in online atmosphere between teacher -student should be adressed effectively, ✓ create a supportive learning environment and

STHALA/ ISSN- 2582-9491

2019/20	based courses	Online exams in moodle which is not fully effective	students with the online atmosphere, learning effectiveness has come down as there are diverse set of students with diverse responses, Rate of interaction between student teacher has reduced.	apprciate diversity in students, ✓ teacher-student ratio have to be reorganized, ✓ Continous career guidance for the students to be given, ✓ Motivation, awareness of responsibilities, involvement in self studies, learning attitudes, time management self-research, self judgement rational thinking. encouraging team work.
PostPandemic Fall 2020/21	Skill, Knowledge, Digital and Design based courses	Suggesting 50% Remote teaching / consultation and 50% on campus for evaluation and exams with Syncronous and Asyncronous methods of teaching suitable for any kind of pandemics	Teaching and learning both should be tackeld to get best results in effectiveness. Reorientation of architectural education is needed with identifying distant education courses. Turnitin software to be used for assignments	✓ Syncronous, Asyncronous along with on campus teaching, evaluations and exams ✓ Rethinking pedagogical approach along with Andragogy and Heutagogy.

As these pandemic occurrences are unsure and uncertain, there may be many more such waves in future hence understanding, support, and compassion to the learners by motivating and guiding them to be self-learners successfully not only enhances the effectiveness in learning but also allows one to stand on one's own feet in their future endeavours as guided in the quote by Swami Vivekananda.
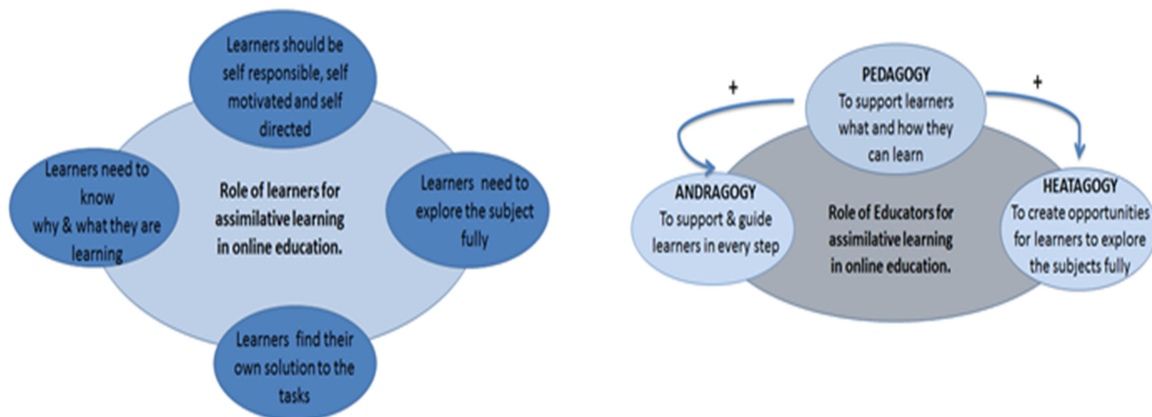

Figure 5.2 Flow chart of the roles and responsibilities of learners and educators

Source : Author

RETHINKING ARCHITECTURE PEDAGOGY IN THE ERA OF PANDEMICS

While framing the strategies for effective teaching and learning processes in architecture education in any kind of Era's should be remembering to enhance the students by increasing their intellect, strength of mind to reach their goal should be the primary goal of the teachers.

6. Acknowledgements

7. References

1. Ibrahim Lukman n, Utaberta Nangkula. 2012, Learning in Architecture Design, Procedia - Social and BehavioralSciences 60 (2012) 30 – 35

2. Soliman Ashraf M. (2017-6) "Appropriate teaching and learning strategies for the architectural design process in pedagogic design studios" www.elsevier.com/locate/foar ,Frontiers ofArchitecturalResearch, 204–217

3. Toquero Cathy Mae D (June 2020) "Emergency remote teaching amid COVID-19: The turning point" Volume 15, Issue 1, Asian Journal of Distance Education https://www.researchgate.net/publication/3420093 16. Page no. 185-188

4. Geropanta Vasiliki, Papamanolis Antonios (2017) " E-Learning & Digital Design in Architectural Pedagogy ,Observations and Questions based on the On-line Msc of Interior Design" Learning to teach Architecture in the information age. 163-182

5. Salama Ashraf M. and Crosbie Michael J.(2010) "Bubble up: Alternative approaches to researches to research in the academic architecture studio" Archnet-IJAR, Volume 4 - Issues 2-3 - July and November 2010 - 61-75.

6. Maii Emam, Dina Taha, Zeyad ElSayad (2019) "Collaborative pedagogy in architectural design studio: A case study in applying collaborative design". www.elsevier.com/locate/aejAlexandria Engineering Journal (2019) 58, 163–170

7. Arzu Sorguc, Çağlar Fırat Özgenel, Müge Kruşa, Fatih Küçüksubaşı STEAM Approach for Architecture Education. Conference Paper • September 2019 DOI: 10.5151/proceedings-ecaadesigradi2019_357

8. Bozkurt Aras, Sharma Ramesh C, (2020 april) "Emergency remote teaching in a time of global crisis due to CoronaVirus pandemic" https://www.researchgate.net/publication/3410435 62 Asian Journal of Distance Education, Volume 15, Issue 1, page 1 -6.

9. Rahim Ahmad Fuad Abdul "Guidelines for Online Assessment in Emergency Remote Teaching during the COVID-19 Pandemic" SPECIAL COMMUNICATION Volume 12 Issue 2 ,page no 59-68

10.Gunasagaran Sujatavani, Mari Tamilsalvi M, Srirangam Sucharita, Kuppusamy Sivaraman. (2019) "Adoption of Social Media by Architecture Students in Fostering Community Service Initiative using Technology Acceptance Model" IOP Conf. Series: Materials Science and Engineering 636.

11.Kolhe Neha (2017) " INNOVATIVE TOOLS AND TECHNIQUES TO TEACH ARCHITECTURE" International Journal of Engineering Research and Technology. ISSN 0974-3154 Volume 10, Number 1 (2017) page 67 -71

12. Sopher Hadas, Dafna Fisher-Gewirtzman (2019) "Immersive Behaviour Setting in Architectural education" https://www.researchgate.net/publication/3380089 59, International Research & Education in Design Conference 2019 — REDES2019 14 & 15 November 2019, Lisbon School of Architecture of the University of Lisbon, Lisbon, Portugal.

13. Olga Ioannou (2018) "Opening up design studio education using blended and networked formats" https://doi.org/10.1186/s41239-018-0129-7, International Journal of Educational Technology in Higher Education, Page 2 of 16.