

ISSN 1728-7715 (print)
ISSN 2519-5050 (online)

JOURNAL OF RESEARCH IN ARCHITECTURE AND PLANNING



VOLUME THIRTY-TWO
2022 (First Issue)

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ISSN 2519-5050 (online)

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AND
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Department of Architecture & Planning,
NED University of Engineering & Technology, City Campus
Maulana Din Muhammad Wafai Road, Karachi.

ISSN: 1728-7715 (Print)
ISSN: 2519-5050 (Online)
Journal DOI: https://doi.org/10.53700/jrap_neduet

Online publication available at:
www.jrap.neduet.edu.pk

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Published by NED University Press

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Published by

NED University Press, Department of Architecture and Planning, NED
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JOURNAL OF RESEARCH IN ARCHITECTURE AND PLANNING

Introduction

Focusing on research works relevant to the fields of architecture and planning, the Journal of Research in Architecture and Planning (JRAP) explores issues of relevance to both scholars and practitioners in the field of architecture, urban design, urban planning, built form heritage and conservation. JRAP was initiated in 2000 as a peer reviewed journal, initially published annually, however, since 2011 its frequency has increased to biannual. In addition to the papers received through our regular submission process, the two volumes also include papers selected from those presented at the annual conference of Urban and Regional Planning, hosted by the Department of Architecture and Planning at NEDUET. Contributions to the journal on general topics are accepted any time of the year, and incorporated in upcoming issues after going through a peer review process. A post conference review is also undertaken for the selection of conference papers, before their publication. JRAP holds the privilege of being the first, and perhaps the only peer reviewed journal in the discipline of architecture and planning, published from Pakistan. Contributions are received from across the globe and on average half the papers included in JRAP are from international scholars.

As of 2018, a new category entitled 'Young Scholar's Contribution' has been included in the Journal. In this category, papers from young faculty and early career scholars are accepted and editorial assistance and peer review feedback is provided to improve the research papers. One such paper is published under the head 'Young Scholar's Contribution' within each issue of JRAP.

Aims and Scope

The primary objective of JRAP is to provide an international forum for the dissemination of research knowledge, new developments and critique in architecture, urban design, urban planning and related disciplines for the enrichment and growth of the profession within the context. The journal focuses on papers with a broad range of topics within the related discipline, as well as other overlapping disciplines. JRAP publishes a wide range of research papers which deal with indepth theoretical reviews, design, research and development studies; investigations of experimental and theoretical nature.

Articles are contributed by faculty members, research scholars, professionals and other experts. The editors welcome papers from interested academics and practicing architects. Papers published so far have been on topics as varied as Housing, Urban Design, Urban Planning, Built Environment, Educational Buildings, Domestic Architecture, Conservation and Preservation of Built Form. All back issues are open access and available online on the Journal's official webpage: http://jrapp.neduet.edu.pk/online_journal.html.

EDITORS' NOTE

This volume of the Journal of Research in Architecture and Planning is the 32nd volume and first issue of year 2022, containing five papers and one book review. First two papers are contributed by international scholars and the remaining three are by local scholars. The papers cover multiple themes under the scope of architecture, pedagogy, planning, urban issues and heritage

The two international papers are centered on architectural studio pedagogy and teaching methods. The first paper from Bangladesh deals with challenges faced globally during COVID – 19 pandemic and reports on the teaching shift to online mode amidst the lockdowns and restrictive mobility. Here case example of Bangladesh is presented evaluating the online architectural studio positing the merits and demerits of the online teaching system. During pandemic the major concern world over was continuation of imparting education to students. Multiple challenges were faced and subsequently mitigated during this learning process of shifting entire studios online. Digital tools were appropriated and refined in real time to adjust to the arising demands. The paper also assesses the future scope of the online teaching and learning method.

The second paper also focuses on studio pedagogy, presenting the case of University of Bahrain where action research structure was applied to make studios more interactive and engaging. A set of experimental structures were used in studio teaching and the results are presented in the paper. The result of this application reflected that students responded better to collaborative learning model with studio instructor playing and active role of facilitator rather than being a passive observer to studio activities. The two papers although focused on studio pedagogy are reflective of deliberation being done on larger question of pedagogy and methods of teaching with the changing social, cultural, political and global economic dynamics.

The third paper brings us to urban Lahore and is a study of commercial “public” spaces and their publicness. The evaluation of publicness is conducted on the basis of Star model and its 5 gauging parameters namely ownership, physical configuration, control, animation and civility. The paper stresses that for developing countries, since the priorities are focused on provision of basic necessities even a minimal intervention in the sector of public spaces is met with an overwhelming response. This however is not the optimum goal and if a thorough analysis of publicness for public spaces is conducted on basis of model used in this study, better results and interventions can be achieved.

Fourth paper also focuses on online studio pedagogy and presents a local case study of COMSATS University, Islamabad. The paper presents case of urban design studio which is slightly more complex than the architectural design studio. In urban design studio, as mentioned in the paper as well, there is extensive physical mapping and documentation involved and this posed a challenge to conduct the studio online. The paper presents the strategies and methods applied to successfully conduct the urban studio in an online format. In conclusion the paper advocates for a hybrid method of studio teaching where the best of both physical studio learning and online format of learning can be applied for the benefit of students and teachers alike.

The last paper of the volume presents case study of Martin Quarters in Karachi and gives a proposal for its revitalization. The quarters that were aimed at housing federal employees has had a change in its makeup. Over a period of time family sizes increased which in turn increased the density of the area. This change is documented and deliberated upon in the paper and it indicates that multiple changes in the physical makeup of the houses were a direct result of increase in family size and makeshift expansion of the residences. Multiple other problems are identified through extensive surveys and physical mapping of the area and a set of solutions with government intervention are proposed in the paper.

The volume also includes one book review. The book is “History and Archaeology, Azad Jammu and Kashmir: A Study Based on Literary Evidence” written by Muzzaffar Ahmad and reviewed by Hussain Khalid.

Editorial Board

AN EVALUATION OF ONLINE ARCHITECTURAL DESIGN STUDIOS: STRENGTHS AND WEAKNESSES OF ARCHITECTURAL EDUCATION IN BANGLADESH DURING COVID 19

Mohammad Faruk*, Shayeeeka Binte Alam**

Article DOI:

www.doi.org/10.53700/jrap3212022_1

Article Citation:

Faruk M., et. al., 2022, *An Evaluation of Online Architectural Design Studios: Strengths and Weaknesses of Architectural Education in Bangladesh During Covid 19*, Journal of Research in Architecture & Planning, 32(1). 1-9.



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ABSTRACT

Bangladesh, like many more countries around the world came to a halt with the start of COVID-19 pandemic. In order to manage the collapsed education system, different institutions started trying various alternative virtual mediums to reach out scattered students country wide. These included the use of television telecast, radio and communicative platforms like Zoom, Google meet, Google classroom, Facebook and many more. Unlike most subjects, Architectural teaching requires to adapt to a studio-based teaching approach with 'one to one interaction' and plenty of 'on paper drawing exercises' involving the students and their instructor. The literature review conducted within the scope of this research could not find many studies trying to identify the challenges faced by various architecture schools across the world, although there are studies on education in general during pandemic.

The Department of Architecture at BRAC University is one of the leading architecture schools in Bangladesh. The department has developed a new online teaching learning platform named BuX to continue with its online academic program during Covid 19 pandemic. This paper reports the preliminary findings of a larger research conducted at the department. It aims to evaluate the newly adopted virtual teaching platform for its acceptability among the stakeholder; i.e., the students. The objective of the study was also to assess the adoption rate of virtual classes and to determine the various benefits, challenges, and reasons for non - adoption by the stakeholders. The research takes a mixed method approach supported by extensive literature review and online survey using Google form. Approximately 25% students of the department participated in the survey.

This study can be extended further in collaboration with other architecture schools both in Bangladesh and abroad. This may help the university policymakers and the academics to evaluate the pedagogical strategies for architectural education implemented during the pandemic. Furthermore, it will also help to identify the scopes for developing an appropriate online teaching and learning method for the 'new normal' situations.

Keywords: Architectural Education, Architectural Pedagogy, Bangladesh, BRAC University, Virtual Class.

INTRODUCTION

The sudden emergence of the coronavirus (COVID-19) in Wuhan city, China, and its spread across the whole world happened a very fast pace. As an immediate consequence, the educational system at all levels, came to a halt. When World Health Organization declared the COVID-19 outbreak as a pandemic on March 11, 2020, Bangladesh was also in complete closure along with many other countries of the world to battle this global threat. All academic institutions were shut down in Bangladesh from March 2020 to prevent the spreading of the virus. This unforeseen closure of the academic institutions affected the student population to a great extent, which also involved people who are related to the education sector. In order to cope up with the situation, many educational institutions started to provide online education to minimize the learning gap in countries going through lock down. Various online education platforms emerged in Bangladesh, like many other countries, finding an alternative way to impart knowledge within the Pandemic era. Platforms like Facebook, Zoom, Google classroom, Google meet etc started to gain popularity as a medium through which academicians started to communicate with the students (Rahman, 2020) (Figure 1).

Online learning/teaching is a big challenge for a small country with a large population, like Bangladesh. In most cases both the learners as well as the teachers are facing great challenges to deliver classes using the online platforms. Teachers as well as the students had various stages of introduction to digital fluency and many of them never had the virtual teaching and learning experience. Lack of devices

and resource, no prior training or platform, syllabus adjustability, network issues were some of the few challenges to be addressed. Online learning or distance learning might be new for many academic institutions, but there were studies about distance learning which revealed many benefits and limitations (Al Husban, 2020; Seage and Turegun, 2020). Recently, research conducted in India on the positive and negative aspects of virtual education (Arora and Srinivasan, 2020), showed the conditions of students experiencing online education.

Architecture education, which requires mostly hands on learning, is a difficult field of education to conduct virtually. The fundamental course in architectural education is the Design Studio which requires field visits and peer learning as well. As a result, the most important issue was to redesign the syllabus to adapt with the changing virtual learning scenario. The adaptation process the architectural education to the new virtual studio system led to improvisation of various coping strategies for numerous constraints and difficulties. This became even more difficult because of the deteriorating pandemic conditions which affected many families directly or in most cases passively.

The goal of this research is to study the ideas and evaluate the prospects and problems faced by the students of the architecture department of BRAC University during their design studio courses; which is being conducted by distance learning methods through the newly introduced BuX platform. The survey includes a set of questions aimed for the architecture students, to investigate:

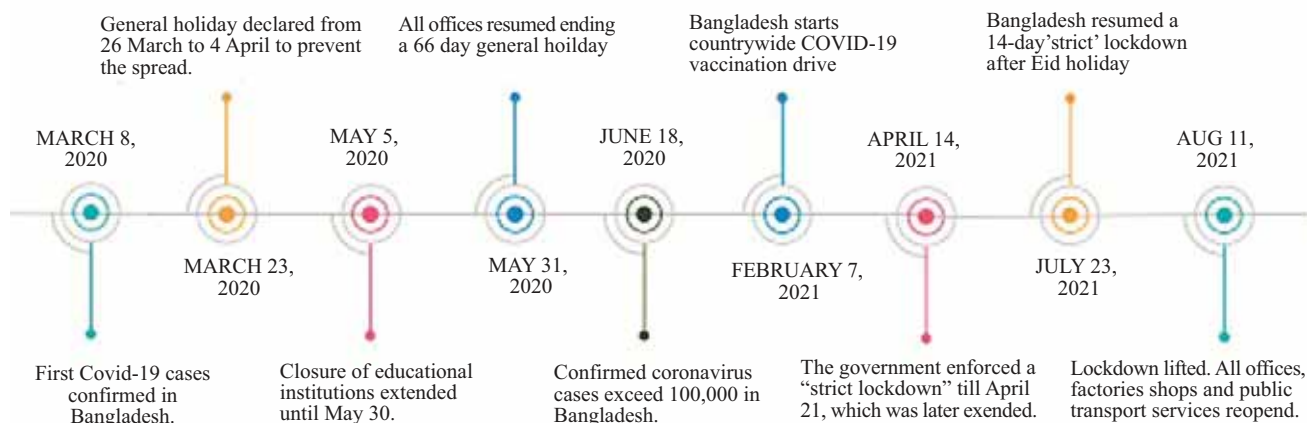


Figure-1: Covid 19 in Bangladesh.
Source: Author

- Students' views and opinions about architectural education in physical studio and virtual studio environments
- Assessment of the technological tools and educational methods used.
- The converted online habits and routines of the students and also how they are coping with the sudden changes.
- The satisfaction level of the students in the online environment, focusing on the teaching, technology and the interactivity.

Additionally, this research can serve as a foundation for the planning of the future architectural education processes, with beneficial guideline for the future academic researches, especially for the virtual environment.

ADAPTATION OF ARCHITECTURAL DESIGN STUDIOS TO ONLINE SYSTEM

Architecture is one of the unique courses where the learning is focused on real time experience-oriented studio environment. Architecture studios are interactive spaces which is primarily conceived as the lecture space; additionally, it is the multi-dimensional space where students spend their time developing design works, nourish their creativity, communicate with each other, discuss and share with their peers. Naturally, the studio environment helps to develop the sense of belonging within the students to the architectural

profession (Dutton, 1987; Ceylan, et.al, 2020). On the other hand, Ledewitz (1985) described that in the architectural design studio, students get training about the various aspects of architectural education; they learn a new graphical language, nurture new skills like three-dimensional visualization and representation of their own ideas. Learning through interaction is a basic requirement for the architecture education (Maghool, et. al., 2018).

Undoubtedly, the design studio is the central element of architectural education, developed through a continuous process of exercise throughout centuries. Because of these objectives, adaptation of architecture studio environment was one of the major issues in architectural schools during the pandemic. During this unexpected and challenging condition, architecture students faced specific issues, for example non-availability of technical infrastructure, uninterrupted internet, proper computer which can run software like AutoCAD or Sketchup, materials for making models and many more. Revised curriculum encouraged alternatives for physical models, focused more on digital interpretation and presentation (Alnusairat, et.al.,2020). Moreover, general health problems, psychological conditions, unavailability of electronic devices, adaptation to the new normal condition became severely challenging for all the students. During this unique educational situation, investigation was circulated through an online survey among the students to perceive the threats and opportunities of the newly emerged digital space for the architecture students.

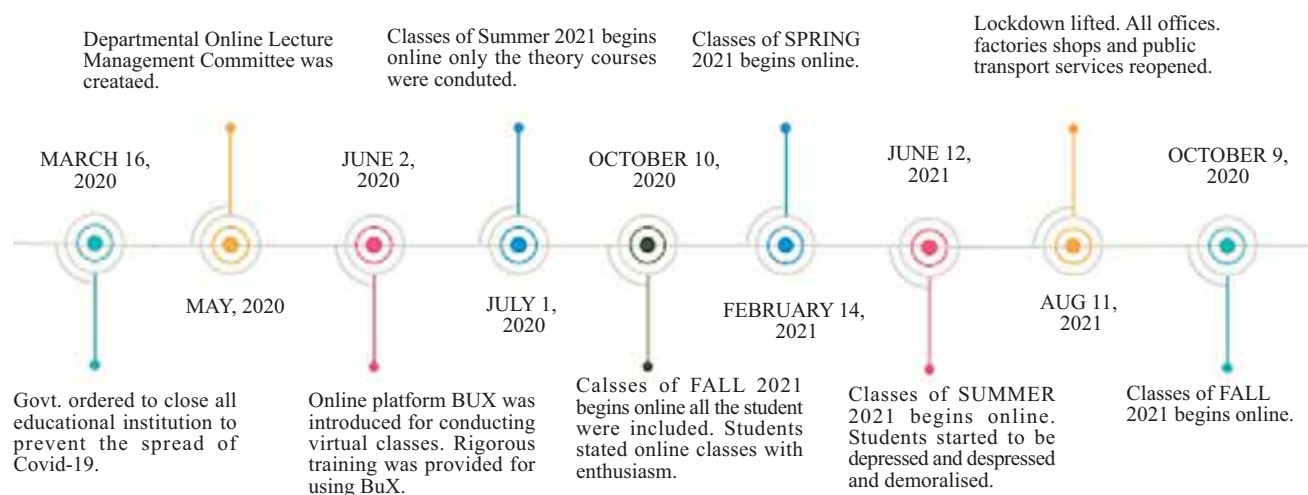


Figure-2: BRAC University Adaptation in Covid 19.
Source: Author

METHODOLOGY

Architecture Design studio, as explained by Shoshi and (Oxman, (2000)) is an educational place where students spend their maximum hours to master diversified design methods. Over the last few years, scholars are experimenting with virtual teaching of design courses. Salama and Wilkinson (2017) strongly believed that online design studio pedagogy cannot replace the traditional studio in the future. When the pandemic started, the physical architecture studio got replaced by the various digital platforms. For this research, BRAC University was selected, which ranked in the top two private universities of Bangladesh according to the QS ranking in 2020 (Brac University, 2021). In the Architecture Department, there are ten design studio programs, supported by various courses on history, theory, building physics and technologies, environment and society etc. throughout the education curriculum. Beginning with Basic Design and Design studio courses, the fresh-year students are introduced to the concept of design. Gradually they develop critical thinking and generate solutions using two- and three-dimensional volumes. Eventually, students from first year to final year are expected to learn different design strategies and produce unique design solutions to diversified architectural problems using the knowledge and skills they learned during the training (Ceylan, et.al, 2020). During the pandemic, after visiting evidence based research in the field, a number of significant changes and revisions were introduced in the syllabus and mode of teaching. This suggested change was primarily focused on adopting the online pedagogy.

Sampling and Participants

The survey was done at the middle of the Summer 2021 semester between 1st to 15th August, 2021. It focused on collecting feedbacks from the students of Architecture from BRAC University. Most of these students took online design studios during the COVID lockdown period. The survey aimed to examine their experiences about online design studios that were conducted during the pandemic time. The survey population is represented by first, second, third, fourth and fifth-year students of the B. Arch program having age span from 18-22 years. The survey was conducted using questionnaires on Google Form so that it becomes easily accessible to every student. This user-friendly tool helped the students to easily access the questionnaire and respond to it. A total of 100 students participated, which is 25% of the total student number of the department; containing 71 female students and 29 males; this male and female proportion is the prevailing demographic feature of most architecture schools in Bangladesh. The survey was open for any student

of the department of architecture and students were encouraged to take part in the survey voluntarily.

Design of the Survey

The questionnaire was designed depending on an extensive investigation of the existing literature available on online learning. They included reports on the challenges, opportunities and constraints of online teaching in architecture schools of various countries. Following the studies by (Alnusairat, et.al., 2020) suitable elements were pointed out, focusing on issues effecting teaching in the online design studio environment. A set of 30 questions were developed from the literature and divided into four different dimensions:

- Learning engagement of the students
- Advantages of online learning
- Online learning quality
- Students' reflection

Students' satisfaction was measured using 5-point Likert scale questions, with answers ranging from "strongly disagree" to "strongly agree". A reflection section was included to the survey to collect insights from students into their virtual learning experiences.

RESULT AND DISCUSSION

To cope up with the Covid Pandemic Lockdown, nearly all the institutions adapted the online teaching platform. This transformation from the conventional to the virtual, through a continuous process of trial and error, has been a major turn for the teachers, who had to explore and embrace online teaching methods almost overnight (Varma and Jafri, 2020). Most of the educators adopted different online teaching platforms for presenting the class contents. Google Meet, Zoom, Microsoft Team, Skype all gained popularity in a very short time. According to the survey conducted, 97% of the BRAC University students embraced Google meet as the principal mode of communication. They also use Facebook messenger or WhatsApp to stay connected with classmates outside class time. 77% of the respondents were satisfied with the applications used for the tutorial classes, whereas 23% were not satisfied.

The data obtained from the online survey was evaluated based on simple descriptive statistics. An overall observation of the survey, regardless of the studio level of the students

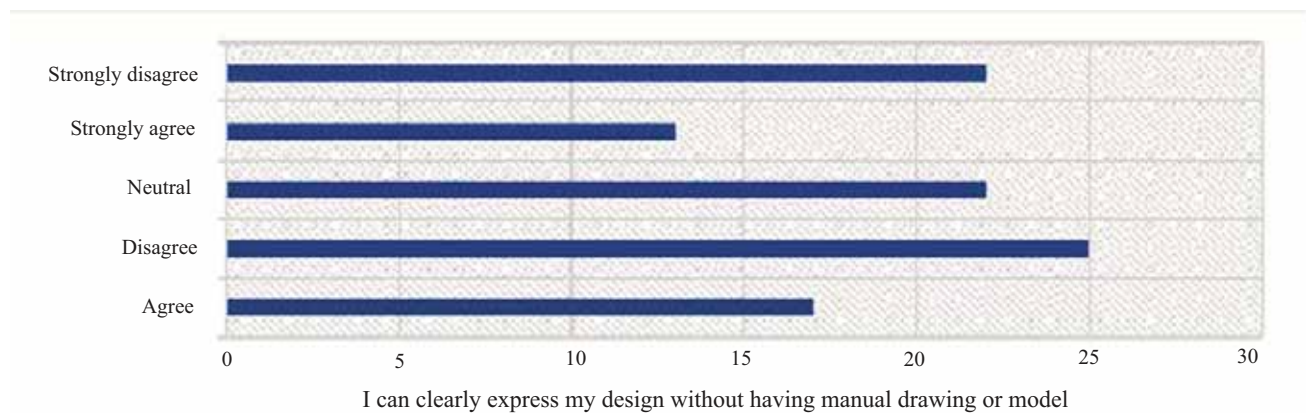


Figure-3: Student's Expression of Design.

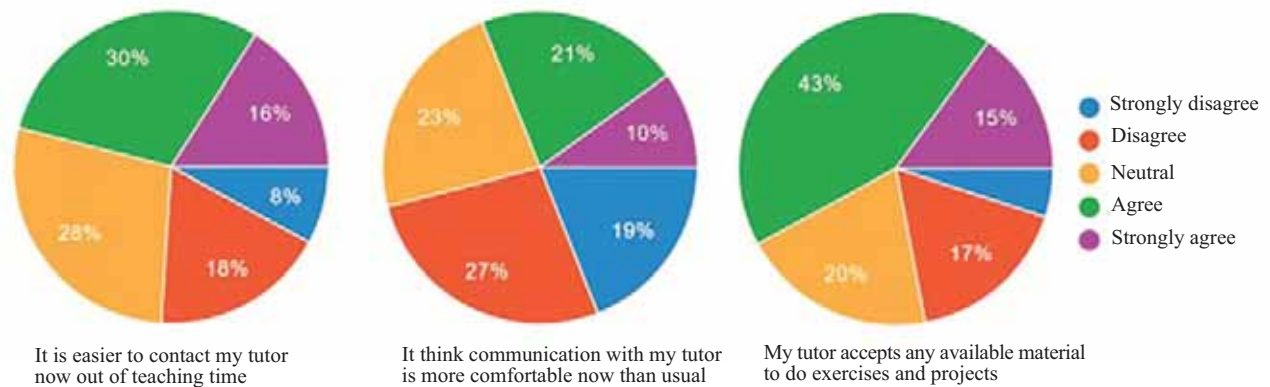


Figure-4: Communication with the Teacher.

suggested that the most significant shift during virtual studio for the students was using alternative techniques like Google meet, Zoom, etc which were not much familiar before. Another benefit of the online studio was to watch the recordings of the online critiques and juries along with the regular class recordings. Since they are online, most students could attend and learn from the jury. A significant realization was about the ability to be efficient under sudden changing situations (Figure 3).

Results depending on the studio level information indicated that the first year students (age group 18-19) are more positive about the virtual studio than the senior ones, as fourth and fifth year students (age group 21-22) are more analytical about it. Regarding the communication with the tutors, 46% students felt that it's easier now to reach out to the tutors, when 46% disagreed that the communication is more comfortable than before (Figure 4). Nonetheless, 58% students agreed that they were given liberty for choosing the material. In the architecture education system, one-to-

one tutoring feedback is an essential part. In the studio, students not only learn and develop different skills when they are working together in the paired space, but they also learn by attending to one another's critiques. Additionally, students who are taught collaboratively rather than individually, may nurture the expertise they require for creative work (Crisosto et al., 2010). This procedure is important to enhance the student's self-confidence during their design training (Choi and Kim, 2016).

From the data derived from this study, it indicated low range of contentment with the virtual learning experience. Only 33% of the students agreed that they get more feedback on their work than usual, while 35% received feedback on assignments in a timely manner, quicker than usual. Students strongly disliked working on a group assignment online, 51% preferred meeting their colleagues face to face than online when 53% felt online collaboration was not successful (Figure 6).

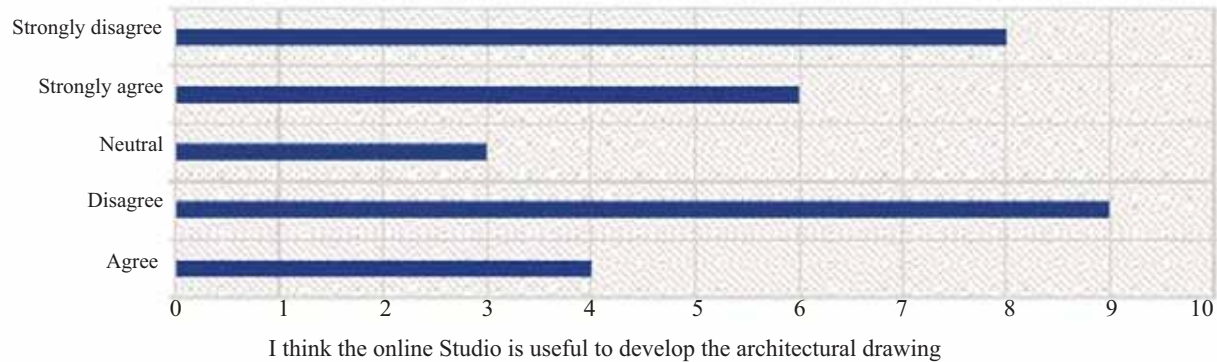


Figure-5: Perception on the Usefulness of Online Studio on Developing Architectural Drawings.

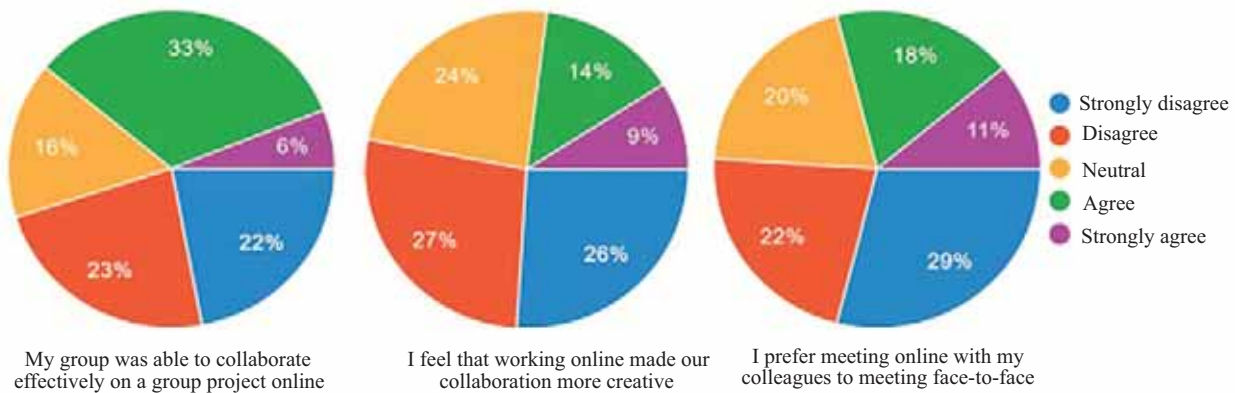


Figure-6: Peer Learning and Collaboration.

This study revealed many advantages of the online learning as well. Interestingly, 66% students responded that their communication online is timely and efficient. While 35% agreed that their self-assessment quality has increased, 48% believed that they have more time to study now. These results suggest that the students of each year are having trouble to manage their time for studying and preparing for design classes and online submissions; which aligns with the results of Newman et al. (2018).

Only 30% students believed that they could easily present their design ideas when working through only a computer, especially without manual hand sketches or physical models. Just 37% accepted they were able to maintain design work virtually like the usual quality while 28% remained neutral. Despite overall negative responses, the students indicated their development in computer skills more than expectation. Most (82%) had rapidly developed their skills in Photoshop, Revit and CAD software.

The sudden shift to online platform has some other beneficial outcomes as well. The dependency on the online resources increased to a great level (81%). While only 34% agreed that online studio could be helpful to develop the design concept, 65% said internet could be a good resource for their assignments. Approximately 81% of the surveyors spent more time watching educational videos on YouTube or reading various blogs on architecture than before due to accessibility of resources (Figure 8).

Assessing the survey questions, results focusing on studio level are similar to general observations. However, some deviations were noticed. For example, for the traditional model-making skills, the freshmen students were more optimistic than the senior students; also, the efficiency of the resources; which is similar with the study by Ceylan, et.al (2020). At the conclusion of the survey, students answered questions which reflected their opinion about the future online classes. While 40% students indicated that

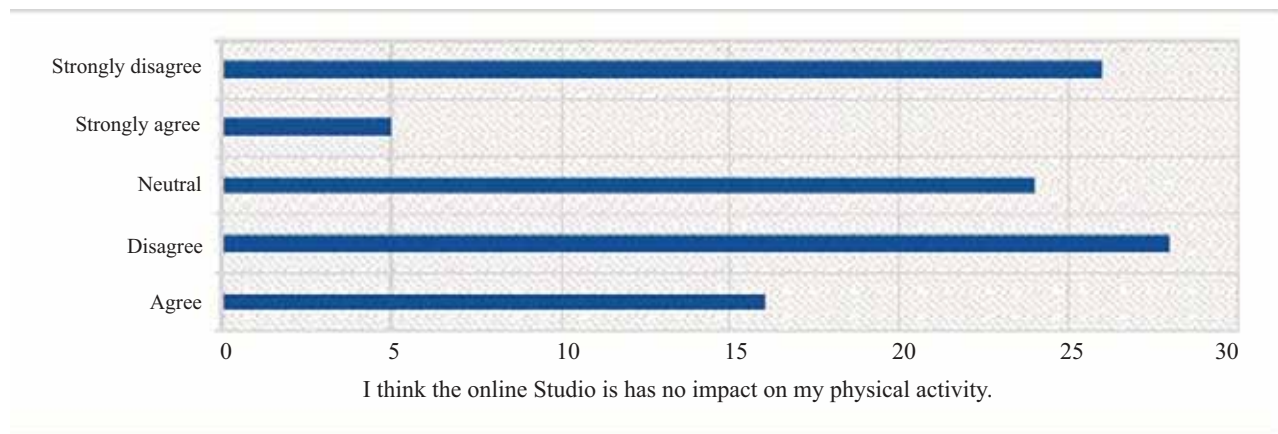


Figure-7: Online Studio and Perception of Healthy Lifestyle.

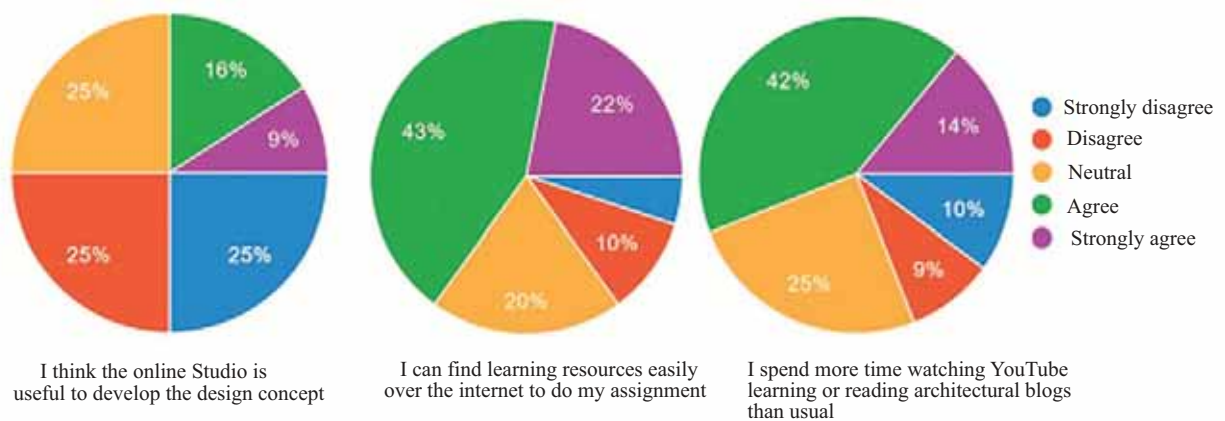


Figure-8: Perception on Effective Learning Through Online Design Studio.

they would think about taking online studio in future, 39% disagreed. According to Mulligan et al. (2018), future experience could be less challenging for the architecture students provided enhancement in the collaborative thought about the precise architectural problems. Further scanning of the survey revealed that the junior students were 15% higher than the senior students who would consider participating in the online class in future.

CONCLUSION

Architectural design studio is a physical classroom which develops the recognition of a student as an architect reflecting their personality, where they can express their ideas and get motivated by other students with their thoughts, feelings and the way they perceive the life (Coyne et al., 1994). Therefore, the design studio can be expressed as an influential space for discussion, presentation, conversation, participation

and education (Ceylan, et.al, 2020). The traditional physical studio, which is the fundamental education environment of architectural design studies, is suddenly converted into a virtual environment because of the Pandemic. The sudden adoption of online education is a matter of great concern for all the educators worldwide (Gopinathan and Ramachandran, 2020). The prospects include critical observation of virtual pedagogy regarding the virtual division, lack of inclusiveness, inequity, unaffordability and value; yet on the other hand, online education is the only solution during this global pandemic (Kebritchi et al., 2017; Jena, 2020).

The findings of this study highlighted that a large percentage of the participants felt unsettled about aspects of their online learning experience and wanted more guidance and support. The survey shows an interesting perspective regarding the cognitive consequences of the online design studio, especially

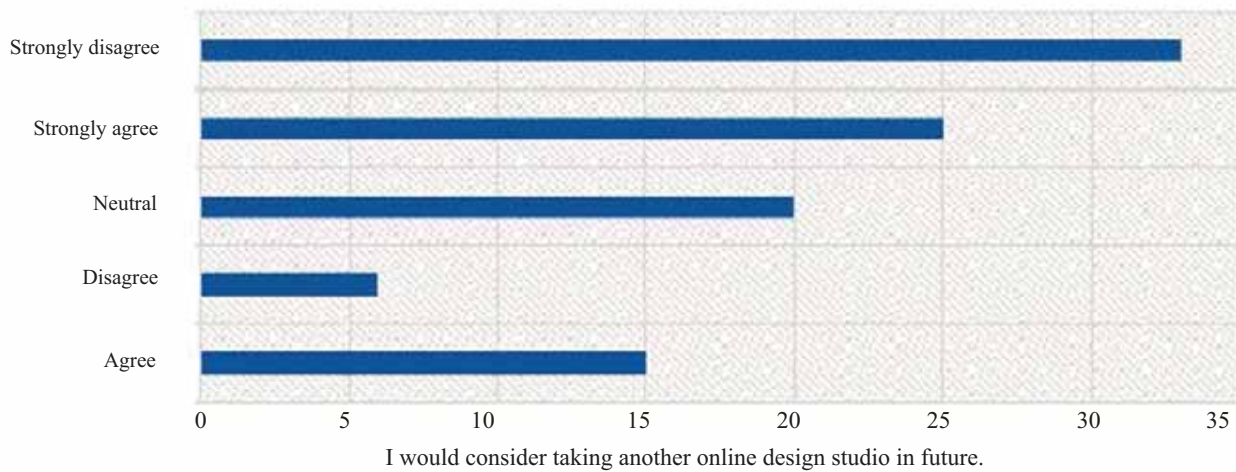


Figure-9: Perception on Registering for Online Design Studio in Future.

at this traumatic pandemic time. If the architecture students are provided with necessary equipment for their studies and they are given the opportunity for self-reflection, they can achieve efficient results even in the crucial pandemic environment.

Another significant result of this survey is the indication of the weakness of the conventional physical studio, where students joined the discussion or classes while dealing with their design works at the same time. They often missed some valuable information or comments along with the interruption of concentration (Ceylan, et.al, 2020). On the other hand, online studios provide recordings of the session, allowing them to concentrate on a specific works without

the fear of missing any information. This digital method of education is anticipated to create various learning opportunities and make the students ready as active learners instead of passive listeners (Salama and Crosbie, 2020).

This can be a principal characteristic of online education which is required to be applied into the design studio even if they return back to the traditional physical environment. However, further studies are essential to collect more information about different pedagogical initiatives being initiated globally, especially the procedures and the experiences in the architectural design-based courses during the pandemic period.

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APPLYING ACTION RESEARCH TO STRUCTURE INTERACTIVE AND ENGAGING DESIGN STUDIOS IN ARCHITECTURE SCHOOLS: A CASE STUDY OF UNIVERSITY OF BAHRAIN

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Article DOI:

www.doi.org/10.53700/jrap3212022_2

Article Citation:

Shah A, A., 2022, *Applying Action Research to Structure Interactive and Engaging Design Studios in Architecture Schools: A Case Study of University of Bahrain*, Journal of Research in Architecture and Planning, 32(1). 10-22.



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ABSTRACT

Architecture design studio is a social environment where interactions among students and a teachers serve as a pedagogical tool to enhance the students' imaginative and creative thinking. However, keeping students motivated for long hour studios is a challenging task. This Action Research (AR) is conducted to evaluate the effects of "structuring" the teaching sessions that take place in the architecture design studios to observe their effects on the motivational level of the students while working for prolonged length of time in a studio. The study examines two types of structured studios: *semi-structured* studios and *fully-structured* studios through a meticulous review of the planning, implementation and the cycle of activities. The findings reveal that a higher level of motivation is observed in students when the studio structure is designed to encourage collaborative learning amongst the students, and when the teacher acts as an active facilitator in the studio instead of being a mere observer.

Keywords: Action Research, Architecture Design Studio, Higher Education, Motivation, Studio Teaching, Design Pedagogy

INTRODUCTION

This study is performed at the second-year level Architecture-Design-Studio, ARCG-210 of the University of Bahrain. The research shows integration of the UK Professional Standard Framework (UK-PSFS); Activities (A1-A5), Knowledge (K1-K6) and Values (V1-V4) where applicable.

Architecture studios are the main design related educational activities of architectural education where the students receive hands-on instructions and guidance. The typical education techniques used here are *desk crits*, where project critiques are delivered at the student's desk, and there are *juries* which are multi-layered open discussions on how the complexity of the open-ended design problems have been resolved by the students. This pedagogy enables students in enhancing their understanding of the design process from a superficial approach to a deeper approach.

During the period of teaching at the selected research site, the researcher observed that, generally, the students are not used to staying and working for long hours in the design studios. Spending more time in a studio plays a vital role in developing a constructive approach, enhancing design capabilities and improving visual perception. As the foundation of the curriculum in architecture is learning the design process (Demirbas and Demirkan, 2003).

It is of utmost importance to search and learn about the reasons of students' decreasing interest in the long-hour studios and to look for the feasible solutions to this problem. This research aims mainly to investigate the underlying causes behind the students' inadequate social interactions, lack of presence in the studios and the lack of positive orientations towards the learning outcomes (Biggs and Tang, 2011).

Action research is a process that involves action, evaluation and reflection as a method of improving the learning process. The process is designed to collect evidence in order to create changes in practice through participatory and collaborative research. The idea behind action research is to create reflective practices in the participants through a process of observations and interpretations. In an action research, plans are formed, then implemented, observed, revised, and re-implemented, creating a continuous cycle of improvements through reflections. Findings of an action research are not absolute; rather a point in the cycle of continuous improvements.

Action research has many benefits. The educational journey should be designed to produce an effective practice path for students, rather than just achieving positive results. Action research helps educators to be constantly aware of their journeys, and find ways to constantly improve their educational practices, through a culture of inquiry. This culture of inquiry helps educators in an active process of assumption, speculation and development of self-awareness with respect to their individual capabilities (Clark, al, el., 2020). Students when involved in action research become capable of observing, obtaining and analyzing knowledge instead of focusing merely on the information given by their tutors. This process of engagement influences a culture of practical application and bridges the gap between theory and practice.

AIM AND OBJECT

The aim of this study is to improve student motivation during long hour studios and findings of the study can provide solutions for future implementations.

The process of the studio investigated in this research was designed to use the practice of action research as a way to form an observation-based informative journey for a practical application. The research was participatory, with the researcher being the teacher, interacting with the students to create a cycle of planning and control for achieving the best practice of implementation. It is important to note that the results of this exercise are not absolute; rather a tested method of implementation for a specific group of participants. The main objectives of this are:

- To evaluate the effects of introducing “*structured studio sessions*” on student’s motivational level during long hour design studio.
- ATo develop an environment of social interaction and constructive learning among the students. To improve their innovative thinking and to enhance their diverse design capacities under the supervision of an active facilitator (Figure-1).

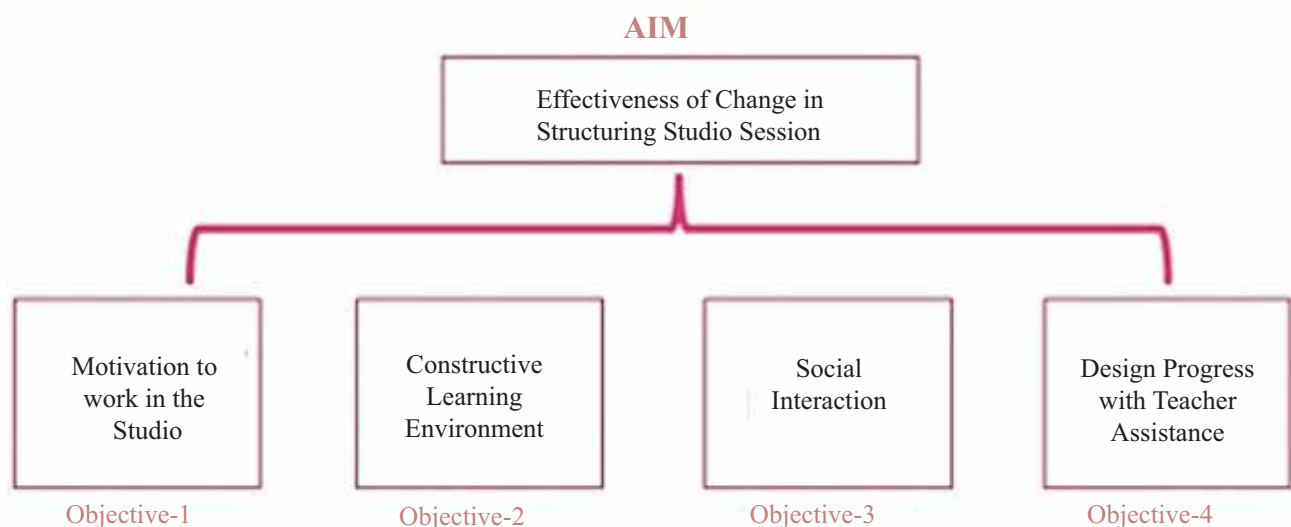


Figure-1: Indicating Aim and Key Objectives

LIMITATION OF THIS STUDY

There were no restrictions in this study. However, since the nature of the study is subjective, the judgment acquired through the individual reflections may not be precise. Keeping in view the long duration of the studio which lasted 5.5 hours, the level of interest of students varied as some of them got tired by the end of the studio. This research considers the design studio findings as being related only for the class section which participated in this research, while the other class sections which did not participate in this research were not considered in the research findings.

NEED OF THE STUDY

The primary intention of this research is to induce helpful modifications in the active studio period. The study was focused on the question. How can the interaction and interest of the students be effectively improved by introducing 'structured-studio-sessions' in the architecture design studio?

LITERATURE-REVIEW

This study focuses on scheduling teaching sessions in design studios in accordance with the Intended Learning Outcome (ILO) to help students who are working in the studios for extended periods of time, as the goal is to travel, i.e. overall design process, rather than to arrive, i.e. the end result (Biggs and Tang, 2011). Learning environments need time management and teaching strategies in order to achieve ILOs (Biggs, 1987). By considering students' learning interests and scheduled activities, a "structured studio" was used as a teaching strategy. As mentioned earlier, time organization and structured coaching helps to distinguish the diversity of individuals (Williams and Williams, 2011). This literature review imparts that while organized teaching helps in designing studio activities, it also helps in developing constructive theory, social contact was emphasized for helping the students engage in the educational process and enhancing ILOs (Doran, 1999). Educational environments which encourage social interactions allow students to consult through amalgamation between prevalent knowledge and innovative information. Numerous theories are included in the social learning theory. This theory combines two different learning concepts, including active participation and passive participation (Tennant, 1997; Ashworth, Brennan, and Egan, 2004). Bandura has introduced social cognitive theory (SCT) as the human behavior of social learning in intellectual environments (Bandura, 1986). Three elements of human behavior are: the reciprocal model, dynamic influences and environmental influences.

The crucial aspect of the reciprocal determinist theory states that people can act either as a change-enabler or a reactor. Behaviorism theory also has influences on the education at third level. Behaviorism determines the vitality of designing feedback and teaching methods, and the assessment process with observable behavior (McLeod, 2020).

A Conventional Design Studio (CDS) strategy is a structured learning environment with clear objectives and procedures. These structured studios, on the other hand, may have limitations that make it difficult to use traditional design studio techniques. Although CDS has been practiced in most of Architecture Schools across the globe, the author observed that not much has been explored in context of fully-structured and Semi-structured studio pedagogy method, while mostly CDS and few other experimental pedagogy methods have been explored and published. This research gap leads the author to approach the studio pedagogy as fully-structured and semi-structured studio environment. The author defines the fully-structured and Semi-structured studio as stated below.

A fully-structured studio involves a more traditional method of teaching. The entire studio work is structured and scheduled by the teacher varying from the lectures, site visits (conducted prior to the study), literature reviews, analysis, design and drafting, one on one crits sessions, juries, modes and medium of presentation, etc. It focuses more on the extrinsic motivation rather than the intrinsic motivation of effective teaching/learning. In a fully structured studio the dialogue between student-teacher and amongst the students is less, which is highly required for an architecture studio. The role of the teacher is more of a provider and controller.

A semi-structured studio on the other hand involves partial structuring and scheduling of the studio work and gives more flexibility to the students on various aspects such as choosing their mode and medium and medium of presentations. It also incorporates more interactions between the student-teachers and amongst the students, through open jury sessions, thus promoting more exchange of ideas and the process of design, which is a condition considered necessary for a studio culture. It focuses more on the intrinsic motivation and less on extrinsic motivation, which would eventually improve the expectancy-value. The role of the teacher is more of a facilitator and moderator.

Action Research (AR) is a method of observing the pedagogical process in order to achieve productive understanding of the process (Metteal, 2012). A typical studio teaching includes individualized teaching sessions, creative criticism and collective discussions. It is observed that after one-to-one discussions, students are not willing to stay and work interactively in a studio for long hours. Therefore, conducting an appropriate AR imperative which can bring effective improvements in this practice and bring a dynamic environment in the studio. The main challenge is to determine the methods by which students are inspired to interact and share their creative ideas and opinions amongst one another in order to construct their design comprehension from a superficial level to a deep level (Biggs and Tang, 2011).

Gregor's theory-Y states that learners deliver their best when they are relaxed and unrestricted (Biggs and Tang, 2011). The purpose of a design studio is to unlearn and deviate students from the pre-defined and traditional mindsets, so that they can explore their creativity. However, the learning environment needs some controlled processes to encourage them towards multi-dimensional thought-processes and enhance their awareness as designers (Kahveci, 2004). An effective educational environment is created through the satisfactory management of the environment which provides a foundational basis and the necessary conditions (Chadda, 2004). The AR employs a well-thought-out process to detect studio teaching issues. As a successful change in studio teaching approach, structured instruction sessions are established. This adjustment is thought to be important in order to improve studio teaching quality and to foster active engagement and enthusiasm in learners throughout the design studio.

Action research creates a form of self-reflective process of inquiry, where participants can improve their rational thoughts and practices in their social and educational environments. Action research may be individual, where a researcher applies it upon himself or herself, or collective, working within a group of participants. The main defining factor behind action research is to allow change (McTaggart, 1991). In order to bring about positive changes, participants have to be willing to question their environments and practices. In an academic context, action research usually involves participants and researchers focusing on one thematic problem and using the process to resolve the problem. Hence, action research creates communities or groups that are self-reflective and critical, participating and collaborating for a process of planning, implementation, observation and change.

This AR is significant because it directly connects the researcher's educational practice with the study. This method of research facilitates the studio master to identify the shortcomings in his or her pedagogy techniques and hence make positive changes to get better results.

RESEARCH METHODOLOGY

To address the research problems, a systematic technique is used, which includes the necessary training for acquiring and interpreting data (Kothari, 2004). For this research, triangulation method is applied, which is a proven practice to increase legitimacy of data by merging diverse approaches (Yeasmin and Rahman, 2012; Smith, and Kleine, 1986). Personal observations, semi structured interviews and a survey of opinions were used as research tools, which are discussed individually below. The independent variables in this study were the design structure of studio sessions and students willingness to work longer in the studio, which included the pre-design activities such as the literature reviews, site analysis, group discussions, critical thinking about the relevant conceptual approach as per the design project type, occasional five minutes' student's presentations on famous architects' philosophies etc. The students' motivation to remain in the studios and work for longer period in the studios were dependent variables. The students' consent was taken before the commencement of the AR. A total of 16 students between the ages of 18 and 20 years participated in the study, of which 11 were female and 5 were males. The inspirations of this research were the social-cognitive theory and constructive theory, and the hypothesis was that in an organized environment, human behavior is actively contextualized in the social learning process. The research commenced with reflective practices, and employed a sequence of organization, implementation, surveillance and reflection.

Throughout the AR, students' engagement and involvement was the focus. Studio activities should be described with respect to teamwork and individual participation. Assigning individuals specific tasks to accomplish a group output can aid in both individual development and teamwork design (Corazzoa, 2019). The author defined studio context to have many different elements, including using studio as disciplining. Design studio environments offer opportunities for both conscious and unconscious learning (Park, 2020). The research adopted the Conventional Design Studios CDS strategy as structured studios with a systematic learning environment with specific goals and processes. However, these structured studios may have drawbacks which may

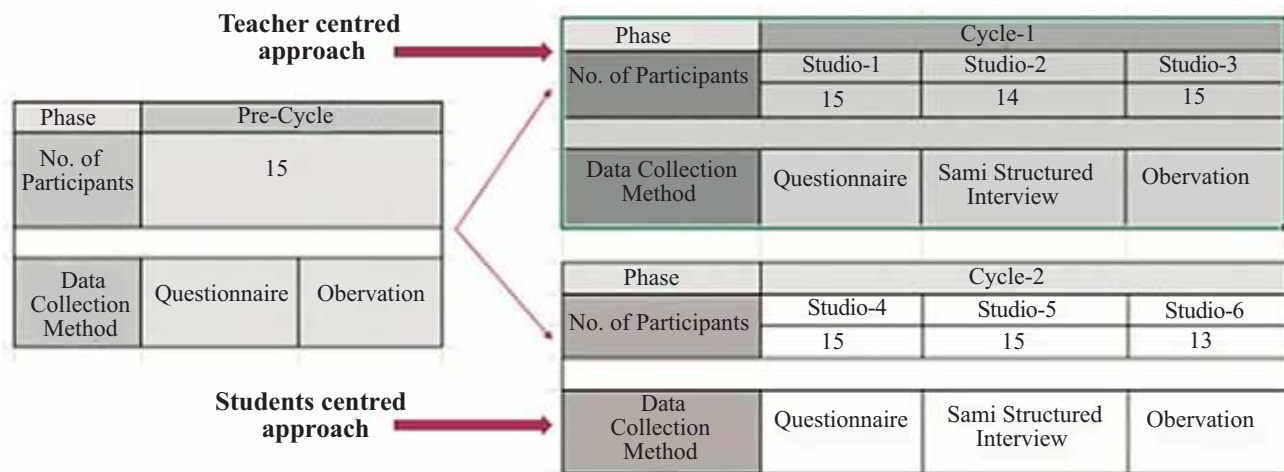


Figure-2: Action Research Cycles and Students' Participation.

create issues in application of the conventional design studio (CDS) processes. The author used semi-structured and fully structured studio pedagogy to see students' motivation to progress in the university learning environment. The teachers or instructors in such studios are expert professionals from the fields. The structured and scheduled task activities makes the learning process more efficient as scheduled.

This research encompassed two primary rotations as cycle-1 (Teacher centered approach) and cycle-2 (Student centered approach), preceded by a phase which supported an understanding of the existing interest levels of students to remain in studio and work (Figure 2). The survey of opinion was conducted in each cycle which helped to get feedback of their struggle in developing quality work during studio timings. After every cycle, students' progress was measured to see their design improvements and drawing developments. Each stage helped to implement a new element of change to enhance the work progress. Students interviews assisted to link each cycle with further modification to get better results. The researcher undertook primary positions as the facilitator, a communicator and an overseer-monitor. In order to grow into an effectual classroom organizer, specific skillsets are required in all three roles (Chadda, 2004).

Data-Collection and Application:

Data collection defines a methodical process of gathering and analyzing useful information using standard and validated techniques, which assists in critical evaluation of positive and negative aspects of the methodology used in the research.

The criteria to check the reliability of a good research is dependent mainly on the application of adequate procedures (Kothari, 2004). To determine the rationality of the research methodology, triangulation method was used (Yeasmin and Rahman, 2012) Questionnaire, observation and semi structured interviews are the main tools applied in all the research cycles.

Questionnaire

To critically analyze students' attitude, perception, values and understanding, '*structured questionnaires*' were used in all research cycles. Its structure was kept short and simple to make it easily manageable (Kothari, 2004). The questionnaire mainly followed Likert scale in order to reduce the time spent in construction and also the participant's response time.

The questionnaire was conceptualized to elicit the students' experiences in the design studio. It was structured to be able to generate data that is comparable and would yield specific responses to the aspects examined. However, the respondents were also afforded opportunities to express personal opinions and experiences. The questionnaire comprised of questions related to the duration of the time spent in the studio, the inclinations to be in the studios, related performance outcomes, physical learning outcomes and the likely aspects that would motivate to be in the studios longer time along with the questions as mentioned in (Table 3). The following table shows an outline of the questionnaire; the types and intended data outcomes (Table 01).

Table-1: Examining Level of Student Performance and Motivation Through Questionnaires in All Cycles

Question	Aspects Examined	Response Style	Expected Finding
Pre-Cycle			
1.	Presence During 5-6 Hours	Multiple Choice of Periods	2-3 Hours Duration
2.	Inclination to be in the Studio	Multiple Choice of Standard Responses	Excuse to go out Occasionally
3.	Performance	Semantic Differential Scale	Average
4.	Physical Learning Environment	Multiple Choice of Standard Responses	Traditional Studio Setting
5.	Self-Motivation	Multiple Choice of Standard Responses	Average
Cycle-1			
1.	Duration	Multiple Choice of Periods	Up to 4 Hours Duration
2.	Inclination to be in the Studio	Multiple Choice of Standard Responses	Improve Studio Presence
3.	Performance	Semantic Differential Scale	Average Good
4.	Self-Motivation	Multiple Choice of Standard Responses	Average Good
5.	Successful Motivational Strategy of Cycle-1	Multiple Choice of Standard Responses	Students Engagement Improve
Cycle-2			
1.	Self-Motivation	Multiple Choice of Standard Responses	Above Average
2.	Preferred Learning Approach	Multiple Choice of Standard Responses	Through Peer Observation
3.	Satisfactory Level of Performance Goal	Semantic Differential Scale	Average Good
4.	Satisfactory Level of Performance Goal	Semantic Differential Scale	Average Good/Fully Achieve
5.	Successful Motivational Strategy of Cycle-2	Multiple Choice of Standard Responses	Engagement and Self-Motivation Improve

Semi-Structured Interviews

Interviews are qualitative research technique to elicit data from individuals about their practices, beliefs or opinions. Semi structured interviews with the set of predetermined questions (Kothari, 2004), were conducted to get direct feedback from the students. The interview questions were carefully selected to receive the opinion answers in order to control bias response (Cohen, Manion, and Morrison, 2011). The questions were categorized on the basis of students' learning experience, behavior and knowledge enhancement (Table 2).

The elicited data collected through qualitative and quantitative techniques were to be meticulously analyzed, to reveal some foretold results, expected outcomes and unidentified strictures (Kothari, 2004). Bar graphs are used to analyze quantitative

data derived from the questionnaire, whereas, circular process over linear progression technique (Kirklees council) is used to study the qualitative data retrieved from observation and interviews. The modification from one cycle to the next process is connected by simplification of data analysis and research findings.

Observation

Observation is an important pedagogy technique to study behavioral science (Kothari, 2004). For evaluating the learning outcomes, teacher's observation being valid and reliable, is considered as '*legitimate source of information*' (Maxwell, 2001; Kothari, 2004)). Both the tools of observation are employed in this research, including incidental and planned tools (Maxwell, 2001), as well as structured and unstructured (Kothari, 2004). Wide-ranging

Table-2: Sample of Questions during Semi Structured Interviews

Semi Structured Interviews			
Sr. No.	Question	Cycles	Category
1.	What Learning Activity Motivated you During the Whole Cycle?	Cycle-1 and Cycle-2	Experience Question
2.	What Activity did not help you to Motivate?		Experience Question
3.	How Peer Learning Activity helped you to Identify your Design Issues?		Descriptive Question
4.	Do you agree that the design progress can be better in the studio environment more than home?		Learning Behavior Question
5.	Do you Agree that Teacher's Feedback can help to Enhance your Design Progress?		Knowledge Question

Table-3: Rubrics for Observation Notes

Observation Checklist				
1.	Personal Interest/ Self-Motivation	Cycles 1	Cycles 2	Cycles 3
2.	Presence In The Design Studio (Duration-5 Hours)			
3.	Design Progress			
4.	Achievement of the Task			
5.	Personal Comments			

and linked rubrics were also designed for the survey to analyze the efficacy of modification in studio periods (Maxwell, 2001). Learners were observed during their studio sessions with the help of rubrics to maintain the focus and coherence in all three cycles. A check-list was prepared to mark their performance and progress as a result of their motivation (Table 3).

ACTION-RESEARCH CYCLES (PLAN-ACTION-OBSERVE-REFLECT), ITS OBSERVATIONS AND INFERENCES

Pre-Cycle

To analyze the prevalent form of teaching process in the studio, a pre-cycle was performed before commencing with the main cycle. A lightly structured studio was used where the researcher acted as a passive observer; where the primary purpose was introduced and sustained with individual design crit.

The students' perceptions of the studio sessions were judged through a questionnaire designed to see the students' behavior. The questionnaire was focused to see students' performance towards design progress and evaluate their presence in long hour studios. Students' response was analyzed and their design development skills and motivation to work in the studio as an outcome was assessed. The data was collected from 15 students. The result was evaluated that there is a need to develop scheduled activities as a strategy to motivate students to stay in studios and progress.

Key Findings of Pre-Cycle

The observation during the pre-cycle indicated that 50% students preferred to remain in the studio for an average of 3 to 4 hours. Half of the class was interested to receive guidance from the teachers, whereas remaining favored to stay back for completing their tasks. Association of the presence in the studio with the performance in design activities was observed to be at a 'medium' level at the scale from high to low. Majority of the students revealed

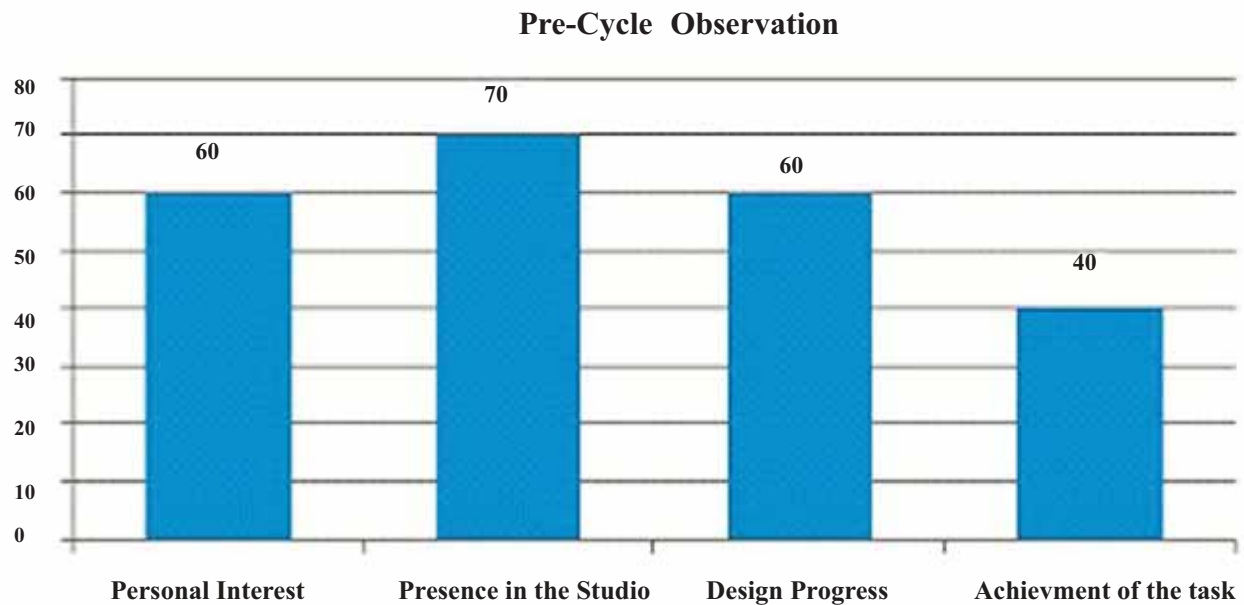


Figure-3: Observation Findings- Pre-Cycle

satisfaction with the studio physical space being adequate, whereas few of them expressed some sort of disapproval or shortcoming (Figure 3).

Pre-Cycle Reflection

The traditional approach of studio teaching, as shown by the data analysis was not always successful. The teacher was unable to focus on the students' individual conceptual process, as well as not playing an active role to inspire them to vigorously contribute in the learning environment. The theory of social learning employs that a person remains a passive receiver of values and behaviors, preserved in a social setting (Tennant, 1997 ; Ashworth, Brennan, and Egan, 2004). Findings of the pre-cycle concluded that some modification is needed to manage students with shared activities. It was also noted that from a questionnaire having multiple choice answers, the resulting outcome was very subjective.

Cycle-1 (Fully-Structured Session):

In the cycle-1, the teacher's role was classified as an active provider, passive-observer and passive-receiver. To inspire the students, a power point presentation related to the design task was displayed. Student-peer-learning was introduced

to facilitate them to provide a design-critique. To get feedback from the students, questionnaires were distributed among them after the completion of cycle-1. Personal observation was noted during studio hours and semi-structured interviews were scheduled with some of the students during working hours.

Key Findings of Cycle-1:

The Questionnaire

The results of the questionnaire showed that 60% of the students preferred remaining in the studio for 4-5 hours, whereas the rest of the students preferred to stay for more than 3 hours. Around 58% students preferred to remain in the studio for perusing guidance from the teacher. A correlation was observed between the students' presence in the studio to their performance in design. It was analyzed that to encourage students to stay in studio, guidance and self-motivation are important factors.

Personal-Observation

Personal observations identified that many of the students left the studio during the recess. Some of the students left the studio for unsubstantiated reasons. Majority of the

Cycle - 1 Observation

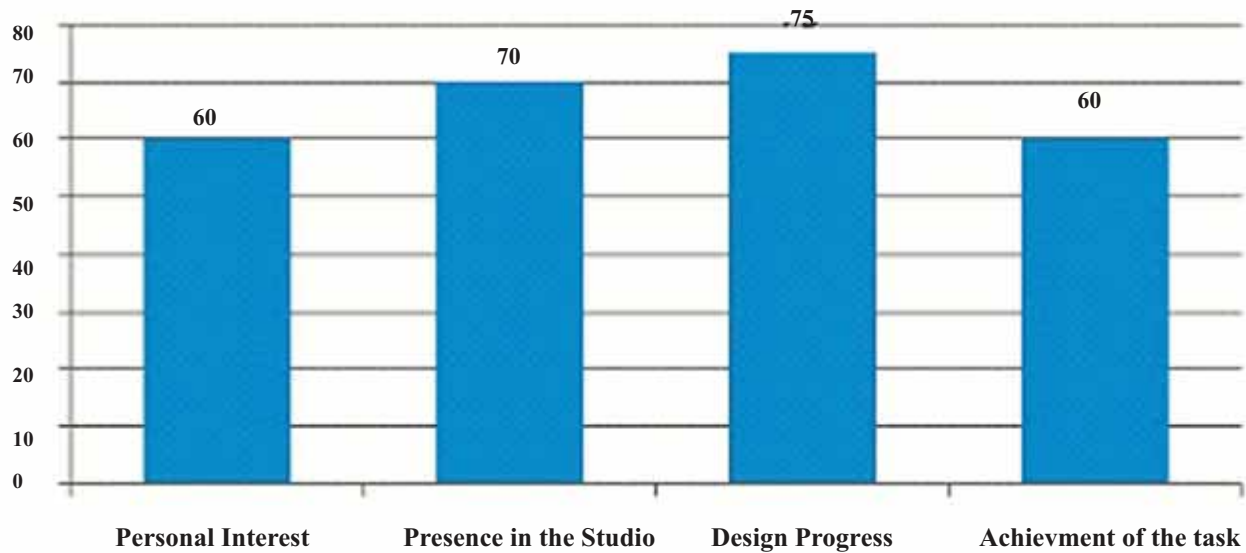


Figure-4: Observation Findings- Pre-Cycle-1

students interacted with each other mainly due to sitting in proximity, while some students interacted to receive peer-feedback.

A good proportion of the students upheld positive communication with the instructor. The educational environment of the studio was enhanced. Teaching sessions were performed in individual sessions and collective discussions. Design development was relatively enhanced during the process Figure 4.

Semi-Structured Interviews

For the semi-structured interviews, four students were chosen based on their individual interests. Most of them responded positively to the studio session modifications. Around 75% students indicated positive reactions to the peer-feedback exercise. All students revealed that when the teacher was fully engaged with them, they were more active in the studio. However, 50% students revealed that they felt dissatisfied during individual student consultations.

Cycle-1 Reflection

‘Structuring’ of classrooms is a fundamental method to facilitate educational process (Williams and Williams, 2011;

Rodrigues, 2013). Getting inspired by the student’s positive feedback on teacher’s active engagement, a variety of activities were introduced in the classroom structure. Being a passive participator, it was observed that students were not very focused on their work as they were continually seeking for teacher’s feedback, guidance and reinforcement to achieve their task. This is coherent with (Smith, 1999) behaviorist orientation stating, ‘One’s behavior is shaped by environment’ to reflect accordingly. According to Margot Syder ‘when you reflect, you take charge of your own learning, so you are totally responsible for yourself’. After analyzing the results of cycle-1, fully structured sessions were converted to fully structured sessions. Reflecting on the findings, potential problem areas were conveniently anticipated which consequently helped in exploring the ideas for their improvements (Fry, Ketteridge, and Marshall, 2008). Therefore, a group of three students in peer-review was arranged instead of two students, to develop a more socially active environment, and different sets of activities were introduced for the assistance of fully structured session (Feldman and Minstrel, 2000).

Cycle-2 (Semi-Structured-Session)

After analyzing the first cycle, the next learning environment was designed as a social-cognitive and in semi-structured-

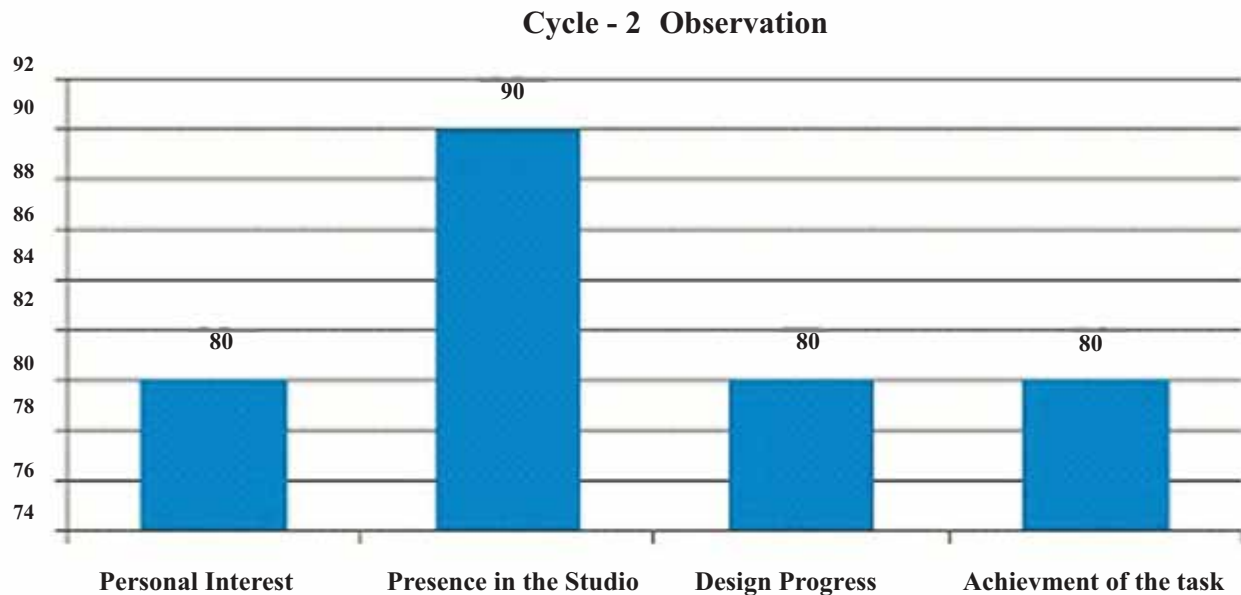


Figure-5: Observation Findings- Pre-Cycle-2

session. The teacher's role was of an active facilitator with an interactive teaching approach, to evaluate the idea that structured sessions create an optimal learning environment (Williams and Williams, 2011). An active dialectical environment was created by cycle-2, in which people and social environment both played an active role. As Freire (2000) endorsed, the social processes mold individual character, specified on the point that adult students should battle methods of enculturation which are isolating and repressive (Tennant, 1997). To develop the environment where teachers inspire students to do their best and to exhilarate them about their learnings, plays an important role in organizing the class rooms (Kagitapu, Ramakrishna, and Rayappa, 2016).

Key Findings of Cycle-2

Questionnaire

During cycle 2, the questionnaire analysis showed good improvement in students' motivation to progress in studio. 100% students preferred remaining in the studio for more than five hours at an average. 75% of the students favored peer support combined with teacher's aide. Studio session

performance was extremely productive. It became evident that teachers help to stimulate self-motivation.

Personal-Observation

An interesting observation was that the majority of the students preferred to have their food ordered to the studio instead of going out for lunch. Social contact was found to be constantly active. Nearly every student was interacting with the instructor and within themselves. Constructive learning was enhanced, and social atmosphere was established. Design development had remarkably enhanced in comparison to the preceding cycle (Figure 5).

Semi-Structured Interviews

In order to get varied responses, four learners from dissimilar groups were nominated. During the interview session, 75% students stated that they agreed with the modified environment. 100% of the students showed contention with the exercise of receiving peer-criticism. Interestingly, 100% of the students revealed that they were more vigorous through the studio sessions. 75% of the students found it valuable with respect to their creative learning.

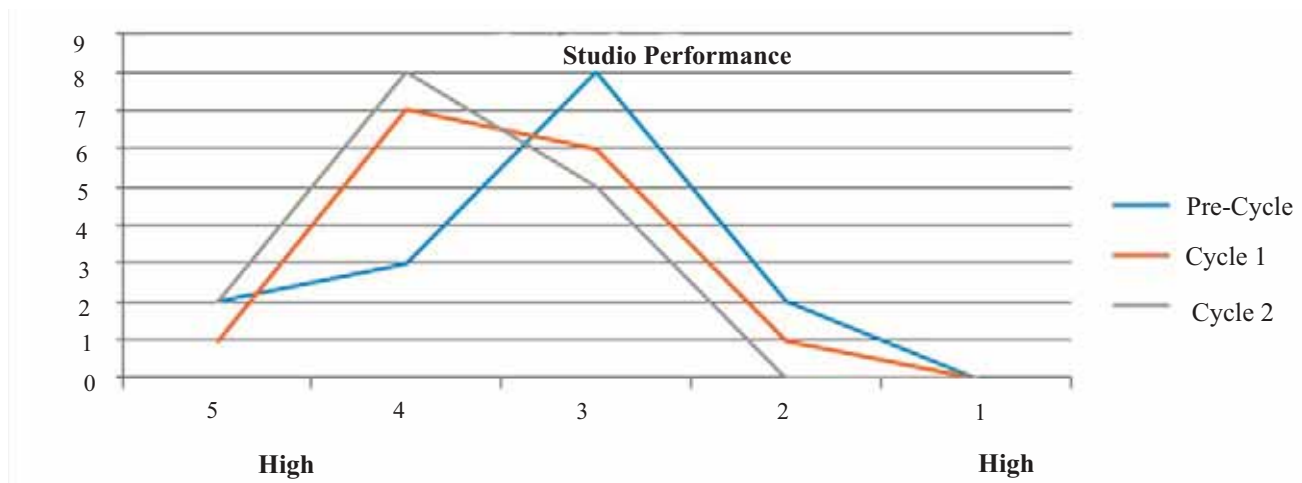


Figure-6: Relationship of Students' Presence in Design Studio with the Performance

Cycle-2 Reflection

Acting as an active participator during cycle-2, it was observed by the teacher that semi structured sessions' outcomes exceeded all expectations. Research imparts that teacher's intrinsic motivation plays a vital role in bringing change as it induced positive change rather than being surface-level (Demyr, 2011). Findings depicted that the students' achievement was significantly dependent on the social atmosphere as majority of them participated actively in a fully-structured studio. It was also observed that may be this motivation for completing the task was influenced, to some extent, for getting the reward. However, learnings of cycle-2 are promising for the continuous improvement in studio-teaching. The idea of Mary and Land (2006), cited by (Fry, Ketteridge, and Marshall, 2008), regarding the development of the threshold concepts assisted the teacher to determine the areas of utmost importance, playing significant roles to help the students (Crawford, 2009).

CONCLUSION

Architecture design teaching does not center on a singular dimension of teaching and learning process. Design studios should be organized in such a way that students are directed towards a multi-dimensional and active thinking process and knowledge-building as a designer. Introducing a change in the current teaching methods, showed that the students' motivation to work in the studio was highly affected by the teachers' efforts. This aspect of teaching is equally important as designing curriculums and planning assessments (Kagitapu, Ramakrishna, and Rayappa, 2016). It validates Bandura's (1986) theory of SCT in which the cognitive learning is

linked with human behavior and the human thinking is affected by eternal environment aspects. Fascinatingly, the McGregor's (1960) X&dY theory of 'human assumption and management' was also analysed to a certain extent, which argues that both aspects are valid in diverse social settings with some management-control and autonomy, so students are self-directed to perform better (Biggs and Tang, Teaching for Quality Learning at University, 2011). The semi-structured-studio where a social-cognitive-environment was shaped allowed for more productive education than the strictly-structured studio, which only partially motivated students to take responsibility of their design. Motivating students to be more reflective in their hands-on learning process is an effective teaching practice for studios, since it invokes reflective learning (Biggs and Tang, 2011). The main research idea of bringing progressive change through motivation in the studio performance was successfully achieved in this action research. The students were gradually motivated in each cycle to work in the studio during the long studio hours. As per findings of both cycles, the semi structured studio showed the strongest impact where the teacher and learner were both occupied in various activities. Contributing and working as an investigator as well as an educator added professional strength to the study (Feldman and Minstrel, 2000). The findings and analysis of the action research reflected that students' motivation in the design progress was improved through different activities from cycle-1 to cycle-2 (Figure 6). There was a noticeable improvement in the performance, especially during cycle-2 with the semi structured sessions. The implementation of different activities during the long hour design studio is highly recommended for any design school.

Recommendation for Future Cycle

This Action Research was a reflective process for the instructor as well as the students. The peer review process gave them confidence to constructively criticize and learn from others work. Collaborative learning is a pedagogical challenge for any studio learning environment. In a very practical context, this action research helped to learn through “action” how to introduce various structuring systems in studio learning that may have more prospects to motivate students learning and progress. It is still unanswered whether integrating digital technology in structuring studio culture

will have a similar impact. The research proposes a future cycle with a change of introducing advance technology association within the studio learning to meet with the new digital challenges. In addition to introducing the advance digital learning tools, the research also proposes another cycle with a change of working with full scale small projects of students’ choice within the scope of their architecture studio project. It could be done in groups where students could be exposed with the Self-Regulated Learning (SRL) which will have life-long impact in their knowledge building (Boekaerts, 1999).

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PUBLICNESS OF PUBLIC SPACES IN METROPOLITAN CITY OF A DEVELOPING COUNTRY: THE CASE OF LAHORE, PAKISTAN

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Article DOI:

www.doi.org/10.53700/jrap3212022_3

Article Citation:

Qalb A., et. al., 2022, *Publicness of Public Spaces in Metropolitan City of A Developing Country: The Case of Lahore, Pakistan*, 32(1). 23-42.



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ABSTRACT

Modern urban design has changed the image of traditional public space and proved significant for raising level of publicness. This study evaluates the publicness of commercial public spaces in Lahore, using the Star Model, widely suggested in the literature, to recommend urban design interventions for improving the publicness of similar public spaces. The level of publicness is assessed against five sets of attributes pertaining to, (i) Access and Linkages, (ii) Symbolic Access and Outlook, (iii) Animation, (iv) Control and (v) Civility. Methodology involves interview-based surveys with the visitors and shopkeepers. Findings show a poor performance by the case studies against the criteria of evaluation. Therefore, research suggests necessary design intervention and concludes on the significance of urban design elements in extruding publicness level of public spaces.

Keywords: Publicness, Public Spaces, Star Model, Urban Design, Moon Market, Barkat Market

INTRODUCTION

Public spaces are a very important part of the urban fabric. These places provide the environment for the city's social life to pulsate and create social encounters. They enrich a society's public life by connecting different spaces i.e., homes, workstations, hospitals, etc. A city's image, social capital, investment, and tourism also get promoted through these spaces. But what is the measure of a good public place? According to Dines et al., "the social value of public space is wide-ranging and lies in the contribution, it makes to 'people's attachment to their locality and opportunities for mixing with others, and in people's memory of places'" (Dines et al., 2006). The concept of 'public spaces' is very

subjective; every person has a very personal perspective on what a good public space is to him/her. The discussion of defining "public spaces" can be broached on three broad levels. Firstly, on individual level, a public space is a very personal experience from one's imagination and understanding. The meaning of public space may vary person to person considering the diverse backgrounds and expectations (Lynch, 1962). Secondly, on practical level, where different ethnic, cultural, political and social groups of public collectively give form to a public space. The real-built environment is molded by different objectives, concepts and expectations. Thirdly, theoretical level, which is sub-categorized into multi-sectoral approach and multi-disciplinary approach.

Multi-sectoral approach considers the functionality and different roles of a public space. Firstly, from social perspective, public spaces (parks, plaza, streets) are places where the encounters happen, or an opportunity opens up to engage in an interaction. These places cater diverse publics and unfolds an enriched public life. Secondly, from economic perspective, public places have greater accessibility to markets and local business. These spaces provide propitious environment to grow businesses along with giving shape to the city's image. Thirdly, from environmental perspective, a public space is a well designed element of urban fabric which provides public an experience of interaction with greenery, pedestrian friendly areas, and with healthy and soothing activities along with the social interaction (Mehta, 2014a., Space, 2007, Van Melik, et. al., 2007, Varna and Carmona, 2014).

Multi-disciplinary approach suggests that public spaces do not just fall under the realm of urban design and planning, but the disciplines of social sciences and humanities as well with it. Each discipline deals with public spaces with different. Sociologist for example, focus on the human interactions and demography; planners on design and planning; legal scholars on the ownership of public space, political scientists on the democratization and rights of public space; geographers on placelessness, etc. This array of conceptualization results in diverse understanding of public space (Space, 2007, Varna and Carmona, 2014).

There is a common sense among these concepts of public spaces that something is missing or lost, thereby, publicness comes in the discussion. In general, publicness is the ideal for a public space. "Publicness is conceptualized as something "out there", measurable, and independent of human consciousness" (Habermas, 1991). Publicness is considered to be the measure of a good public space by many scholars, but as public space, understanding publicness is also an arduous effort. A public space reflects the society's norms, beliefs, ideas, views which is in general the culture of the society. Hence, a public space is a cultural construct and publicness is a cultural reality, which means publicness is an ideal for public place of a certain society at a certain time. Times anchoring is important because cultures and beliefs evolve over a period of time. "The ideal of publicness of the ancient Greeks reflected in the agora where women, foreigners and slaves were not allowed to take part (Mitchell, 1995) seems inappropriate for the contemporary western society's values" (Varna and Carmona, 2014). Similarly, cultures also vary geographically, making publicness a dynamic subject in terms place and time. Therefore, assessment of publicness is not universal all over the world.

A good public space against ideal publicness in developed world cannot certainly be a good public place in a developing country since the expectations and understandings vary from place to place and person to person. For example, in developing country like Pakistan certain shopping malls observe family day on weekend when no male is allowed to enter a mall with a female companion, or many activity areas have designated family areas where no male is allowed without family. The subject of public places has been vastly discussed for the developed countries but rarely it has been taken up for developing countries especially with a critical eye for cultural, geographical, and historical disparity. This study, therefore, examines the publicness of public spaces of major city of Lahore, Pakistan, with a perspective of developing world.

T TYPOLOGY AND PUBLICNESS OF PUBLIC SPACES IN CITIES OF DEVELOPED AND DEVELOPING COUNTRIES

Public space is a common ground where people carry out the ritual and functional activities that bond a community together whether in normal daily life or in festivals. In our daily lives, many places are captivating because of their uniqueness in the architectural plans, or urban designs. Public space is rooted in the ideals of Ancient Greece and is more often associated with citizen group gathering at a place to discuss public issues, to produce open and free public debate, and to formulate public concern. Public space is a stage where the drama of communal life unfolds. The street, public square and park of the city give the form to the ebbing and period of the human exchange. These dynamic spaces are the essential vis-a-vis to the more settled places and routine of the workplace and human life, providing the channels of movement, the modes of communication and the ground for play and relaxation.

All the actors involved in the performance of the metropolis such as architects, businessmen, civil or traffic engineers, and others understand the meaning, the importance, and the value of public space from different points of view. Considering all actors, Public Space is defined comprehensively as: the place where people see and are seen by others as they engage in public affairs, it is thus, the space for town hall meetings, the legislative assembly or any other venues where public business is done" (Mensch, 2018). Similarly, in the context of the above definition "The Cultures of Cities", expressed Public Space as: "Public space is important because it is a place where strangers mingle freely, but they are also important because they continually negotiate the boundaries and markers of human society. As the site and sight, meeting place and social staging ground,

Table-1: Type of Public Space; Descriptions and References.

Types of Public Spaces	Description	References
Street and Sidewalks	Sometimes a path becomes destination. As pioneering urbanist Jane Jacobs said: "Streets and their sidewalks, the main public places of a city, are its most vital organs... If a city's streets look interesting, the city looks interesting; if they look dull, the city looks dull". Streets and sidewalks of the city serves as connective tissue in a society in which people live in interdependence. Streets in city service provide many purposes besides carrying pedestrians	(Efroymson, et. al., 2009), (Jacobs, 1989)
Neglected Places	Some places are often neglected in a sense that they are littered and poorly maintained, otherwise they serve their purposes perfectly.	(Carmona, 2010)
Invaded Space	In a city where traffic congestion becomes a major problem, public spaces some times get invaded by cars places and loose their purposes.	(Carmona, 2010)
Stealthy Places	The places which have been camouflaged by different intervention and visual hurdles, and often get ignored because of them.	(Carmona, 2019)
Virtual Spaces	With technological advancement people are getting more connected virtually through internet. So virtual spaces can be categorized as chat rooms, radio phone-ins, etc.	(Carmona, 2010)
Unscripted Places	Unscripted place is defined by its effective and robust utilization of space for a wide range of different purposes. "Unscripted places are also efficient places in terms of use of space, as the same space can be used in different ways at different times by different people. A tree is shade, shelter from rain, a place to tie a dog, something to climb on, a source of fruit. Playground equipment can be used by joggers to stretch. A plaza offers itself for concerts, events, tai chi, ballroom dance, football, a festival". An unscripted place includes parks, public gardens, plazas, squares, lakes, etc. Some are vast green spaces with paths, and some are paved areas for exercise or events, lakes, restaurants, cafés, and informal shops and eateries. Such spaces are much loved and do much to enhance the quality of life of those who can use them.	(Efroymson, et. al., AR 2009)
Commercial Places	Commercial places include shopping malls, markets, supermarkets, and covered bazaars. All these areas are new spatial forms, as a synthesis of world life and retail gained new meaning besides economic interchange as a gathering space for social exchange and as a site of communication and interaction. These are not only a collection of shops; but also carefully designed to promote consumption and to provide entertainment.	(Morrison and Art 2003)
Indoor Public Places	Places in city where people meet, interact, read, eat, drink and play in a closed environment, can be categorized as indoor public places. For example, libraries, cafes and restaurants, clubs and bars, gyms, recess rooms, and shopping malls.	(Efroymson, et. al., 2009)
Outdoor Public Places	Public spaces which provide an open environment can be termed as outdoor public spaces. For example, parks, playgrounds, lakes, beaches, sidewalks, stadiums and picnic areas.	(Efroymson, et. al., 2009)

public spaces enable us to conceptualize and represent the city” (Zukin, 1996). It can be deduced from the above definitions that such spaces are highly public in nature rather than private, and accessible to common people for many purposes.

Types of Public Space

Several contextual definitions to public spaces can be found with respect to different aspects. These aspects can include the use of public space, design of public space, safety and control of public space, ownership of public space, etc. A public space can be described as commercial space if the predominant use of space is commercial or it can be called stealthy space if the design elements makes the place inconspicuous in urban form of the city. Therefore, contextual definitions of the public spaces are explored in (Table 1) to grasp the nature of public space.

Quality of Publicness and Public Spaces in Developed Countries

The quality of public spaces is a big determinant of quality of life. The proper scale of urban space is very important for the enhancement of public space like in the case of Japanese cities priority is given to pedestrians that's why open spaces are given near the crossroads where benches are provided for people sitting and small open spaces are provided before the entrance of major commercial buildings. Mass transit stops are also provided on these crossroads to enhance people's interaction and it becomes the meeting place of people. Tokyo, the Capital of Japan, has created stations as a public space and gives an image that stations are the face of the town that interconnects the city and socialization of citizens also increases by these places (Sorensen, 2009).



Figure-1: Melton Mowbray, Leicestershire, England

In European cities, public spaces are symbolic landmarks and used as an instrument to portray the image of an urban city of Europe. European cities have public spaces that create a sense of Roman architecture in their theaters, buildings, museums, gardens all are built upon this pattern. Public spaces create a sense of belonging to the city because the urban forms are so beautifully developed and interrelated with each other.

Stockholm, Sweden, known as the city of island, the waterfront is the heart of the town, along with many other public spaces present with multiple uses. Quality of many publicness is also good as access is easier, different types of activities are present there. Due to the low level of traffic flow, cycling and walking is a great pleasure and attraction along the shores. The intriguing design of city halls also adds to the beauty of shores.

Venice's famous canals make its streetscape into the seascape. In Venice, roadways/seaways are the most beautiful parts. Its urban environment, urban design and publicness feature make it unique. Every scene gives us a unique imprint that lasts forever in our minds. Life is present on pathways where you are lost and enjoy lots of things.

Publicness of Public Spaces in Developing Countries

In the scenario of developing countries, public spaces do not seem to be a priority of people and their government authorities. They are not properly regulated. Whereas, private developers who establish large commercial centers with a profit-oriented approach, aim to maintain their standards for attracting people toward these public spaces through proper regulation. In Mumbai besides conventional site allocation for the public spaces through urban planning, people also poach the streets to use them as public spaces.

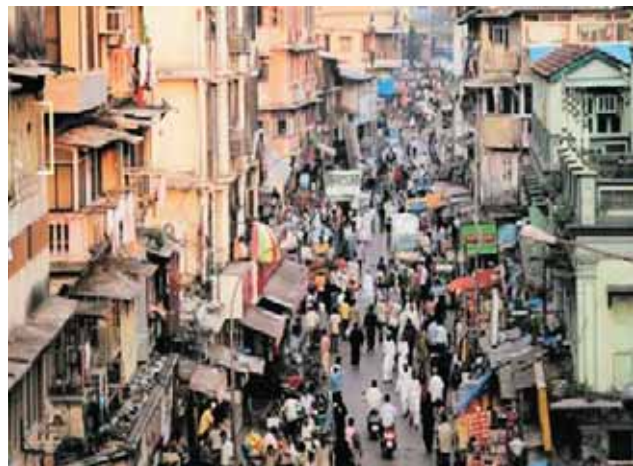


Figure-2: Street Market, India

Frequently they are outside on the streets for various purposes i.e. seating for a nearby tuckshop. The mixed uses and minimal traffic flow on streets allow people to turn them into a playground or the public square. People have leisure chats with each other in the street sitting, and conduct marriages or festival celebrations in streets through a temporary transformation of streets into venues with the help of tents. Only 6% of the total spaces are made up of open spaces and the remaining 45% are partially or fully encroached (Biswas, 2013).

Ekdi and Cyracy (2015) evaluated the publicness of public spaces of Istanbul, Turkey, through fuzzy logic modelling. The study takes account for the fuzziness in the definitions of public place and publicness. The public spaces i.e. Taksim Square Beyoglu, Besiktas Barbaros Square, Beyazit Square Fatih, Tunel Square Beyoglu, Kadiköy Square Kadikoy and Aya Sofya Square Fatih were evaluated on the parameters of management, accessibility and users. The novelty in study superimposes qualitative and quantitative parameters of different dimensions of publicness. However, the notion of publicness in the study was majorly influenced by Turkish perspective which is different from the western world in terms of production of the place, democratic involvement and public participation. The empirical results show that no matter if all six places were centrally placed in Turkey, there were still variations in the dimensions of publicness. Findings also highlight the relationships between different dimensions of publicness such as control measures affect the public's perception of safety or the prevailing relation between animation and user's activity. All six places were publicly owned but they had varying management regimes. Excessive control and policing have caused the erosion of the publicness in these places. Aya Sofiya Square was found with the best

score in publicness. The study concluded that the publicness of the public space strongly depends upon the politics and governance of leading authority.

In India, Praliya and Garg (2019) employed Public Space Quality Index (PSQI) to develop and apply a framework for evaluating public spaces from three different cities i.e. Delhi, Dehradun and Roorkee. The study postulates on the narrative that there is a distinct difference between western and Indian contexts with respect to norms and provisions of public space. The quality of the public places was assessed against 49 different parameters categorized in 8 dimensions i.e. Accessibility and Linkage, Maintenance, Attractiveness and Appeal, Comfort, Inclusiveness, Activities and Uses, Purposefulness, and Safety and Security. The study considers five parks from Delhi i.e. SwarnaJayanti Park, ParshuRam Park, Central Park, Children Park and Mahavir Park, two from Dehradun i.e. Gandhi Park and MDDA Park, and one from Roorkee i.e. Ganga Park. Comparative evaluation between the case studies shows that parks from Delhi have high index level in comparison to Dehradun and parks from Dehradun have high index level than Ganga Park from Roorkee. Delhi is the capital city of India and Dehradun is a medium city with high amenities observation study depicts that satisfaction with different parameters of the quality of public place is directly related to the governance and management policies of the city. Safety and security were seen as the major concerns for almost all case studies, whereas, Children Park, Delhi had the maximum level of space quality index.

Hagenbjork (2011) conducted an analysis on Chinese urban spaces in Beijing. The observation/interview based qualitative study peruse the form, activity and image of 4 different



Figure-3: Colombo, Sri-Lanka



Figure-4: Alhambra Art Centre, Pakistan

types of places i.e. Zizhuyuan Park, Tian'anmen Square, and Yingtao Byway. The study presents that the Chinese urban places tend to be huge and intimidating expressing the insignificance of individuals and the power of regime. Chinese architecture is full of expression symbols and meaning, and is hard for those who do not have depth of Chinese knowledge. The study describes the difference between the European cities' spaces and Chinese cities' spaces i.e. in European urban spaces you can see the vastness of the place whereas Chinese urban spaces consist of several enclosed spaces.

In Sri Lanka, public spaces are attractive venues for physical activities. Public spaces live up to their full potential as they are accessible by neighborhoods at walkable distances. But improvements in the urban designs of the existing places require new lively elements designing to make it more captivating for people. Therefore, the Sri Lankan government has started a renewal program for those grounds which are either encroached or neglected for a long time and have the potential to be uplifted. Different projects have been initiated to enhance the quality of public space.

In local context, not much is done in exploration of evaluation criteria for the publicness of public spaces. Mazhar et al. (2015) evaluated the thermal comfort of outdoor spaces in Lahore, Pakistan. The study compared two public spaces: first modernistic with concrete pavement known as Alhamra Art Centre and second 16th century-built Shalimar Garden, Shalimar Garden, have greener environment in comparison to the Alhamra Art Centre.

Microclimatic parameters were measured for both places and data was used to stimulate thermal sensation through energy budget model COMFA. Exposure of solar radiations

was seen much higher for Alhamra Art, Center in comparison to Shalimar Garden. The study states that Shalimar Garden, a centuries-old open space consists of 62% shade trees, 18% grass, 7% water ponds, and 13% brick pathways and brick boundary wall, whereas the Alhamra Front Courtyard, a contemporary open space, consists of 100% hard, unshaded surfaces (brick, steel, glass, asphalt, and concrete) (Mazhar, et. al., 2015).

In another study, Pasha (2012) explored the urban environment issues in retail oriented area of Tariq Road Karachi. The study aimed at establishing insights for context sensitive design through theoretical foundation from other cities. Problems and issues regarding the built environment were explored through observation sheets, interviews and surveys. The case study presents a typical look of a commercial street in Pakistan.

Methods for Assessing Publicness

Publicness is not universal all over the world. Publicness is a very subjective term as public spaces change geographically, culturally and historically. In the past, major work has been done for the developed countries in the discipline of public space which cannot be universally applied for developing countries because of varying cultural and historical backgrounds. But there are assessment models build to gauge the publicness of public spaces against certain parameters which can be used for developing countries after some modifications pertaining to the subjectivity of the definitions of those parameters. The debate on the assessment of publicness of public spaces starts with the dual nature of public spaces: historical construct and cultural reality. Historical construct of public spaces has various methods of assessment available such as focus groups interviews or



Figure-5: Shalimar Garden, Pakistan



Figure-6: Nodes at Tariq Road, Pakistan

questionnaires from key actors and detailed document analysis of the available literature. But cultural reality is tricky subject for assessment because of subjective variability in its definition. Many partial attempts have been made to narrow down this broad subject, but each attempt is destined to be flawed due to the subjective nature of concept of publicness.

Benn and Gaus Model was one of the earliest model for assessment discussed in “Public and Private in Social Life” (Benn and Gaus, 1983). The criteria used to evaluate were access, agency, and interest. The authors wanted to evaluate how much public space is open to citizens of society. But this model was a limited exploration for the dimensions of public spaces. Similarly, Van Melik et al. (2007) has explored the assessment of public spaces with respect to one dimension, management, in the study, “Fear and fantasy in the public domain: the development of secured and themed urban space”. The study compares two differently managed spaces: ‘secured’ and ‘themed’ ones. Németh and Schmidt, (2007) have also explored the dimension of management of public spaces and tried to quantify measurement on the security of public spaces. Both of these studies have been significant in initiating the work on the assessment of public spaces, but Melik et al., (2007)’s work was also a limited exploration and Nemeth and Schmidt, (2007)’s work had become complicated for the practical application due to major

emphasis on the dimension of ‘design’ and ‘use’ of public spaces. Another study for assessing the publicness of public spaces was conducted on the Parks of Colombo and Sri Jayewardenepura, using the parameters such as visitor’s environment, available facilities, vicinity, mode of access and level of shelter (Bandara et al., 2013). But a rather wholesome approach was developed by CABE’s publication of ‘Spaceshaper’ (Space, 2007). The Spaceshaper has been developed as a practical toolkit for almost anyone with the exploration of each dimension of public space. But this toolkit evaluates the quality of a public space through the users’ perception and interest in the public place. Therefore, the evaluation is subjective to the user’s interest in the place and what is a good public place to that user. After all this document analysis on the techniques and methods to assess the publicness of public spaces, it was concluded to find a balance between the subjectivity, objectivity, robustness and applicability of the approach. Two approaches were felt suitable for this study: Public Space Index and Star Model approach. Public Space Index is true wholesome approach, evaluating all five dimensions of public spaces with a mix of objective observation by research and subjective perception by user (Mehta, 2014b). Public Space Index explored the dimensions; ‘inclusiveness’, ‘meaningful activities’, ‘comfort’, ‘safety’, and ‘pleasurability’. A total of 45 variables were used along with their weightages to assess the publicness on the scale of 0, 1, 2, 3 as very limited, low,

Table-2: Star Model; Dimensions, Indicators, Descriptors, and Measuring Criteria.

Dimensions of Public Space	Indicators	Descriptors	Descriptors
Ownership Status	1. Ownership Status	Degree of influence general public has on management of public space. Therefore, place owned by public authority, elected democratically would have high publicness.	Determined by observation using document analysis and interviews with key actors
	Physical Configuration		
	Macro Design		
	2. Access Routes	Access and permeability to the place can be measured through observing enough access points. In case of busy road near public place, provision of pedestrian crossing and bridge needs to be observed	Determined by observation and layout plan of a public space
	3. Access to Activities	Special consideration needs to be given to the use of public space by differently abled people. If the public space is on ground level, then it is public for users of wheelchair. Otherwise, provision of ramps and stairs needs to be observed.	Determined by observation

Micro Design

4. Public Walkways	Availability of public walkways promotes pedestrian lifestyle and positively affect publicness	Determined by observation using counts
5. Public Walkways	Availability of public walkways promotes pedestrian lifestyle and positively affect publicness	Determined by observation using counts
6. Fences	Presence of fences have an adverse impact on the visibility and accessibility of the public place. Therefore, tall and opaque fences with less entrance points were considered less public and vice versa.	Determined by observation
7. Parking Plaza Slope	Comfort of parking is considered positive for the publicness of the public space	Determined by observation
8. Sitting opportunities (benches)	There is no standard as to how many benches and of what size need to be provided for public space of a certain area. Therefore, rating can be given on the basis of position and comfort of the benches.	Determined by observation
9. Walking opportunities (pavements)	Walking pavements need to be easy going for the children, elderly and women with heels. Lowest rating was given if the easy pavements were available in less than 25 percent of public space.	Determined by observation
10. Opportunities for active engagement (Fountains, monuments, landmarks)	People's interaction happens when there is something to look. Lack of these elements was given lowest rating and presence of more than 3 were considered for highest rating.	Determined by observation

Control

11. Control presence: presence of security guards/ policemen	It is debatable if the presence of guards/policemen should either be there to ensure safety or not, to ensure open access. Here the highest rating was given where there were policemen to ensure safety. Private guards were rated medium and absence of guards/policemen was considered lowest.	Determined by user's subjective rating
12. Control Technology: CC TV Cameras	Similarly, presence of CCTV cameras was also taken subjectively. Their presence was considered highest rating in terms of ensuring security.	Determined by observation

	13. Control Signage	Signage like ‘no photography’, ‘no pets allowed’, ‘no food and drinks allowed, etc. will discourage the publicness. Hence, their absence was marked highest rating.	Determined by observation
	14. Control design: barriers for security	Security barriers and checking points are made to check if a person not wearing anything. Presence of such elements adversely affect the publicness, therefore, rated lowest.	Determined by observation
Ownership Status			
	15. Presence of small-scale vendors	Diversity of public is not a measurable indicator as one cannot be sure of the gender ratios, ethnicity variances, or cultural/class variances etc. for a certain account. Secondly, it is not measurable standard as what ratios of these different groups of public should be present. Therefore, existence of micro-economic activity in form of vendors depicted the diversity of public attracting the economic activity. Their presence on entire site was considered of highest rating.	Determined by observation
	16. Diversity in Activities	Diversity of activities i.e. food, restaurants, shopping areas, playing areas, etc., is also the depiction of number of users coming to the place. Therefore, less than 3 activities happening simultaneously at a public place were rated as lowest.	Determined by observation
Control			
	17. Facilities of public toilets, ramps, stairs	Facilities of public toilets, ramps and stairs were rated high when their provision was ensured along with their tidiness and cleanliness.	Determined by observation and user’s subjective rating
	18. Physical maintenance of soft and hard components of landscape	Physical maintenance of soft and hard landscape elements was rated high when the benches, dustbins, lighting poles etc. were in right condition.	Determined by observation and user’s subjective rating
	19. Management of land use, green spaces and parking	Management on land use was rated high when there was no restricted land use/encroachment was contracted. Green spaces were rated high when the branches and shrubs were trimmed, and greenery looked alive. Parking provision was rated high when there was proper parking place ensured along with security of the vehicles.	Determined by observation and user’s subjective rating

Notes:

Weightage of each of the Dimensions of Public Space is 1.

Scoring Criteria for Ownership Status: 5 = Owned by Public Authority; 4 = At arm's length to public ownership; 3 = Jointly owned by public and private; 2 = At arm's length to private ownership; 1 = Privately owned.

Scoring Criteria for all other dimensions: 5 = Highly Public; 4 = Public; 3 = Moderately Public; 2 = Less Public; 1 = Poorly Public.

Average: Highest possible score can be 5, which will be measured by taking average of the scores of sub indicators.

medium and high respectively. The applicability of public space index was challenged in the developing country because the weightages of the variables were not felt to be universal culturally and geographically. For example, due to subjective nature of publicness presence of CCTV camera might present control over public in western world but in a developing country like Pakistan which is struggling from terrorism, the presence of such elements is positively for publicness ensuring safety. Moreover, scale of 0, 1, 2, 3 leaves the place for assessment where there is mediocrity in the response.

A Star Model, is based on the principles of simplicity and usability (Varna, 2016; Varna and Damiano, 2013). The model provides a complete objective and observation-based method to evaluate the publicness of public spaces. Therefore, modifications of user's perception evaluations were incorporated to add the local subjectivity of the place.

Nevertheless, it still is a very straightforward method for practical application due to equal weightages to all its indicators of publicness. The star model is based on five meta themes of publicness of public spaces: Ownership, Animation, Civility, Control and Physical Configuration. Each of these meta themes had originally a total of 19 sub-indicators which were equally weighted and to be measured objectively by the researcher. Critics may argue giving equal weightage to all factors was not a right approach. But it is also not possible to apply same weightages for different cultures. While different weightages may increase the accuracy in the assessment of publicness, but it also limits the applicability of the model universally as well. Observation based analysis can also be critiqued, for example, negative connotation given to those places which have security guards because their presence radiate a sense of control over public, can be wrong. Because, users'

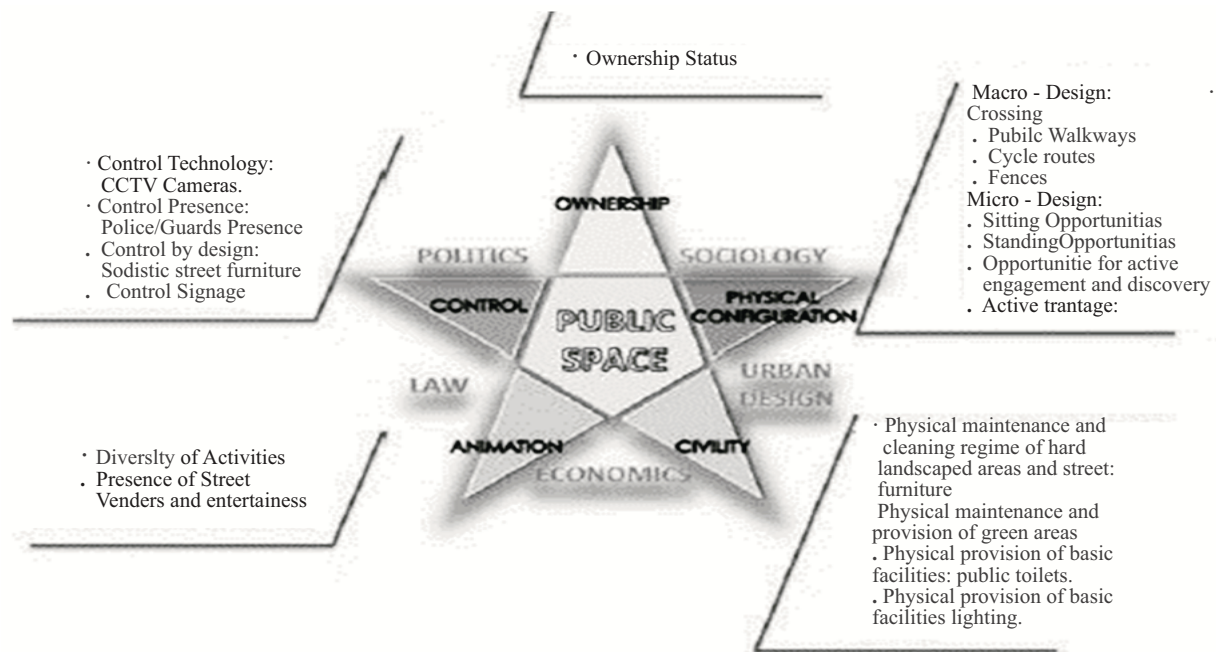


Figure-7: Varna's Star Model

experience, on the contrary, can perceive a sense of safety in their presence. Therefore, observation-based analysis can be biased because user's point of view is also important who visit these public spaces frequently.

In the context of Pakistan, the Star Model was applied with 5 meta themes and 19 sub indicators Table 2. The descriptions or definitions of some sub-indicators were modified with respect to local and cultural subjectivity. For example, families prefer those environments which restrict male entry to the place without a female companion or the presence of guards/policemen give sense of security to the general public in place of feeling control over the extent of access to the activities. Moreover, the objective and biased nature of the Star Model was neutralized by involving user's perception evaluation for some indicators.

After defining the indicators, descriptors and measuring criteria, decisions were needed to be made on how to calculate the publicness. Initially, case studies were needed to be chosen for the practical application of the star model. Most of the new public spaces were created in the newer parts of Lahore city in the contemporary period. Two case studies i.e. Moon Market and Barkat Market from Lahore were agreed upon on following reasons. Firstly, as the model has not been explored subjectively in the local context, therefore, it was found suitable to have a study on two areas. Secondly, scope of the study was limited to one city for the in-depth analysis because subjectivity of the indicators was changing over different cities, therefore, a study on different cities would have been at the cost of losing depth in analysis. Thirdly, it was decided to have similar case studies, with a more robust and comprehensive comparison between the sites. Majority of new public spaces from newer part of Lahore share similarities in terms of their layout planning, time and purpose of development at vital points of the new city aimed to increase cohesion between local population. The new public places were also selected on the thought

that they will be better for assessing if indeed these sites have successfully added into the urban fabric of the city.

Several reconnaissance trips were made to the case study site to collect the research's own observation and user's subjective rating. Observation sheet and questionnaires were used as the research instruments. Converting the user's subjective rating into scores for a certain indicator was a tricky matter. Scoring criteria for judgement of an indicator was kept same for the user and rating given by majority was considered to be score by user. Average for both of the scores of researcher and user were taken to calculate the final score for a certain indicator which was to be determined by both observation and user's subjective rating. Next decision was about selecting the number of users for the representation of local subjectivity of whole population. Researchers' community have a consensus that the minimum sample size for generalizability of a study is 30 (Louangrath, 2014). Nevertheless, Multistage Nonfinite Population method was consulted against the confidence interval of 0.95 and error margin of 0.05 to get sample size for users as 100 to represent the whole population. This new method is based on the specified alpha level. Using the random error: alpha level as the basis to calculate the sample size. Shopkeepers and users were selected through random sampling. After calculating scores for all the indicators, averages of the indicators under a certain meta-theme were taken to find the score for that meta theme. Scores of these meta themes were used to generate the star diagram and to represent the publicness of the case studies.

Description of Selected Spaces

Moon Market and Barkat Market were chosen as case study areas. Originally these markets were planned and developed for the people who were living in Allama Iqbal Town and Garden Town. Later on these became the central market of surrounding schemes. People came here to enjoy shopping



Figure-8: Location of Moon Market



Figure-9: Location of Barkat Market



Figure-10: Street View Moon Market

and get together with their families. By the increase of traffic these areas became overcrowded with congestion developed other problems developed in these areas. These two centers are important in terms of public life, and then its design features and characteristics, will be discussed in detail in later paragraphs. These markets are pedestrian oriented, still due to encroachments and traffic congestion the situation gets worst. These markets are under control of (LDA Lahore Development Authority). The following section describes the existing situation of case study markets.

Location

Moon Market is a popular market situated in Allama Iqbal Town serving the town and its surrounding areas. Allama Iqbal town, named after the national poet of Pakistan, comprises of 1600 acres of land and envelopes Moon Market with 7.2 acres of land. As per latest estimate Iqbal Town population is 843,133 (Alhasan Pvt. Ltd., 2014). Iqbal town is surrounded by Nistar Town, Samanaabd Town and Gulberg Town. Gulberg and Samanabad are good in terms of socio-economic conditions. Diversified activities are present in the market like grocery shops, garments, jewellery, stationary shops, Banquet hall and offices. Moon Market is accessible from different major roads of Lahore i.e. Nadeem Shaheed Road, Main Boulevard Allama Iqbal Town, Fazl-e-Haq Road, Multan Road, Wahdat Road, and Hafeez Taaib Road.



Figure-11: Street View Barkat Market

Whereas, Barkat Market is a commercial area in the Gulberg Town, Lahore. Barkat Market has an area of 16.3 acres while Gulberg town has an area of 10,760 acres. Gulberg town has a population of 849,081. Gulberg town has become the center of Lahore and is surrounded by Samanabad town, Iqbal town, Nistar town, and Cantonment. People of Gulberg town majorly belong to upper and middle class. Socio-economic conditions are very promising in this town. It is serving the posh areas like Model Town, Faisal Town, and Gulberg. It is accessible from different major roads i.e. Ferozepur Road, Khayaban-e-Jamia Punjab Road, Main Boulevard Garden Town, and Usmani Road.

Salient Features

In Moon Market, building height of most of the buildings is 1 to 2 stories. The facade or the physical appearance of most of the buildings is not attractive. Most of the buildings have old design and architecture and also in poor condition. There is a parking plaza which is at present under construction, meanwhile visitors park their vehicles along the fence of the central park. At night, visitors feel difficulty in movement due to congestion in the area.

Barkat Market is formed in semi-square shape. There is segregation in the placement of activities in Barkat Market. Number of food shops and restaurants are at the left side of the market, while right side is for garments, grocery,

Table-3: Scores Against Indicators of Star Model

Indicators		Moon Market	Barket Market
Ownership			
1	Ownership status	4	4
Average		4	4
Physical Configuration			
Macro Design			
2	Access Routes	4	5
3	Access to Activities	1	1
4	Public Walkways	1	4
5	Cycle Routes	1	1
6	Fences	4	4
7	Parking Plaza Slope	5	5
Micro Design			
8	Sitting Opportunities (benches)	3	4
9	Walking Opportunities (pavements)	1	2
10	Opportunities for Active Engagement (fountains, monuments, landmarks)	1	1
Average		2.3	3
Control			
11	Control Presence: presence of security guards/policemen	2	2
12	Control Technology: CC TV Cameras	2	3
13	Control Signage	3	4
14	Control Design: barriers and bollards	2	3
Average		2.25	3
Animation			
15	Diversity of Activities	5	5
16	Presence of small-scale vendors	4	4
Average		4.5	4.5
Civility			
1	Facilities of public toilets, ramps, stairs,	1	1
2	Physical maintenance of soft and hard components of landscape	3	4
3	Management of land use, green spaces and parking	2	4
Average		2	3

jewelry, shoes and other retail shops. In basement there are number of tailor shops. At the rear side there are small shops of clothes, shoes, saloons and parlors.

According to its design, it has an arcade of almost 7 ft. and then footpath of 30 ft. for pedestrian movement but due to encroachments pedestrianized movement is hindered. Mostly buildings are 4 stories high.

Results and Discussion

Evaluation results were found by accumulating the scores of user's subjective rating and research observation into single number. Following is the detailed scoring done against all the indicators, discussed separately in coming section:

Users' Profile

The demographic section consisted of information about name/gender, age, level of education, marital status, occupation, income level, residency, mode of transport frequently used. Majority of the visitor respondents from both case studies were female with a percentage of 68% collectively. Similarly, collectively 83% respondents were in age group of 21-30 years old and collectively 78% were unmarried. In addition, 80% of respondents from both areas collectively were graduates or under graduation. Employment status of the respondents was, 40% public servants, 29% private workers and rest were students.

Surveys were also conducted from the shopkeepers of both commercial centers in order to understand the sense of publicness that shopkeepers attribute to these shopping centers in relation to access, interest, and control.

Based on data all the responding shopkeepers were male, only there is one shop/ boutique in Moon Market whose owner is female. The age distribution shows that most of the shopkeepers are young between the ages of 20- 40 years. Most of the respondents come from near-by areas as 40% shopkeeper belongs to Iqbal Town while in Barkat Market 70% respondents come from the Garden Town. Due to the proximity between residential and commercial areas maximum respondents use motorbikes as mode of transport. Talking about the level of education most of the respondents of both areas have qualification up to higher secondary school level.

Ownership

Ownership status defines the legal status of the public space and illustrates the degree of role that general public has in the management of a public space. Only one indicator was taken for the ownership status. The indicator was divided

into five levels of variation: publicly owned, majorly public and minorly private, public private jointly owned, majorly private and minorly public and privately owned. General public has more role when a public space is owned by a public authority elected democratically. User's subjective interpretation about this indicator was that no matter who owns the place our voices are least heard in the matters of management of the public places. There was also a prevalent belief that a public space owned by private owners is well-managed and looks after the interests of users because they have to maintain their market. Anyhow, there is an aggregate way to measure the ownership status of a public space where both actors are involved in the management. In case of ownership both of these public spaces were similar as both were entirely managed by a public body i.e. Lahore Development Authority, which is held accountable to democratically elected representatives of public. But the shops ownership was private. Still the management of the places were at the arms' length to public ownership. Therefore, a score 4 was evaluated for both places.

Ownership status of the case studies was found similar to the public spaces of developing countries i.e. public places of Indian and Turkish cities (Ekdi and Cyracy, 2015; Praliya and Garg, 2019). Praliya and Garg (2019) pointed out in their study that all 8 case studies from three different Indian cities were publicly owned and managed. Similarly, Ekdi and Cyracy (2015) described six case studies from Istanbul as publicly owned. Meanwhile, Glasgow's experience of regeneration of riverfront from developed country, shows a divided ownership in Varna's study (Varna and Carmona, 2014). Varna and Carmona (2014) also explain in their study that if the publicness of a public place is measured against an axis which has one end as ideal private place and the other end as ideal public place then most of public places would lie in between of this axis. As Kohn (2004) explained that most of the public spaces are neither private nor public but they exist in grey area in between these two. But in depth examination of Moon and Baket Market also resonate with Marcuse (2004)'s scale of legal ownership i.e. public ownership/public function/public use (street, square), public ownership/public function/administrative use, public ownership/public function/private use (e.g. space leased to commercial establishments, café terrace), private ownership/private function/public use (e.g. shops, cafes, bars, restaurants) and private ownership/private use (e.g. home). Therefore, the case studies have a certain level of similarity with public places of developed countries but Varna and Carmona (2014) argue that a most public situation transpires when a public place is owned by a public body, mandated to act in favor of public interest and answerable

to elected representatives. But in a developing country where the priority areas include food, clothing and shelter, a diligence towards owning, controlling and managing public places do not fill the vote banks. Hence, the public spaces are often neglected areas in terms of matching the quality of public spaces from developed world.

Physical Configuration

The dimension of physical configuration was divided into two types of indicators: Macro design and micro design. Macro design represents the signification of accessibility and permeability while designing a public space, keeping ease of movement and legibility as objective outcomes of the process (Carmona, 2010). Macro design was evaluated with six indicators: access routes, access to activities, public walkways, cycle routes, fences and parking plaza ramps.

Access routes to market is not a problem for the visitors as 70% visitors in Moon Market and 86% visitors in Barkat Market, felt that the public places were easily accessible. Easy access was observable because both markets are joined into city's urban fabric through a major road. While most of the shopkeepers live in the proximity to case study areas, therefore, 77% shopkeepers of Moon Market and 80% of Barkat Market have easy access to their workplace. A cumulative score of 4 for Moon Market and 5 for Barkat Market was calculated for the indicator.

The indicator access to activities represent how easily the activities can be accessed by different types of people, for example by those with challenged abilities. Almost all respondent felt that both public places do not facilitate person with disabilities in terms of providing ramps and stairs where there is a change in elevation levels. People felt it is a dilemma of planning community in Pakistan where cities overall are not planned with inclusivity for the disabled. Therefore, a score of 1 was given to both public spaces.

Regarding public walkways and cycle routes, it is considered when a public place is surrounded by a busy road, river or an obstruction, etc. pedestrian and cycle crossings or bridges should be provided. It was observed in Barkat Market, there was a pedestrian crossing bridge within access to the users of Barkat Market and it was also equipped with ramps to be friendly for cycle users or disables. Whereas there were no dedicated walkways or cycle routes in both study areas although footpaths were available but mostly were encroached by hawkers. Therefore, a score of 4 and 1 against the indicator walkways was evaluated for Barkat Market and Moon Market respectively. Whereas, against cycle routes both areas given a rating of 1.

Presence of fences have a negative effect on the visibility and accessibility of the place. There were very few fences presents at both areas which were short and with many access points. So, after observation and user's subjective rating both places were equally marked with rating of 4. Lastly, ramps for parking are considered to influence the accessibility of the public spaces. There were no parking plazas, but ramps were still seen at the areas of parking. People were rather satisfied with provision of ramps, therefore, a rating of 5 was given to both markets.

With respect to micro design elements of physical configuration, there were 3 indicators: sitting opportunities (benches, podiums, stairs, chairs, etc.), walking opportunities (footpaths, arcade, walkways, etc.) and opportunities for active engagement (fountains, monuments, landmarks etc.). There is no standard to how many and what type or size of benches or chairs are required for sitting opportunities. Therefore, this indicator was left to observation and subjective user rating, which was found to be 3 and 4 for Moon Market and Barkat Market. Similarly, criteria to judge walking opportunities firstly relate to user's experience and secondly to the observation. There were footpaths and arcade present at both areas, but public was generally dissatisfied with adequacy of walking opportunities. In Moon Market 63% and in Barkat Market 58% felt that there are enough opportunities for walking purposes but mostly deteriorated due to neglect or encroached upon by food vendors, illegal parking, hawkers, etc. Therefore, rating of 1 and 2 were given to Moon Market and Barkat Market respectively. Regarding opportunities for active engagement, it is considered spontaneous interactions happen when people have something to look at. Both places were lacking in this area as there were no such elements provided for active engagement. Therefore, both places were scored lowest.

In terms of physical configuration, studies from developing world showed a negligent or careless behavior. In Turkey, Ekdi and Cyracy (2015) states the disables were nowhere to be observed and in India, Praliya and Garg (2019) explains the same neglect towards inclusivity of disables and maintenance of soft and hard landscape elements. Meanwhile, the Glasgow's experience of regeneration from European city shows that physical configuration is used as a seducing element for the tourists and locals (Varna and Carmona, 2014).

Control

Four indicators were identified for the dimension of control: control presence; policemen/guards, control technology; CCTV cameras, control signage and control design; barriers

for security. In the western world, it is thought that these control measures inhibit the public from active engagement in different activities and adversely affect the publicness of public space (Varna, 2016). But in developing countries like Pakistan, India, Bangladesh, Sri-Lanka, Nepal, etc. where there are some cultural similarities, these control measures are considered to have a positive effect on the publicness by conveying a sense of security to the general public. Therefore, descriptors for these indicators were reversely modified.

Control presence were not to be seen in the public spaces except for two private guards outside buildings of banks. People felt secure in the presence of policemen or guards. Literature prefers presence of public policemen in place to private guards because policemen can be held accountable to some extent. However, both public places were ranked for low publicness due to the absence of control presence. Similarly, control technology i.e. CCTV cameras was also nowhere to be found and if cameras were present at some place, they were mostly dysfunctional. A score of 2 and 3 for publicness was given for the indicator of control technology to Moon Market and Barkat Market respectively. Absence of control signage i.e. no photography affects publicness positively. However, signage as no littering is not included in the control signage. There was complete absence of such control signage except for the signage of no parking in both public places. Therefore, the score of 3 and 4 was given to Moon Market and Barkat Market respectively. Control design includes the elements such as barriers, bollards or check post. Ideally these interventions negatively affect the publicness of public space, but users' subjective rating proves that people felt secure with these measures. Therefore, their absence was ranked for low publicness by users with scores of 2 and 3 for Moon Market and Barkat Market respectively.

Restriction of the use of land use was also explored as an additional effort. In both commercial areas there is non-significant difference between the free uses of shops. Shop owners of both markets are free to change the use of their shop without following any restriction from union authority or Lahore Development Authority. They didn't have to follow any rules and regulation for the change of use of their shop. This shows the publicness of Moon Market and Barkat market in this respect are at same level.

Control in terms of safety and security is a major concern for the public places of developing countries. In India, Praliya and Garg (2019) expressed the safety and security as top priority area for improvement. The public places from Delhi, the capital of India, are lacking in the issue of safety. Street

harassment exists in many different forms in most developing countries like Pakistan, Sri Lanka, India, etc. and it is, therefore, considered one of the main reasons for public's inclination towards increasing control measures i.e. CCTV cameras, guards, etc. Pakistan suffers from terrorism which is also why the control measures are more expected by the public. Whereas, the developed world considers the control measures as an obstruction in the freedom of use of space (Nemeth and Schmidt, 2007; Van Melik et al., 2007; G Varna and Carmona, 2014; Varna, 2016).

Animation

Regarding the dimension of animation there is a consensual thought of urban designer that a public place is not public if multiple publics cannot enjoy and benefit from it (Carmona, 2010). Three indicators are necessary to measure the animation of the public space: diversity of activities, number of users and diversity of users. There was not a concrete method to measure number of users or diversity of users in a certain public space. Therefore, a measurable approach was taken from Varna's Star Model which measures the diversity of public and number of public through the generation of micro-economic activities happening in the area. Two indicators were finalized: diversity of activities and presence of small-scale vendors.

Both markets were assessed as highly public in respect to diversity of activities because both markets were enriched with activities such as food, clothing, jewelry stores, play areas etc. Similarly, both markets were evaluated as public because there were a great number of small-scale vendors and hawkers present at both places.

Both developing and developed world was seen as flourishing in the dimension of animation. Perhaps, people tend to naturally produce diversity in activities and interactions even if they are from different backgrounds. India, Praliya and Garg (2019) observed fun rides and swings in the parks along with all sorts of sport facilities. Glasgow's regeneration gave a captivating view of the river along with many land marks (Varna and Carmona, 2014). Animation is sometimes infused in the urban fabric and sometimes it transpires naturally. For example, Barkat Market became lively with interactions of public naturally which in reality lacks the elements which could have been beneficial to the aspect of animation of the place. Therefore, the quality and content of activities of public places from developing world might be different from developed world but their lively life will match developed world through quantity.

Civility

Civility is tidiness and cleanliness of the place. Three indicators were taken as the measure of civility: facilities of public toilets, ramps, stairs, etc., physical maintenance of soft and hard components of landscape, and management of land use, green spaces and parking. Majority of the user's subjective rating presented dissatisfaction with respect to facilities as public toilets, ramps and stairs. Firstly, there were not enough facilities of such kind and secondly their maintenance and cleanliness were highly neglected. Both

markets were rated 1 for publicness against the indicator of facilities of public toilets, ramps and stairs.

Soft and hard elements of landscape include street furniture to shrubs, plants and greenery. People were most dissatisfied with the physical maintenance of these elements. Moon Market was lacking lighting poles to light the area at night. Furthermore, both public spaces had a central park which was highly neglected in terms of maintenance. Overall rating for evaluation of physical maintenance was 3 and 4 for the Moon Market and Barkat Market respectively.

Management of land use, greenery and parking was also highly neglected area of the civility. Vendors had encroached public walkways and no one ensured the management of land use. Similarly, management of greenery was assessed as good if the greenery was not gone brown and dry. People were somewhat satisfied with the greenery. Lastly, parking was found to be insufficient and neglected for both markets. Overall a score of 2 and 4 was evaluated for Moon Market and Barkat Market respectively.

In Turkey, Ekdi and Cyracy (2015) found in their study that the civility was scored an average of 3 out of 5 for six case studies of Istanbul. Similarly, in India Praliya and Garg (2019) found out the satisfaction scores near to 50 percent against maintenance of the places for 3 case studies out of total eight and rest of the case studies were ranked more than 70 percent. Meanwhile, civility in European cities is

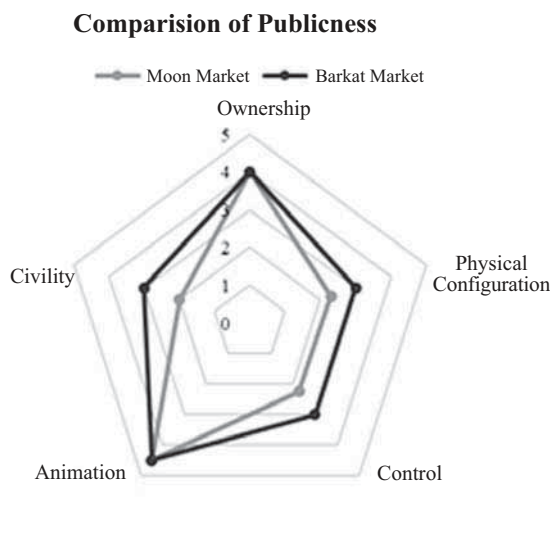


Figure-12: Star Diagram of Moon Market

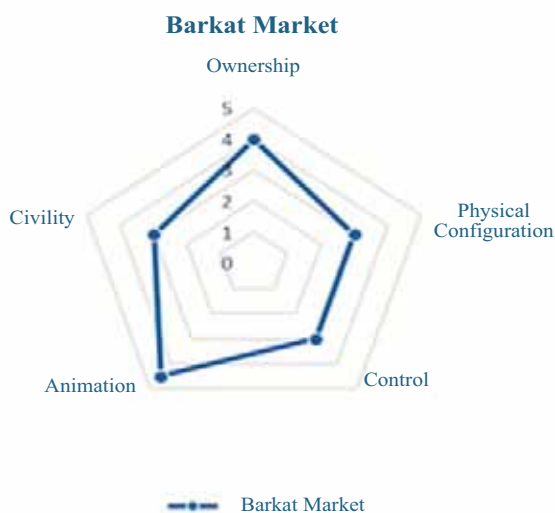


Figure-13: Star Diagram of Barkat Market

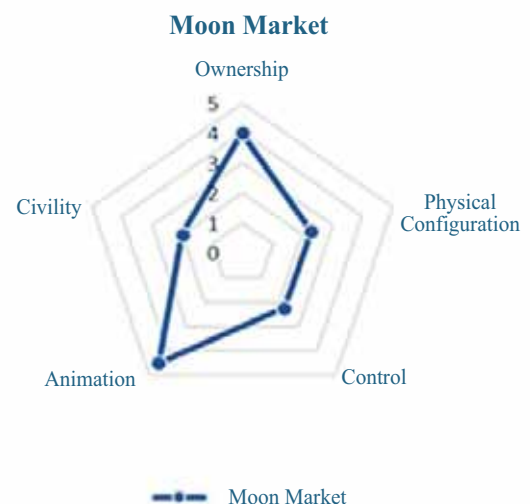


Figure-14: : Star Diagram for Comparison

satisfactorily observable in the public spaces (Varna and Carmona, 2014). Although the satisfaction with the aspect of civility is seen in developing country but it is still unmatched with developed world in terms of quality and level of civility.

Publicness of Moon Market

The Radar diagram of Moon Market shows that dimensions of ownership and animation got highest scores. It explains that the location of Moon Market is suitable and accessible as many road linkages are available to market. In terms of Animation, market is accessible by all age groups, gender, and to all types of socio-economic classes of society. However, control got the average score as people are not satisfied with the security arrangements. They want more control on the environment, check and balance by the Moon Market security itself. In addition, the dimension of civility got the least scores which indicates that there is a need for proper maintenance and cleanliness of basic facilities. In the dimension of physical configuration satisfaction level regarding hard landscape elements is average and provision of soft landscape elements is much lesser because Moon Market park is in a poor condition.

Publicness of Barkat Market

The radar diagram demonstrates the scores received by the Barkat Market by evaluation. According to the diagram Barkat Market has high score animation and ownership. Security has lower value as the absence of control measures has compelled private businessmen to make their own investment for security measures and install CCTV cameras or arrange a guard outside their business area. As far as animation is concerned, the score is high for Barkat Market as it is accessible by all genders, age groups and socio-economic classes. But civility has low value due to encroachments affecting the management of land use and low cleanliness level for basic facilities i.e., public toilets. But it is commendable that the soft landscaping in the central park is good.

Comparative Analysis of Publicness

Comparative analysis of both the markets is depicted in the diagram and it is deduced that publicness in Barkat Market is more as compared to Moon Market. Ownership and Animation have equal values in both markets. Civility, Control and Physical Configuration have lesser scores in Moon Market than in Barkat Market.

Recommendations and Conclusion

There is need for increasing harmony in the design for the market shops at Barkat Market. Ramps should be provided to make Barkat Market inclusive for differently abled people. Moreover, provision of streetlights and dustbins cannot only enhance the aesthetics of the market but can also ratchet up the functionality of the place. Consequently, the visitors will feel more comfortable with the environment. Adequate security arrangement was the demand of both shopkeepers and visitors for both areas. Putting barriers and standing guards in the markets will make it more secured. Security can also control the car snatching problem. Improvement of soft and hard landscaping was a major need in Moon Market. An improved environment also needs a proper maintenance to keep thriving. Cleanliness and encroachment were much neglected areas for Moon Market. In Moon Market, congestion becomes a major problem during peak times which needs to be addressed preferably through the promotion of pedestrian walkability and lifestyle of cycling in the area. Otherwise, city development authority has built up a parking plaza in the premises of this market which needs to go operational as soon as possible. Pedestrianization of this area with the help of bollards and security personnel restricting the entering of vehicles in the market would enhance the level of publicness. In this way, congestion can be removed.

It is essential for better urban design, to identify key success factors for developments from the perspective of publicness. The way markets affect urban form and the life that take place within them makes the urban designer's job more crucial than before. Findings of this research suggest that the study areas have several deficiencies with respect to the quality of publicness. However, Barkat Market has relatively high level of publicness as compared to that of Moon Market. Access and linkages as well as animation have almost equal values in both the markets. Civility, control and symbolic access and outlook received lesser score in Moon Market than in Barkat Market. It was unfortunate to find out that no consideration was given to the provision of facilities for disabled people. Parking is a serious issue being faced by the visitors of both the markets.

Publicness around the globe have different subjective meaning which is a debatable topic. But comparison between the publicness of developing and developed world has shown that public spaces have been neglected in developing to meet their full potential. In developing world hence do not countries, where food, clothing and shelter are the priority areas, both governance and public overshadow the livability, publicness and potentials of public places. People

are found highly satisfied where even a light intervention is made to liven up the place. Therefore, the publicness scores might match for public places from the developed and developing world but in reality, there would still be a major gap between these two types. A framework is still needed to measure and compare the actuality of public places from both developing and developed world in true sense.

A way forward developing countries can be beforehand designing of any market through a proper analysis i.e. assessment of publicness through star model. Keeping in

view the socio-economic characteristics of prospective visitors, it is better to consider the ownership status of the public place and the level of facilities to be provided. The publicness of a public space can be examined by using the five criteria of ownership, physical configuration, control, animation and civility. In this way, results can be compared systemically to produce a more detailed study about the publicness of a public space in Lahore. A thorough study should be conducted to justify the development of public space at a certain place.

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SHIFTING URBAN DESIGN PEDAGOGY: REFLECTION ON OPPORTUNITIES IN AN URBAN DESIGN STUDIO DURING THE COVID-19 PANDEMIC

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Article DOI:

www.doi.org/10.53700/jrap3212022_4

Article Citation:

Kabir U., et. al., 2022, *Shifting Urban Design Pedagogy: Reflections on Challenges and Opportunities in an Urban Design Studio during the Covid-19 Pandemic*, Journal of Research in Architecture & Planning, 32(1). 43-53.



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ABSTRACT

How does one teach a subject that requires extensive site interaction with people and public places where a pandemic is rampant? The challenge is two-fold; with studios aiming to achieve intended design outcomes essential to developing students' ability to tackle complex design problems there exists a real fear for health and safety. Though the verdict on efficacy of online learning as part of urban design pedagogy is still pending, this paper will present the challenges and opportunities in pedagogical approaches and problem solving while portraying a holistic analytical picture of the undergraduate urban design studio.

The outbreak of COVID 19 pandemic in March of 2019, forced all tiers of education to re-evaluate its studio methodology within a matter of weeks. Architecture and urban planning schools worldwide had to redesign a centuries old studio model that relied exclusively on face-to-face interactions to develop a culture of discussions and exchange of ideas. Several reactions and responses to address this challenge are in progress, amidst uncertainty and fluidity, towards the teaching and implementations of urban design.

This paper is a documentation and analysis of an urban design studio at an undergraduate level that adopted the online mode of learning in 2020. There is discussion on content formulation, teaching methodology and student outputs to encompass the challenges and opportunities arising from teaching the urban studio online. To achieve the goal urban design studio and urban design theory courses were analysed in terms of student engagement and satisfaction viz a viz online teaching. The hybrid mode of teaching that maintains a balance between face to face and online learning may be a more effective pedagogy in future.

Keywords: Online Teaching, Hybrid Teaching Asaptability, Urban Design, Pandemic.

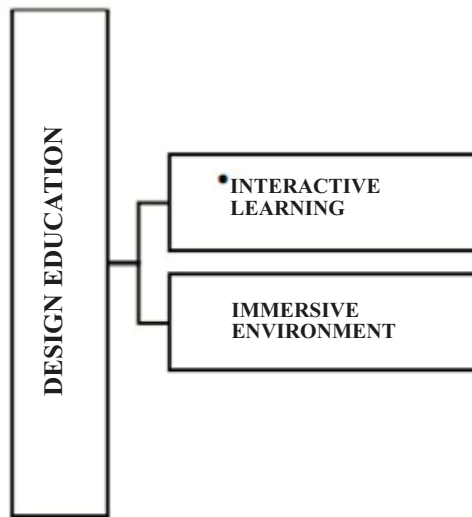
INTRODUCTION

With more than 4.7 million deaths and 230 million cases reported daily (BBC, 2021), COVID 19 disrupted the normalcy of life globally. The pandemic changed the socio-economic, political, and cultural landscapes of the world, impacts of which will remain for years to come. The impact on the education sector was colossal and possibly irreversible. Across the globe, students were asked to leave campuses, lockdowns were imposed and within weeks all teaching activity was shifted online. In Pakistan, where economic

disparities are high and access to internet is often erratic, this meant walking into an unknown territory for both, the instructors, and the students. Circumstances attacked the core of design education, the design studio; the heart of the design education culture vanished.

Design education revolves around interactive learning in an immersive environment of the studio space Table1. The interactive aspect of learning exists on two primary levels, between student and instructor and among students or peer learning.

Table-1: Core of Design Education.



In the past, design schools endeavoured to create experience-oriented learning environments, the core of which remained the studio, a space where ideas are nurtured, and innovation is encouraged; where students augment their design development while learning through direct and indirect means, spontaneous discussions, extempore lectures, presentations, and debates.

Students make use of this space in countless improvisations, a microcosm of the profession. Design pedagogy in the 20th and 21st century witnessed experimentation with new educational theories, amongst them; Checkering's Theory of Student Development, (Chickering and Reisser, 1993), Bandura's Social Learning Theory (Bandura, 1971) and constructivist theories. Along this journey, numerous study models of problem-based learning, learning by doing and learner centered learning been developed.

In this scenario, design pedagogy has taken an interdisciplinary stance as far as its philosophical and practical moorings are concerned. Socio psychological theories have specially resonated deeply with design academia in the past two decades.

Much before the pandemic, the digital revolution created great opportunities for experimentation in design education. The idea that of the unlimited nature of the internet and its possibilities, to educate and train a vast number of human beings without leaving their homes, was already being experimented with across disciplines. (Yamaguchi and Shiheyuki, 2008). In many design studios across the globe, virtual studios were being experimented with, especially in cross continental collaborative studios. (Bradford, et. al., 2000). Design students enhanced their skills through educational platforms like MOOCS. The



Figure-1: Learner Centred Learning.

cognitive and design thinking development, however, remained the forte of a design studio with its very distinct culture of physical interaction, communication, and exchange.

Urban Design Pedagogy

The term urban design was coined in a conference in 1956 at Harvard University but urban design was being practiced centuries earlier. Study of literature reveals that urban design has been understood and practiced in the three domains: design aesthetic social problems and place making concerns (Lang, 2005). Urban design encompasses many fields that have repercussions for public realm like urban planning, landscape design, civil and infra-structure engineering. Moreover, as a process, it is far more complex than mere design of the material environment. It is encompassing personal to political ideologies, value sets, politics, propaganda, symbols, lore and myths, history, memory, representation, pleasure, life patterns and ecology, etc. It is often a convoluted process shaped by political, social, and economic dynamics. In essence, this field and consequently its pedagogy is multi-disciplinary and collaborative (Carmona et. al., 2006, McGlynn 1993 Tomas). (Carmona, M. et. al., 2006, McGlynn, 1993, Lukovich, 2017). Broadly speaking, the focus of urban design pedagogy lies on identification and understanding of opportunities and challenges a city offers. After this understanding is acquired a tangible intervention to improve the social or urban condition is attempted. Urban scholars like Scott Brown (1990) emphasize the practice of "philosophy of action" for urban designers. Essentially urban design as a pedagogical domain works very closely with and for the society and its problems in real time (Scott, 1990). Field research is an essential part of creating meaningful urban design. Essentially both content

Table-2: Elements of Asynchronous Teaching.

ASYNCHRONOUS TEACHING	
READ	LISTEN PODCAST
VIDEO BASED INSTRUCTION	TAKE NOTES
PRACTISE AND REVIEW	ONLINE DISCUSSIONS
DOCUMENT LEARNING	RESEARCH & REPORT
VIDEO BASED INSTRUCTION	

and methodology cannot be successfully taught without immersing into the urban milieu and glean a deeper understanding of the complexities attached to the urban conundrum.

Considering the limitations of a pandemic, urban design education becomes much more complex. Embodied cognition theory emphasizes that learning occurs through an interplay of body (constituting the physical body and the senses) and mind. So even in settings in which online teaching predominates, there is often a need to look for ways to integrate some sort of physical (inter)action to significantly enhance learning (Kosmas, 2019). Whether the world shifted to online teaching as a necessity or wholeheartedly, this mode of learning is here to stay. The literature coming out on the success of this mode also points towards certain limitations of online learning especially in the scenario of urban design pedagogy and education scenarios in the developing world.

It has been researched that the theoretical content of urban design pedagogy can quite comprehensively be shifted online or asynchronous mode Table 2.

Students benefit from listening and re-listening the content in their chosen time and space. It has been noted that evaluations and assessments are conducted relatively smoothly for the theory content of the urban design pedagogy. In fact, the structure of content and teaching schedules become more disciplined and streamlined. (Remon, 2020).

The efficacy of urban design studio teaching on a pragmatic/practical level, on the other hand, requires further

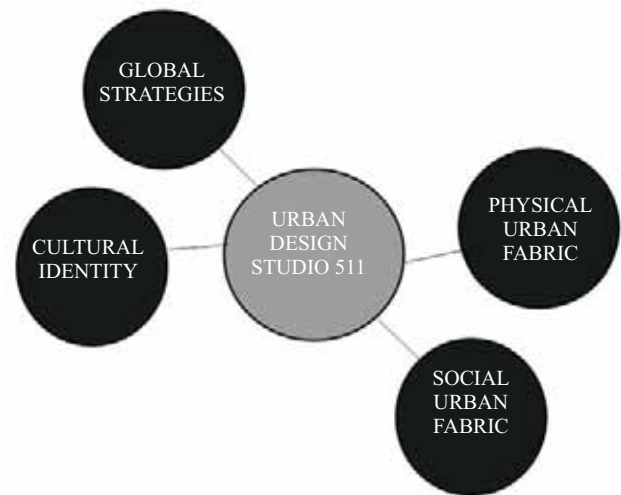


Figure-2: Areas of Focus.

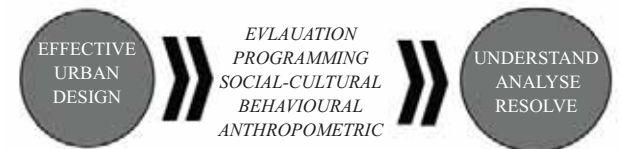


Figure-3: Urban Studio Teaching Strategies.

research. Purely from a pedagogical point of view, studies have already pointed out that lack of social support in the form of discussions/verbal interactions and the amount of stress students are confronted with seriously impact their well-being. Consequently, overall quality of education declines. (Natvig, 2003).

As supported by the literature reviewed so far, the essence of urban design lies in dealing with people and their conditions. Its core learning in a studio cannot be entirely divorced from its main subject of life as is happening in real time and space. Otherwise, urban design studios may promote a culture of ignoring the complex urban environments and designing in a vacuum according to a hyper idealistic brief. (Cuthbert, 2006). There are many challenges to teaching urban design in a virtual environment, the greatest being access to the stakeholders whose opinions, aspirations and hopes must be translated in a meaningful urban intervention. Thus, participatory, community driven design methods cannot be practiced in its true spirit in a virtual world. Emerging research in the post pandemic education debate points towards a hybrid methodology for conducting the urban studio.

Methodology

This paper adds to the nascent body of knowledge about experimentation in teaching design studios during the

COVID 19 pandemic. It is a documentation of the urban studio taught at COMSATS University Islamabad in 2020. The paper elaborates content formulation and studio methodology by discussing studio exercises designed to achieve specific studio outcomes in the domain of urban design. Moreover, student feedback from urban design studio and urban design theory was collected during the semester. The data gathered was analysed to assess student satisfaction and engagement level.

Studio 511

In the past, urban design teaching and practice has focused on the design of urban spaces as being the modulation of the physical aspects of the fabric while the complex social processes that contribute to its making have not been included. More recently, a few practitioners and educationists have voiced concern about this and suggested instead an alternative path where the design effort is based on field-intensive mapping exercises to understand the ground reality.

Based on this background, Urban Design Studio 511 (Table 3) aims to employ a critical mindset that could question given urban conditions and display awareness that urban space is also politically and economically intense (Akpınar, et al., 2016).

Additionally, the studio was derived from the notion that urban design pedagogy must step back from only proposing global strategies and instead construct a model that includes cultural identity of a place and its people (Crysler, 1995).

Basic methods of understanding, analysing, and resolving urban environments including, evaluation, programming, socio-cultural, behavioural, and anthropometric influences were introduced throughout the course of the semester (Figure 3). The studio that primarily consists of studio work was redesigned keeping in mind an online mode of teaching (Table 3). This redesign was aimed at avoiding the most

common challenges faced in the online studio, maintaining motivation and interest of the student, and tackling unforeseen circumstances that occurred in the at-home learning scenario.

Breaking down of learning outcomes into three smaller tasks instead of working on one extensive urban project throughout the semester was an effective way to keep students interested.

It gave them the chance to cover for any loss in course work due to an unforeseen situation that disrupted their learning space. Any student who was unable to perform in one task could cover it in the next (Table 4). Additionally, each task introduced a new perspective of urban design and along with it a new site, this provided a variety that was helped maintain motivation amongst the students. Since urban design work requires study across and along multiple layers, tasks were broken down into individual and group work; this eased general work stress and encouraged student interactions that helped in maintaining positive and productive attitude along with exchange of ideas and learning.

Streamlining all instructions beforehand with detailed guidelines, objectives, parameters, and deliverables and providing this information to the students at the beginning of the project aided greatly in helping student move on in their work, especially in situations where the students felt they were facing a mental block or were working in an isolated environment.

Each task focused on one or more of the learning outcomes of the course; and was conducted individually and/or in groups depending on the scope of the work. Recognizing its multidisciplinary nature, the urban design studio encompassed lectures to reflect the analysis and understanding of cultural, political, and economical interaction that eventually shapes and reshape the city over time.

The comfort in online communication that had developed by this time across disciplines and audiences made

Table-3: Studio Design.

MULTIPLE PROJECTS	DIGITAL & PHYSICAL	INDIVIDUAL & GROUP WORK	STREAMLINED INSTRUCTIONS & PARAMETERS
Varying perspective	Access to information	Ease in workload	Maintain focus on objectives
Maintaining Interest	Maintain depth of study	Ideas' Exchange	Aide in isolated learning environments
Chance to cover up	Representation	Interaction for Motivation	

Table-4: Comparison of Single Studio and Multiple Studio Task Specifically for Online Learning Environments

SINGLE STUDIO TASK	MULTIPLE STUDIO TASK
Large scope of work	Seperated grading
Accumulative grading	Margin to recover from work lag
Same working group may cause monotony	Change in working groups, variety of interaction
Consistent Performance	Different context, challenge and scenarios



Figure-4: Areas of Exploration.

accessibility to experienced resources very manageable. The first two tasks of the studio aimed to achieve two major parts of urban design learning: reading the city and mapping the city. The latter half of the studio focused on urban interventions and architecture in the city, with increased complexity of study, analysis, and an additional design intervention challenge (Figure 4).

Studio Task 01 – Reading the City

The first studio task was an introductory exercise (Table 6) in identifying and defining urban elements and reading the city. This is the first time in this undergraduate program that the students work on an extensive and multi layered scale which may be intimidating, therefore students are taken to an urban setting, as a group, they are consciously made aware of all the elements and layers that exist in these settings and the visits are repeated to formalize their understanding until they are able to grasp and identify aspects and elements by themselves. However, in the online learning scenario, group travel was not possible therefore, the task was designed at a smaller scale and parameters of observation and study were laid out (Table 5). The students were asked to work on the neighbourhood scale; within a 1 km radius of their own residence. This was an area which they were already familiar with and could easily navigate (Figure 5).

The study consisted of two parts, identification, and preliminary analysis. An introductory study list to aide in this process of observation and analysis was provided. Google maps along with other GPS services, online surveys and local authority data deemed most useful as a support to this observation and study especially because providers of information like local government offices were closed and some areas had strict lockdown restrictions limiting even neighbourhood gathering.

Studio Task 02 – Mapping the City

The second task of the semester aimed to develop in-depth identification, understanding, mapping and analysis of urban scenarios. The basic aspects of study were like the first project however, included further aspects and complexity of the study increased in terms of depth of study, accuracy and detail of mapping, documentation of the area and maturity of analysis (Table 7).

Table-5: Revised Studio Project Parameters for Online Studio.

IN-STUDIO TASK PARAMETERS	REDEFINED TASK PARAMETERS
Site selection based on overall city concerns	Site selection limited to proximity of street/block
Site Visit, Study and Survey	Reduced parameters of study
Group work to cover larger areas thoroughly	Use of online mapping platforms
Interviews and interactions with people	Local authority websites for data and statistics
Municipal office meetings	

As by this time the lockdown restrictions had eased and therefore, the site study was to be conducted in groups to ease the workload on any individual student, a list of sites was provided each covering a 2km radius, each group chose their site from the list. The project included three main parts, each: mapping, analysis, and urban guidelines.

A guide with parameters and sub parameters was provided to the students (Table 7) that broadly outlined the aspects that were to be studied. This guide was not as detailed as the one from the first task as the student is expected to review and make their own contributions to the study parameters based on lessons learnt from the previous project and supportive resources in the course. The students took a walk around the selected area to observe, hear, smell, and experience the setting of the area to observe and document the cultural, social, and physical context of city life.

Learning outcomes were achieved successfully with respect to developing an understanding of the urban domain and its scale, mapping, and documentation of urban settings. Students produced analytical diagrams, sections, and sketches that covered the quantitative aspects including services and infrastructure, links and connections, land use, demographics, and qualitative aspects including social and cultural context, environmental aspect, urban morphology, visual quality, and sense of place. The work produced also displayed students' ability to identify urban elements and conduct preliminary level analysis of urban scenarios.

Studio Task 03 – Urban Interventions

The third studio task dealt with the areas adjacent to ravines in Islamabad. The ravines of Islamabad cover an area of approximately 8.8 square kilometre (3.4 sq. mi). However, negligence and lack of municipal control and planning these

Table-6: Structured Studio Instruction.

URBAN DESIGN ASPECT	IDENTIFICATION AND READING	PRELIMINARY ANALYSIS	METHODOLOGY
Urban Morphology	How has the area developed over the year?	Comments and review on the growth pattern	Google Maps Interviews
Open Area and Landscape	Parks, vegetation, tree plantations, ravines, urban voids. Categorization of elements, identification on plan and photographic and sketched documentation	How has the vegetation pattern effected the microclimate? What role do the open areas play in the overall enviroment? Is there a plantation plan?	Site Observation and Google Maps
Built and Voids	Developed a Nolli map identifying all built areas in white and unbuilt in black so that the unbuilt is highlighted	What is the nature of the unbuilt area? What is ratio of built to unbuilt, how has it effected life in the urban domain?	Google Maps
Land and Voids	Identify building typologies. Mixed use, Corporate, Educational, Residential, Commercial, Industrial etc.	Is there diversity in land use in the area? What effect has the lack of, or the existence of diversity had on the urban enviroment?	Site Observation and Google Maps
Architecture	Identify building volumes, heights, form and architecture language through site observation and photographic documentation.	Is the architecture design of the area designed or organic? How has the arechitecture language of the built forms effected visual quality of the area?	Site Observation
Pedestrian Circulation	Categorize and identify types of pedestrian paths. Conducts a ped shed analysis, identify basic amenities that are within 1 and 2 radii.	Is the area pedestrian friendly? Are pedestrian routes designed or developed by users? Does the pedestrain circulation include universal accessibility? What amenities are at a walking distance?	Site Observation and Google Maps
Landmarks	Identify any local and/or national landmarks in the site area	Do local landmarks help in navigation and wayfinding for the area? If yes, how?	Site Observation and Google Maps

ravines have become and continue to be a complication for residents and a hazard to the environment. The ravines that lay in the heart of the concept of integration of natural landscape into the grid of the plan has been left in the background and deemed as unwanted or discarded spaces even though these ravines provide numerous environmental benefits including essential rainwater drainage and were once centres of biodiversity and thriving microclimates for local flora and fauna.

As per the by-laws of local government, “No building plans shall be approved on open nallahs, water courses, public sewers and the like.” These has been done because of construction hazards due to soil erosion, flooding, exposure, and vulnerability towards seismic activity. Currently, the ravines face issues involving illegal settlements, damage to local flora and fauna, rainwater drain blockages and massive urban waste dumping.

For this task, students worked in groups of four to select one residential sector of Islamabad with a ravine passing through it. Each group conducted a broad study of the ravine across the sector and selected a 1.5 km portion of the ravine to develop a revitalization plan. Proposals could include but were not limited to, an urban vision for the ravine and possibility of implementation of this idea on other ravines around the city. The proposals presented resolutions for waste management, landscape design, public spaces, pedestrian movement and revival of local flora and fauna.

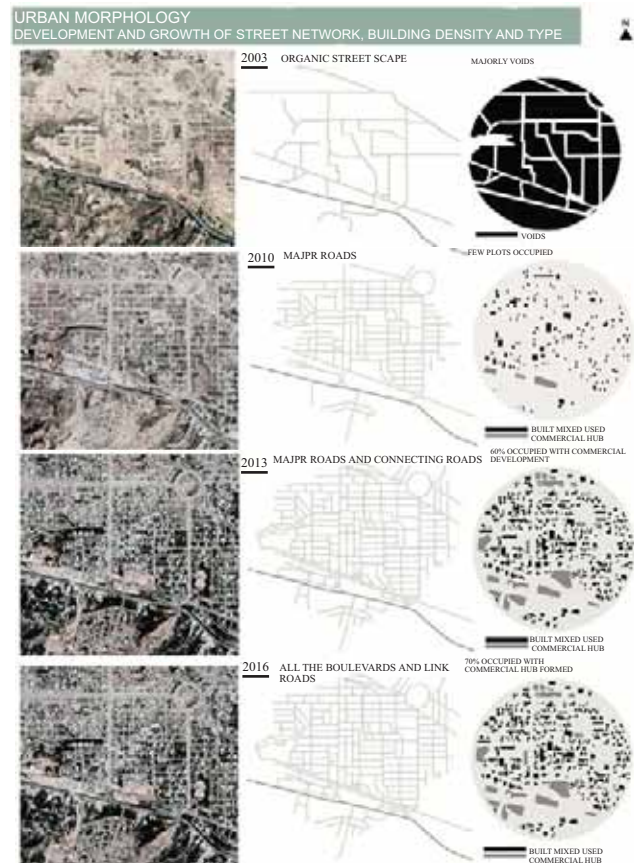


Figure-3: Data Collection and Analysis using Digital Applications Student Work N- Nimra Ashfaq.

Table-7: Parameters Provided for Aide in Analysis for Task 02.

URBAN PARAMETERS	SUB PARAMETRIS
Urban Morphology	History Evolution Growth
Connectivity and Connections	Vehicular (designed and desired) Pedestrian (designed and desired) Road Typologies Parking Areas (designed and desired)
Form and Visual Quality	Streetscape Heights and Massing Skyline Urban Art Signage Architecutre Language
Land-Use and Services Infrastructure	Building Typologies
Open Space and Landscape	Parks and playgrounds Unbuilt Open Space (public owned) Landscape and Plantation Built: Void
Context and Sense of Place	Loca land national landmarks Social Nodes
People, Culture and Environment	Lifestyle/culture Users/ Stakeholders Health and Ethnic/Religious Groups Urban Transport Climate Sensitivity Garbage Disposal Demographics

Parameters of urban research and analysis included but not limited to, urban morphology, connectivity and connections, form and visual quality, land-use and services infrastructure, open spaces and landscape, context and sense of place, people, culture, and environment. Throughout the course of the semester, the studio was supported by carefully selected recommended reading material that included, urban theories, literature on debates and controversies in thoughts about the future of cities and the cities of the future and innovations and ideas on sustainability in urban design. The analysis parameters aimed to be a guiding structure for conducting research and students were given the opportunity to add parameters that they deemed suitable considering their specific research.

With the increase in automobile usage relationship of the pedestrian user to the city weakened and pedestrian oriented design diminished. The ravines are an opportunity for the revival of public spaces and pedestrian movement. These ravines run across every sector and can be developed into pedestrian linkages across the sectors while also providing revenue, agricultural and urban farming opportunities for the locals. The challenge we face today is not a return to past but moving forward with lessons learnt from today's context with an evolved vocabulary of the city, i.e., bringing the city back on pedestrian scale and reviving its public life simultaneously.

The scale of the project was bigger with a higher complexity level. The students employed both digital information of the site and onsite exploration of the ravines to come up with meaningful interventions to rethink the use of the land adjacent to ravines. Previously given studio tasks had trained them to gather data efficiently. The challenge was made into

a design intervention. This was important for them to learn the aspirations of the communities living near the Ravines. Moreover, they carefully investigated the informal ways these areas were being used by different community groups for varied uses. The major takeaway was that the program and intervention could not be an alien idea implanted onto the site. Both program and design intervention had to arise organically from site surveys and interviews with the people. The students learned that on urban scale the intervention sometimes is very small in scale but has a major impact.

Studio Teaching Methodology

Maintaining learning outcomes during on campus teaching restrictions and city-wide accessibility restrictions was a big challenge for the studio. This studio is the last step before the thesis year and therefore not learning the full spectrum of the contents could result in serious gaps in the expected skills and understanding of an undergraduate student.

A revised studio methodology for online teaching mode was develop that was primarily based on two main aspects breaking down of studio tasks and group work. Both aspects aided in internalising certain concepts in a step-by-step fashion before they attempt a design intervention in the final project and secondly, The studio used Microsoft MS Teams as the main platform for instruction. All relevant class material was made accessible to students beforehand. The studio instructors planned the course work thoroughly as the online methodology relied heavily on organisation of work and schedules of tasks. During studio sessions, tasks were introduced, each instructor took their individual time to discuss the topic and present points to ponder upon.

This was followed by a discussion session was questions and debate. Online platforms that provide whiteboards and note taking were extremely useful for live improvised discussions (Figure 6).

The class was divided into groups and was asked to create their own timelines and schedules. The group tasking was established for every member of the group with consultation and submitted to the studio team. Half of the class went on site surveys while half the class discussed their site findings in the online studio with the teachers. All studio discussions and lectures were recorded for access later. Grading and evaluations were done regularly after each group discussion to maintain the relevance of the studio discussions. All grades were uploaded periodically on the university marks portal for students. Grading criteria were explained before giving each task to the students. The studio was run in a systematic preplanned manner to limit disturbance in schedules and focus remained on the learning outcomes.



Figure-6: Digital Instructions using online whiteboards.

Analysis

To compare and analyse the true state of online studio pedagogy from the students' perspective, a survey was conducted in the middle of the semester Table 8. The survey aimed to find out information on psychological state of the student, online methodology, studio content and studio culture specifically in an online environment. The survey was given out to students of the same semester who were being taught urban design studio and urban design theory course in an online environment.

On the topic of psychological state of student, when asked about how they felt during the past week, 82% said they were stressed with respect to the design studio in comparison to only 29% who said they felt stressed with respect to the design theory course (Table 7). 54% students were comfortable in doing their schoolwork remotely in the design theory course however it was only 35% who felt the same for the design studio even though overall 83% students found the chosen learning platform easy to use.

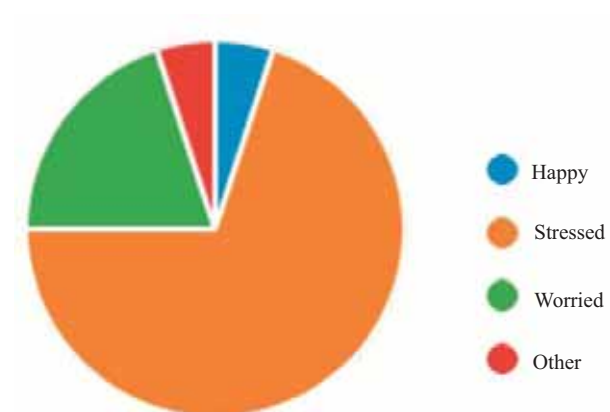


Figure-7: During the Past Week, how have you Felt?

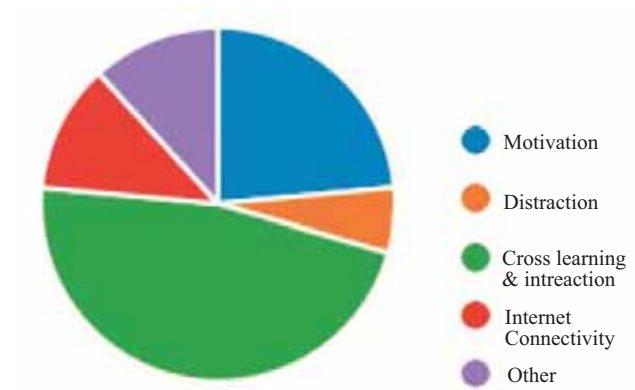


Figure-8: What is the biggest challenge you are currently facing while taking the design studio

On the aspect of online pedagogy, the main challenge being faced by the students in the design theory was internet connectivity and maintaining a regular schedule for themselves (33% respectively), however, for the design studio 47% students said it was the lack of cross learning and interaction followed by motivation (23.5%) Figure 8. Though the supporting material including lectures talks and interactive sessions were deemed relevant and useful by 94% students in the studio however it may be the aspect of social interaction and face to face cross learning that 65% students felt that the studio course would have been more effective if it was held in person Figure 9.

Studio culture remained an important element of the online teaching pedagogy, 82% students agreed that instructors made serious efforts in maintaining a culture of interaction, discussion, facilitation, and an overall collegial environment aimed to develop an interest in the topic. 100% students agreed that the instructors were prepared for the mode of teaching and that the interpretation of course outline into content was made to keep interest and motivation alive even though 47% students felt that breaking up of studio projects into smaller tasks was an effective idea.

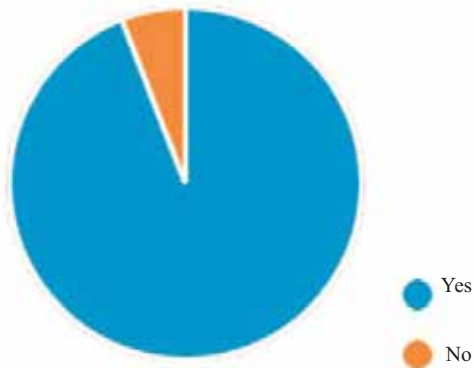


Figure-9: Instructions for projects clear and understandable.?



Figure-10: Are Projects and Deliverables in Line with the Online Studio.

Discussion and Conclusions

The experience of running an urban studio online had some high points and some low points. As far as the content design of the studio was concerned, its was planned achieve the outcomes of a normal on campus studio. This was ambitious because the content was extensive even for a physical studio. The students were already under stress from taking online classes and studios in the previous semester. This required a change in the teaching strategies. There were a lot of discussions and debates. The students were encouraged to simultaneously use chats and zoom meetings to somehow create a studio environment of peer learning. The students were given a week's break to recoup their energies before the start of new task. The outcome was at par with the on-campus studio. The online mode of teaching gave the students the freedom to interact with architects and experts from across the globe. On the other hand, though instructors and students were engaged in the studio for extended periods there remained a sense of unreality and detachment. The online meetings could not replace the face-to-face discussions. The internet freed but at the same time enslaved the class to the screen. The physical space dissolved and the new construct of a virtual reality devoid of tangible social contact took its toll on the students.

A review of student performance and overall motivation and assessment of student work at various stages and at the end of the course indicated that the online methodology worked successfully for high performing students who were often self-motivated and proactive and were able to maintain their academic standing. However, otherwise average, or low performing students struggled greatly, decreasing their overall grades. Additionally, students were able to understand and perform group tasks better than individual tasks.

As seen from data analysis the students were more comfortable and responsive to studying theory online even though some had trouble regulating personal schedules. Certain aspects like pre-recorded lectures, availability and refinement of class content and material to the students and interaction with experts from other parts of the world that are vital advantages of the online studio may be retained and employed extensively, however, the physical studio has certain psychological support mechanisms and learning advantages that need to be retained. The hybrid studio may truly be the future, flexible in terms of accessibility of expertise and knowledge as well as adaptability and communication.

Table-8: Student Survey Results.

	URBAN DESIGN STUDIO	URBAN DESIGN THEORY
STUDENT SATISFACTION AND STRESS		
During the past few weeks, how have you felt?	42% Stressed 6% Happy 23% Worried 6% Other	29% Stressed 42% Happy 25% Worried 8% Other
During the past few weeks, how have you felt?	65% No 35% Yes	8% No 92% Yes
ONLINE METHODOLOGY		
What is the biggest challenge you are currently facing while taking the course online?	24% Motivation 6% Distractions 47% Cross learning and Interaction 12% Internet Connectivity 12% Maintaining regular schedule	33.5% Internet Connectivity 12.5% Motivation 17% Distractions 33% Maintaining regular schedule
Would you say you are learning more intensively via the online mode than would in face-to-face classes?	12% Yes 29% No 59% About the same	21% Yes 14% No 54% About the same
Is audio and visual communication during sessions satisfactory?	65% Yes 0% No 35% Not Always	67% Yes 8% No 25% Not Always
Do you feel online class sessions fully support and are essential to understand the recorded content?	-	37.5% Yes 0% No 62.5% Sometimes
Are projects/assignments/deliverables coherent with online methodology?	82% Yes 18% No	82% Yes 18% No
COURSE CONTENT		
Is the course content useful and interesting?	100% Yes 0% No	100% Yes 0% No
Is course structure organized and well structured, with supportive material?	94% Yes 6% No	96% Yes 4% No
Are all instructors well prepared in terms of course content?	100% Yes 0% Only one out of three 0% Only two out of three 0% No, none of them	100% Yes 0% No
Have the instructors helped in developing an interest in the topic?	82% Yes 18% No Difference 0% No	87.5% Yes 12.5% No Difference 0% No
Are instructions for projects/assignments clear and understandable?	94% Yes 6% No Not Always	87.5% Yes 12.5% Not Always
Do instructors maintain a healthy class environment where participation is encouraged?	94% Yes 6% No	100% Yes 0% No
The studio was designed in multiple small tasks rather than one big project throughout the semester, is this a better methodology?	41% Yes 59% No	-

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URBAN DECLINE AND CHALLENGES OF REVITALIZATION PROJECT: A STUDY OF MARTIN QUARTERS KARACHI

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Article DOI:

www.doi.org/10.53700/jrap3212022_5

Article Citation:

Nazir H., 2022, *Urban Decline and Challenges of Revitalization Project: A Study of Martin Quarters Karachi*, Journal of Research in Architecture & Planning, 32(1). 54-70.



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ABSTRACT

With the emergence of the housing problems in Karachi, new housing schemes are being launched on the city's outskirts. Instead of launching new housing in the suburbs, this research aims to study one of the existing dilapidated areas within the city and considering redevelopment as an alternate to eviction. This research revolves around the qualitative approach that involved surveys of Martin Quarters, focused gathering discussions and on-site meetings with involved stakeholders. A total of 50 respondents were picked using the multistage random sample method.

The analysis is based upon the perception of householders about the revitalization of the area and examining the actual planning of government quarters that aimed to house federal employees in Karachi in the first phase of development of Karachi in 1947-1957 and current planning techniques used by people guided by traditional ways of living.

The paper finds that the land on which Martin Quarters are situated is an expensive land of State that is being wasted due to the low-density settlement and also occupied illegally by many residents. Furthermore, it is improperly planned and growing haphazardly due to the increase in the population of the city and is at risk of decay and chaos.

The paper concludes that the revitalization of Martin Quarters by the government is only a solution to stop the decaying of this area and it will benefit the general masses by enhancing accommodation capacity.

Keywords: Street Vendors, Local Economic Influencer, Business Safety for Vendors, Planning for Local Economic Development

INTRODUCTION

Karachi is Pakistan's most populated city. Migration has tended to result in a complex allocation of populations, with far-reaching impacts on the city's growth. Karachi's populace has grown significantly over time. Furthermore, patterns of urban settlement in Karachi are disorganized and unplanned, with a diverse cultural undertone. *Katchi abadis* (informal settlements) have expanded in size resulting from the government's inability to address the demand for housing low-income groups. Demand for housing for Karachi's populace is exceptionally large and pressing with time. The

pattern of growth rate has resulted in an exceedingly high demand for low and middle-income housing. The accessibility of planned schemes and the design services of such housing units have not kept pace with the constantly rising demand, resulting in not only an unsolvable housing shortage but also extreme chaos in the built-up environment (Hasan, 2015). Sufficient housing provision in such a growing city is difficult and challenging to achieve. Over time and via numerous housing scheme initiatives, it has been apparent that both the government and the formal housing construction sector are unsuitable for providing housing facilities to the needy.

Not only the formal sector is unable to satisfy the need for low-income housing, but it has also been blamed for exploiting and distorting property values. Other than just land shortage, low-income households face discrimination in distribution policies and processes, as well as access to housing financing (Uppal, 2021). Low-income individuals are often bothered by house availability, possession, and other similar issues. The Karachi Strategic Development Plan (KSDP) 2020 aims to solve the housing crisis by encouraging high-rise construction, densification, and in-fill within the metro city as well as increasing occupancies in already built but empty housing schemes. This policy also includes modifying and regularizing *katchi abadis* (Hasan, 2020). Regularization would allow land titling and ownership while upgrading would include the development of trunk infrastructure to enhance housing conditions. It needs to be seen how well these steps can be applied. Furthermore, the extension of built-up land and growing densification have increased demands on public infrastructure. The urban landscape has been changed by large-scale building schemes related to housing, industry, and transportation. Thus, this paper aims to address the growing need for housing in Karachi by proposing the revitalization of outdated metropolitan centers as the need of the time that can strengthen the urban living environment, land use value, and also contribute to the social welfare system. Urban revitalization, is the process that eliminates conditions that contribute to urban deterioration or reviving a neighborhood as a consequence of change (Egerciolu, et.al., 2016).

Revitalizing Karachi's urban centers, will not only satisfy the city's housing needs, but also protect the city's valued property from unauthorized activities such as unorganized land encroachment, illegal land construction, and urban core densification. It will also help to develop facilities and allow space for more housing. Therefore, this study demonstrates how an area can be redeveloped by merging with the local context based on people's housing needs so that the area can accommodate not only the extended families but also the massive migration of residents from rural to urban areas.

REVIEW OF LITERATURE

Housing is a problem that affects both individuals and masses alike, as a result, a high priority is given to the role it performs in providing human comfort through nature and society (Eldredge, 1967) states that housing is a set of products and services that promote and improve healthy life, as well as a connection to neighborhood efficiency and sustainability.

Similarly, Agbola (1998) notes that housing is a collection of features that contain a distinct home in every neighborhood; this is a collection of financial, cultural, and psychological phenomena. Alternatively, housing could be described as a multifaceted bundle of products and services that extends much further than lodging.

When it comes to housing and demand for housing in Karachi, according to Hasan (2018a), recent estimates show that the city has expanded exponentially in the last few years, and its metro area has incorporated more than 23 million inhabitants, with a population density of more than 24,000 people per square kilometer (Hasan and Arif, 2018). This confirms that Karachi is denser than any other "metropolis" with a population of more than 10 million inhabitants, except for Dhaka with 36,941 residents per square kilometer (Qureshi, 2010).

Karachi had become the capital of Pakistan in 1947, soon after the independence of Pakistan, and 600,000 Indian refugees moved to the city. This raised the city's population from 400,000 to a million in 1951 (Hasan, 1993). He further stated in another article that the open spaces in the city center were made available to refugees. As a result, temporary tent dwellings (hut dwellers) were built out of cardboard boxes, reeds, bamboos, fabric, and other discarded materials (Hasan, 2010). Many of these colonies were later relocated. He further added, that to overcome the congestion in the urban core where the migrants had settled, the government built one-unit homes for the refugees working in lower-level government positions. These 80 and 120 square yard units were constructed in five townships: Liaquatabad, Aurangabad, Shah Faisal Colony, Golimaar, and Malir Colony. They were partially funded by grants and donations from foreign organizations. These units were provided at a discounted rate with monthly installments of 2 rupees (Hasan and Mohib, 2003). In a report, Hasan (2018a) states due to the refugees' limited income, there were many defaulters, making recovery impossible and finally, the State that was forced to waive the dues. Some of them sold their cheaply purchase housing units in the open market and migrated to the city center in search of new jobs. Today, these schemes housed lower-middle-income and middle-income residents in medium-density neighborhoods close to the city center. After this effort, the concept of constructed units was stopped because the newly established State lacked the financial and logistical resources needed to address the growing housing shortage (Hasan and Arif, 2018).

Furthermore, Hasan (2018b) stated that many schemes were known as "quarters". These were designed and constructed

by the State to ease mid-level government employees, including Jehangir, Jamshed, Aluminum, Platoon, Martin, Clayton, Pakistan, and Garden Quarters. These compound-style, gated housings were designed for various areas of Karachi. He added, the lower category quarters were only temporary, consisting of a cemented base on which pre-fabricated aluminum panels were installed and assembled. This form of settlement had shared toilets and water taps. The State charged the residents a minimal rent to manage common services. Quarters in higher categories, such as Jamshed, Martin, Jahangir, Capital-C Area, Pakistan, and Garden, had two and three-room units with verandahs, toilets, and kitchens; shared spaces were built between the quarters to allow for sufficient light and airflow (Hasan, 2018a).

According to Hasan (2013), many of these colonies still exist, but the population density has changed over time as the number of individuals per family has increased and houses extended. These quarters are also an important part of the city center. Their proximity to the city center and big shopping centers has increased real estate prices as well as the interest of investors and the building mafia in these areas. According to Hasan (2018a), the commercial influence on real estate is considerable, and so many residential quarters are being forced to transfer their land usage, either to high-rise apartment towers or retail and office plazas. This shift is occurring in the absence of concurrent infrastructure

growth, resulting in parking issues, encroachments, and congestion, as well as choking off the current water supply, drainage, and sanitary landfill systems (Hasan, 2018a).

In addition, Hasan (2004) sheds light on the housing schemes initiated by the government, like a scheme of cooperative housing projects for its workers in the 1950s. This scheme led to the development of twenty-four housing societies. The first scheme was the Pakistan Employees Co-operative Housing Society (PECHS), and many others followed with many cultural, ethnic, and general interest communities.

He further added that they were registered as housing societies, and some even founded unions. Many of them were titled after the residents' place of birth, ethnicity, or a prominent leader. Among them are the Sindhi Muslim Cooperative Housing Society (SMCHS), the Kathiawar Memon Cooperative Housing Scheme (KMCHS), the Bahadur Yaar Jung Society, and the Al-Hamra Society. In terms of plot sizes, they ranged from 200 to 2000 square yards. The price of land in these areas has risen to 35,000 Rupees per square yard presently. A few concept designs were developed, including service lanes with drainage systems and rear entrances for servants. They were originally ground+ 1 structure, but as the population grew, larger plots had been subdivided into two or transformed into apartment buildings.

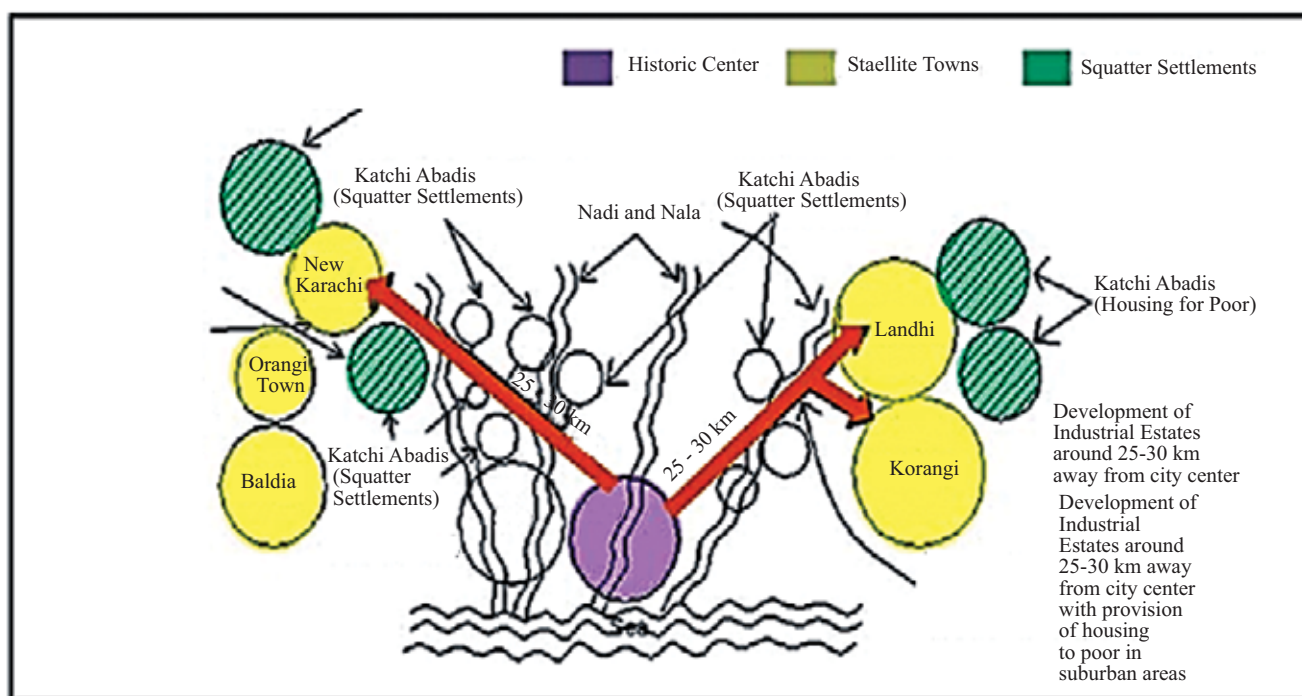


Figure-1: Suggestions for the Greater Karachi Resettlement Housing Plan 1956-1958.
Source: (Kumar, R. 2011)

However, their proximity to the city's commercial corridors such as Shahr-e-Faisal and Tariq Road resulted in unauthorized commercialization along and close to these roads, increasing the density. The new high-rise structures lack the needed facilities and services, putting a burden on the surrounding residential areas for parking, water supply, sewage treatment, and energy supply (Hasan, 2004).

In 1958, the Government of Pakistan hired Doxiades Associates to prepare a Master Plan for the capital (Hasan, 1994). Using several surveys, the consultants concluded that 119,000 homeless families were living in the city center. Karachi would need 500,000 housing units over the next two decades, according to the proposal. It proposed to build 300,000 units at the first stage, while the remaining 200,000 as sites and utility schemes, with 30 percent of the construction financed and the remaining 70 percent recovered as installments (Hasan, 1994). The Doxiades proposal included two relocation projects, one in the Landhi-Korangi Industrial area (east) and the other in the New Karachi and Site Industrial Area (north) of the city (Figure-01). These settlements were 20 kilometers from the city center and served a dual purpose: they housed evictees from the inner city and agricultural workers who worked in the adjacent industrial zones.

In phase one, 45,000 one-room units with all services were designed and allocated evenly between the two settlements. Just 10,000 units were constructed until 1964 due to a shortage of funding and slow industrial output (Hasan, 2015).

Hasan (1993) stated that people forcibly removed from inner-city slum areas were left in the lurch because they did not get the planned compensation structures and were unable to return to the city center because the property had been cleaned out and sold to developers and builders. This caused them to encroach on government land and set up colonies as an illegal subdivision; this laid the foundation of fringe settlements (Hasan, 1993).

All these consequences highlighted the city's shortage of affordable housing. The Department of Housing and Urban Development (HUD) describes affordable housing as spending 30% or less of one's household income on housing. If a person spends more than 30% of their income on housing, they are assumed to be housing cost-burdened (Bernstein, et. al., 2006).

Arif Hasan, is also of the opinion that low-income areas should be designed in such a way that they could have the opportunity to grow incrementally for their future needs. The residents living in densely populated low-income areas

prefer the houses with the facility to grow over time and make any possibility of income-earning with their living. On the other hand, the public sector has an opinion to provide housing without incremental approaches, to answer the needs of today, and to build vertical housing for the low-income group. Therefore, there is a need to find a middle way and take initiative to fulfill the actual needs of most of the population of Karachi city.

The revitalization of old metropolitan areas may improve the urban living condition and land-use efficiency, thus increasing overall social welfare. There is a lot of debate in literature on the externalities of revitalization. (Ahlfeldt, 2011). Various words are often used interchangeably to refer to the revitalization procedures Spandou, et. al. (2010) described the term as regeneration, renewal, redevelopment, reconstruction, renovation, and rebuilding, among others.

The term "urban revitalization" refers to a group of activities directed at revamping an existing city structure especially in communities that are in decline due to economic or social factors. In general, urban revitalization strategies look to enhance characteristics of the urban environment like pavement design and sidewalk accessibility (Egerciolu, et. al., 2016).

Vileniske Urbans (2014), on the other hand, noted that the word revitalization would mean physical, social, financial, and cultural dimensions. Revitalization aims to support current urban growth by keeping urban identity, history, and heritage. Besides that, the revitalization initiative will generate employment opportunities protect natural resources, as well as provide proper community services and facilities for citizens.

Several studies on urban revitalization have been conducted on a global scale. As just a process, urban revitalization consists of a collection of urban management policies designed to enhance the social, economic, environmental, cultural, and historical regrowth of problematic, neglected, and dilapidated metropolitan areas (Spandou, et. al, 2010). Therefore, the aim of this study is to propose an urban revitalization project in one of the city's neighborhoods, Martin Quarters, where people can live and work with good environmental quality, proper public, cultural, and leisure facilities, and to enhance the quality of life of residents.

METHODOLOGY

Primary data for census information was gathered through field surveys as well as meetings with prominent professionals such as Arif Hasan, an urban planner, and other professional of the Urban Resource Center. A sample size of 50 respondents was selected at random from the study area using both purposive and simple random sampling approaches, with 30 being men. A semi-structured questionnaire was developed to collect feedback from persons who are now serving in the government as well as those who have retired.

The interviews were analyzed using content analysis, and the census data was analyzed using descriptive statistics. The findings were examined to generate suggestions for redeveloping the area. Surveys of Martin Quarters were done to get information about the social, cultural, economic, and political values of the area and to evaluate the needs of residents. Information about the quarter was also collected from the Urban Resource Center. Pakistan Public Works Department (PWD) also helped to find the current reports about the quarters and in the end, Pakistan Estate Office (PEO) provided the information about the government's point of view on Mafia Quarter resettlement.

THE STUDY AREA

The study target area was chosen based of its proximity to the central commercial area of the city its and potential for redevelopment and financial growth. This area is situated on major traffic routes and is easily approachable from the key business centre. Hasan (2018b) indicated that the construction of the Green Line BRT in the neighborhood has significantly boosted the value of the property on which it is built. He further added that Martin Quarters were one of the number of quarters that were allotted to the lower grades of government employees in the first phase of the development of Karachi in 1947-1957. The location of Martin Quarters is prime i.e.; it is near the city center, surrounded by several amenities and main arteries of the city i.e.; Clayton Road, M.A Jinnah Road, new M.A Jinnah Road, Jamshed Road, and main Guru Mandir roundabout (Figure 2).

The total area of Martin Quarters is 81 acres, out of which 31 acres of land have been utilized for the construction of 1364 quarters built between 1948 to 1952. Whereas, approx. 14 acres covers infrastructure like roads, parks, and open spaces (Anwar, 2021). A total of 21.6 acres of government land is unauthorized development. This is utilized by the allottees by extending construction of their houses and 471 shops (178 authorized and 293 unauthorized) with an addition of 3 acres and 11 acres declared as *Katchi Abadi* (Anwar 2021).

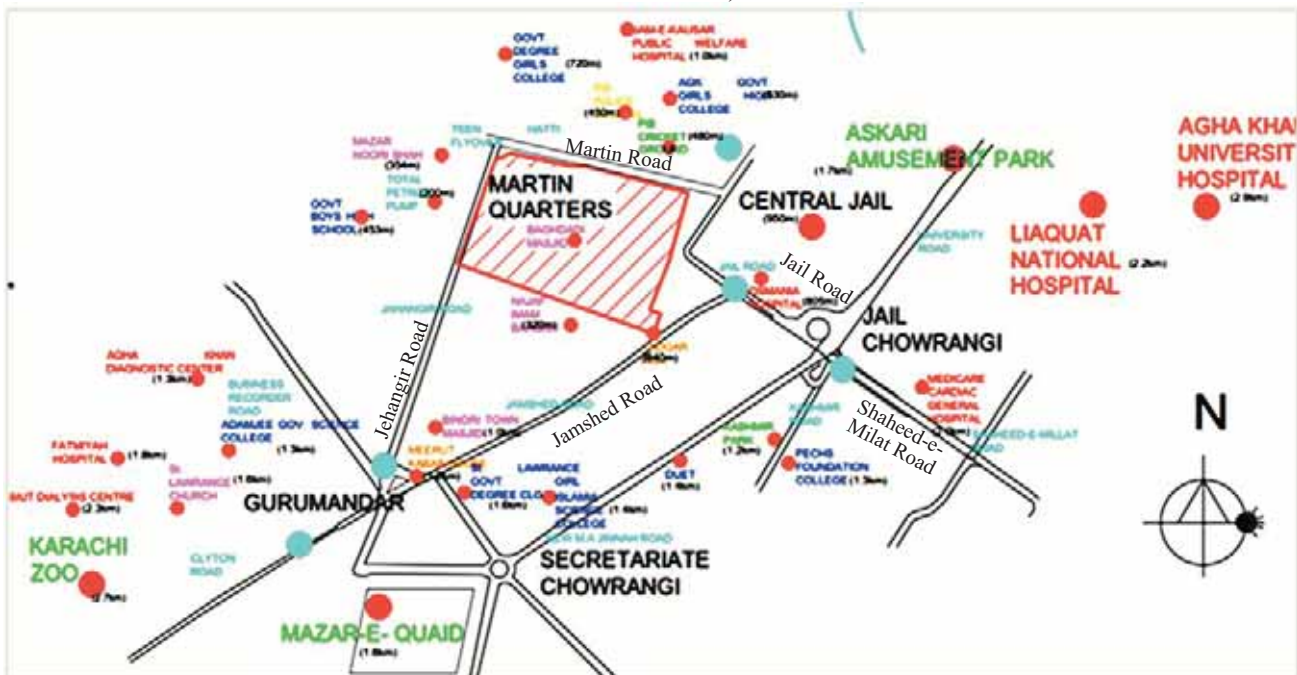


Figure-2: Location plan of Martin Quarters.
Source: Author

The planning of the area is also not in compliance with the building and zoning by-laws and it has been growing haphazardly reflecting the growing population of the city. Insufficient provision of amenities is forcing the residents to get these need fulfilled from faraway places. If properly planned the area can contribute to the economy as it is near to the commercial hub of the city and can also benefit the masses by increasing its accommodation capacity. The proximity to city centre, availability of open spaces, land value and similar characteristics associated to Martin Quarters and how they can enhance the opportunities of better living for low-income groups are the key criteria for the selected case study areas.

Martin Quarters is located on a precious parcel of land that was allotted to federal employees as per their grades with the deduction of 5.0% of the basic monthly pay as house rent and after retirement, 11.25% of the pension is deducted (Hasan, 2018b).

Martin Quarters has a population of 14,387 people, which has grown 1.24 percent from 1997 to 2017, and the population is growing as a result of increasing family size (Anwar et al., 2021).

Only 32% of the residents work within 2 kilometers of Martin Quarters, and the remaining 68% drive long distances every day to and from work, having limited time for social activities on weekdays.

Mode of transportation is private conveyance (such as bikes and cars for many residents), and public transports like buses and rickshaws. Table 1 shows the percentage of people using different forms of transport for commuting.

The road network of the area can be categorized into three types: primary roads that are 60-80 feet wide and used mostly by the local traffic of the area including public buses, secondary roads are 20-30 feet wide and tertiary roads are 8-10 feet wide streets. The periphery area is linked with important roads like Jamshed Road, Martin Road, Jail Road, M.A Jinnah Road and the main collector Road which divided the area into east and west is Jahangir Road.

Table-1: Shows the percentage of people using different transport for commuting.
Source: Author

Use private transport	30%
Use public transport	70%

Small scale enterprises are spread throughout the area which is an important aspect of the economic setup. Some houses in Martin Quarters have small shops [general store, medical store, barbershop, tailor, etc.] to meet economic needs but, disorganized shops along the roads create traffic congestion. Besides, the flower shop at the Teen Hatti, stop adjacent to the Noor Ali Noori Mausoleum plays a great role in daily routine especially every Thursday as many people visit to offer Fatiha in the Mausoleum. For prayers, several mosques of different scales are in the area. Baghdadi Mosque at the center of Martin Quarters is the center of attraction to pray and different occasion for all people. People from different parts of the city visit this Mosque especially on occasions and it has the capacity of 1500 persons. Apart from mosques, there is also one big Imam Bargah adjoining area of Clayton Road.

Looking at the existing condition of plots, it is apparent that quarters finally had ground plus one structures, (Table-2 shows the area of allotted plots). However, over time they have grown vertically due to lack of expansion horizontally, and change in land use has also occurred. One of the major factors causing the land-use change is the land value. The rapidly increasing population of Karachi increased the commercial activities in Saddar and adjacent areas with the rise of their land values, therefore, the land value of the Martin Quarter is also increasing because of its proximity to Saddar as shown in Table-3.

The factor behind the expansion of houses is related to the increase in population. Residential units in the area are now a mixture of old and new structures in which the percentage of old structures is 5% whereas 95% of structures are transformed into new structures. Current extensions are highly dangerous as the upper stories are built on cement tile roofs that are not so strong to bear the load of the upper story on them. Table 2 shows the area of original houses allotted to the employees. Now the houses are from ground to ground plus 2-3 story. Different material of construction in housing shows different alterations in the structures. RCC tiles, asbestos, or G.I sheets used for roof and walls are plastered and erected with sand cement and traditional wooden double doors and casement wooden windows are being used for openings. In some places like kitchen windows and verandah the cement “Jalli” has been used.

To accommodate more people, initially, *kutchra* (temporary structures) were constructed the walls were made up of bamboo, mud, grass, reed, stones, thatch, straw, leaves and

Table-2: Area of Allotted Plots.

Source: Author

Grade	Type of one Quarter	Plot Size	Covered Area	Open Space
6-10	F	728 Sq. ft.	633 Sq. ft.	95 Sq. ft.

Table-3: Area of Allotted Plots.

Source: Author collected data from different departments and through surveys of area.

(1)	(2)
Area Information	Land Value of Category
Area (Acre) 81 Acre	Open Res. Plot 25000
No. of Quarters 1364	Res. Buildup Plot/ Sq. Yd. 32,000
Type of Quarter F- Type	Comm. Open plot/ Sq. Yd. 75,000
	Comm. Built up plot/ Sq. Yd. 54,000
	Industrial Open Plot/ Sq. Yd. 12,000
	Industrial Build Up Plot/Sqft 3,000
	Flat/Apartment/ Sq. Yd. 4,500

Table-4: Ratios of built up area with population density.

Source: Author

Note: As such, the density is 177.6 persons per acre, $*14,387/81 = 177.6$ per/acre (low density)

Ground Floor	25%	2,046 Persons
Ground +1	52%	8,508 Persons
Ground +2	20%	4,896 Persons
Ground +3	3%	9,816 Persons
	Total	14,387.6 Persons



Figure-3: Amenities in the area.
Source: Drawn by Author



Figure-4: Built up area with height variations.
Source: Drawn by Author



Figure-5: Original plan of F-Type barrack given to the Federal Employees consisted of, a verandah, two rooms, common bathroom, washroom and kitchen, and also a provision of back alley
Source: Drawn by Author after visiting the houses.



Figure-6: Back alley provided with the barrack was encroached by the residents.
Source: Drawn by Author after visiting the houses.



Figure-7: Residents divide their quarter into 2 parts and rent out half of the portion.
Source: Drawn by Author after visiting the houses.

unburnt bricks room, or extend the surrounding area of the house using hedges and gradually the residents have made *pacca* (permanent structures) where the walls were made up of cement and concrete construction in extended spaces. Some people used those extended/encroached spaces for their own needs and some sold off and/ or rented out extensions to meet their economic needs (Figures 5-7). The current situation of the Quarters indicates that the extensions are illegal i.e. not in compliance with the building regulations (Figures 8 and 10), resulting in narrowing down street widths and putting pressure on existing infrastructure and circulation patterns (Figures 11 and 14).

Infrastructures such as sewerage, power, and gas lines, on the other hand, are already in place, however, there is a shortage and poor maintenance of water, electricity, and gas lines. The explanation for the deteriorating condition of infrastructure can be related to the fact that it was not planned to support the current 40% population and is overburdened. Moreover, the area does not have much aesthetic appeal. The roads surrounding Martin Quarters have shrunk due to encroachments and do not have proper bus stops. Amenity plots in the area such as parks and playgrounds are encroached by the dwellers.

Khan, et. al., (2018) stated that unplanned extensions and subsequent encroachments adversely affect the physical and social environment of not only Martin Quarters but also the broader area. Thus, Supreme Court of Pakistan ruled against the illegal encroachments and asked the unauthorized inhabitants to leave the premises. As per Butt (2018), according to a report prepared by the Deputy Attorney

General, 4,168 government quarters are unlawfully occupied. Residents of the quarters petitioned the court for a stay order on the land, but the Supreme Court (SC) rejected the petition and directed the government to pursue the operation of vacating the buildings. Government workers, comprising women and children, had protested outside of the Supreme Court Karachi Registry in response to the decision, which asked state officers to evict unlawful inhabitants of Pakistan Quarters and Pakistan Secretariat. The court also directed state officers to come to their conclusions after hearing the employee petitions and checking the residents' applications (Butt, 2018).

During the trial, one former Martin Quarters worker said, "This is our land because we have been residing here for 20 years," however, Justice Musheer Alam clarified that ownership would not be legal even though someone had lived in the houses for 100 years. The court goes on to mention that only current government employees are permitted to live in government housing (Butt, 2018). Hasan (2018), in an article highlighted the point of views of residents on the order of eviction. During interviews with the residents of quarters, they have highlighted their point of view as they are not illegal occupiers. "We will not be moving or shifting somewhere else since we were assured on many previous occasions to receive either property rights of these quarters or any other substitute in some other place inside this city," said Nabeel Ahmed, a 45-year-old occupant of Martin Quarters (Hasan, 2018). He further explained that "We have maintained the Quarters and have been charged the rent by the government. How can the court suddenly

order us, the members of the dead government officials, to leave?" Nabeel continued "This place is home to the grandsons of a famous poet and just look at the mental pain we are suddenly subjected to. Is this why our forefathers moved from India to Pakistan? To witness this unfairness?" (Hasan, 2018).

'The label of unauthorized occupiers is painful,' and we have nowhere else to go Abdul Aleem is a 38-year-old resident who grew up in Martin Quarters and whose father emigrated from India when he was a child. He went on to mention, "The instructions to clear the illegally inhabited land showed that we are lying, unauthorized occupiers, and this is very hurting for us. What I felt now that my ancestors' enormous efforts to establish an independent nation have been found futile. When my grandfather reached Pakistan, he expired in the cantonment. My father struggled a lot after his father passed away and eventually got a public sector job. This is how we reached here," he remembers. "We were assured that we would receive ownership of these dwellings." Aleem admits that a few dwellings are not only illegally expanded but even sold out by local mafias. Besides that, he argues that the violations of some inhabitants do not make all inhabitants guilty and that it is not fair to ask all inhabitants whose members of the family served Pakistan to evacuate this place. Aleem further said that they have spent a lot of money on repairing their houses since they were allocated quarters.

"The homes were allotted to our parents with only a tin-sheet roof. They were designed and managed over time by people. They have spent a lot of money since the Public Works Department (PWD) stopped working for these dwellings a long time ago owing to a shortage of financial resources." He further stated that they were issued guarantees of ownership or alternative accommodation by various governments, such as Prime Minister Zulfikar Ali Bhutto in 1972 and then Nawaz Sharif in 1991. Due to their long-term residency in Martin Quarters, the Ministry of Works granted permits to residents in 2006 (Hasan, 2018).

According to the above situation, many people are unlawfully renting out the quarters, and the entire area is expanding haphazardly with little to no planning. On the other hand, relocation without an alternate is not a solution to the city's rising housing need. If a suitable alternative is not provided, the city's illegal katchi abadis will continue to grow. As a result, to address the problem, it is recommended that existing areas be revitalized, which would benefit not only the inhabitants but also the development of the city.

NEED FOR REVITALIZATION OF THE AREA

After interviewing the related government departments such as the Pakistan Estate Office and the Urban Resource Center, a small chunk of the site was chosen and a survey was performed. Two research assistants were hired to meet potential respondent's in-person to maximize response rate and minimize selection bias. Following that, 50 relevant questionnaires were obtained (each questionnaire is answered by one person from a single household). Almost all families are extended families. 45% of the female respondents and 55% percent of male respondents were mostly between the ages of 20 and 50. They claim that they are the dominant group in the settlement. Table 5 shows the ratios of arrangement of demographic data of surveyed household representatives.

DATA AND ANALYSIS

This analysis intends to investigate the factors that influence homeowners' perceptions toward housing revitalization in the area. For the revitalization of the area, the willingness of residents matters. For this reason, the factors which influence the household decision are categorized into two groups, policy judgment in the land requisition and redevelopment activity and societal perception, and under the umbrella of these two categories couple of questions were asked from the residents as shown in Table 07.

The definitions of the variables that are distributed in Table 7, are defined in Table 6.

The distribution of the interviewed household members in terms of their opinions of government redevelopment projects are shown below. The higher the ratings, the more supportive people's views toward redevelopment projects.

According to the survey, shown in Table 8, 70.12 percent of interviewees are willing to support future government redevelopment projects because they assume that redevelopment is advantageous. In fact, with the rising price of compensation for lands and residences as a result of urbanization, most building owners not only do not oppose redevelopment but also want to improve the current economic conditions by land acquisition and house redevelopment, if fair compensation is provided (as shown in Table 8), while 29.88 percent are reluctant.

Table 9 lists the reasons, for supporting redevelopment projects, given by residents, who have expressed a willingness to support a future housing redevelopment program.



Figure-8: A narrow street view



Figure-9: A narrow street with upper floor encroachments



Figure-10: Commercial area view



Figure-11: First floor Encroachment



Figure-12: Private School



Figure-13: Street's main road view showing condition of cleanliness (Author)



Figure-14: Narrow Street due to encroachments

Table-5: Ratios of Arrangement of Demographic Data of Surveyed Household Representatives.
Source: Data collected by Author through site survey

(1)	(2)				(3)	(4)	(5)				(6)			
Gender	Age	Male	Female	(%)	Members Per house	Household Composition	Class	Grade	Income	Educational Background				
(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)				
Male	45	16.31	18.75	18.53	8-9	30.15	Single	14.98	Lower	3-5	12 K-15 K	15.15	Primary School	13.15
Female	50	28.65	26.12	28.17	12	18.50	Married (with Children)	77.31	Lower middle	6-10	20 K-25 K	20.85	Elementary School	19.83
	31-40	23.42	20.71	20.53	4	38.13	Married (with out Children)	7.71	Middle	11-16	30 K-50 K	44.15	High School	47.19
	41-60	26.42	30.22	30.83	≤4	13.22			High	17	<50K	19.85	High School	19.83
	≥6	5.2	4.2	1.94										
Total	Total	100	100	100	Total	100	Total	100	Total	100	Total	100	Total	100

Table-6: Definitions of Variables.
Source: Author

Sr. No.	Items	Definitions	
1.	Perception regarding compensation level	Variable's categorizations: 1 = unsatisfactory, 2 = a bit unsatisfactory, 3 = impartial, 4 = a bit satisfactory, 5 = satisfactory	Perception of Policy
2.	The compliance of redevelopment with the regulations	Variable's categorizations: 1 = absolutely not, 2 = not, 3 = impartial, 4 = adequate, 5 = yes absolutely it is	
3.	The rights of democracy are still respected.	Variable's categorizations: 1 = Yes Respect, 2 = a bit respect, 3 = neutral, 4 = not that respect, 5 = No respect	
4.	Conflict between the government and the homeowner is common	Variable's categorizations: 1 = usual, 2 = a bit usual, 3 = neutral, 4 = not that usual, 5 = unusual	Societal perception
5.	Unwillingly) Forcible eviction/demolition is usual	Variable's categorizations: 1 = usual, 2 = a bit usual, 3 = neutral, 4 = not that usual, 5 = unusual	
6.	Expectations for quality of living after-redevelopment	Variable's categorizations: 1=Very bad; 2=bad; 3= average; 4=good; 5=excellent	
7.	Willingness to redevelop the area	Dummy variable: no = 0, yes = 1	

DISCUSSION

Based on the data collected for this study, including statements of the authorities and personal opinions, it is clear that since the land value in Karachi is getting higher day by day, and if the land is near the city center then it is more valuable and expensive. To resolve the issue of housing and to get economic benefits from the expensive land which is losing its value because of unplanned and unorganized development, the area of Martin Quarter needs to be revitalized as President of Pakistan Arif Alvi asked for implementing Pakistan Quarters Urban Regeneration Plan (Thenews.com.pk. 2022), and further Pakistan Quarters residents get 54-year lease (News Desk, 2021), so this proposal could be presented for the approval.

In addition, the increasing cost of residences is a major issue for Karachi's families. Since housing rates have risen dramatically than average rates since 2000 and rental accommodation accounts for a significant share (more than 15%) of total household spending expenses. Therefore, it is important to provide people with low-cost housing by redeveloping existing housing schemes. If considering the scenario of Martin Quarters, eviction orders from the Supreme Court of Pakistan have been passed for the residents of these quarters, thus by redeveloping the area we can also propose

an option for resolving this dispute which offers the opportunity to the residents of quarters to buy the newly developed project or live there on rent.

On the other hand, the government needs to emphasize redevelopment implementation challenges such as people's perceptions of redevelopment's adherence with regulations and consideration for democratic rights.

People learn from society and adapt their behavior accordingly. For example, (Unwilling) forced eviction/demolition is common in the area that has a significant impact on people's willingness to welcome any future redevelopment initiatives. Therefore, to achieve harmonious urban redevelopment, the government must foster positive public attitudes toward the government. The redevelopment of Martin Quarters could be done by:

- Maximum use of land i.e. increase the occupancy percentage (in terms of number of residents).
- Provide maximum amenities in the vicinity as per standards.

Table-7: Investigation of the Land Acquisition and Redevelopment Process and Background Elements
Source: Author

Sr. No.	Items	% of interviewees in each category					Total
		5	4	3	2	1	
1.	View regarding compensation level	1.02%	33.17%	30.29%	26.85%	8.67%	100%
2.	The compliance of redevelopment with the regulations	2.02%	32.17%	28.29%	27.85%	9.67%	100%
3.	The rights of democracy are still respected.	3.10%	35.67%	34.29%	16.50%	10.73%	100%
4.	Conflict between the government and the homeowner is common	4.89%	15.65%	14.23%	29.45%	35.78%	100%
5.	(Unwilling) Forcible eviction/demolition is usual	3.50%	14.74%	20.78%	28.58%	32.40%	100%
6.	Expectations for quality of life after-redevelopment	13.13%	33.59%	38.71%	10.67%	3.90%	100%

Table-8: Readiness to initiate redevelopment (Yes or No).
Source: Author

Acceptance of redevelopment	YES	NO	Total
Percentage	70.12%	29.88%	100%

Table-9: The primary reasons why people are willing to support future redevelopment.
Source: Author

Sr. No.	Reasons	Percentage
1.	Getting compensation to uplift one's living quality	64.38%
2.	Purchasing more than one set of resettlement residential units in order to improve living conditions and rental income	74.00%
3.	Improving facilities and public service requirements such as housing, education, communication, and medical care	32.00%
4.	Become the city person with a higher socioeconomic status and a better quality of life	4.22%
6.	Others	3.57%

- Planned area with commercialization opportunities.
- Combination of modern and traditional architecture in designing.
- Use of traditional architectural elements e.g. jharokha, arcades as shading devices, courtyards, verandah, and geometrical compositions.
- Cluster planning of houses with the provision of open spaces used as communal spaces to retain the feeling of a good neighborhood (muhalla), for festivals and celebrations.
- Walkup apartment, solution for communal and density needs.
- Requirements for redevelopment are given in the following table and the basis of these requirement is the report “IIED DENSITY STUDY: 04 Cases of Housing in Karachi by Hasan (2010)

To incorporate the present density and also for the extended families

Density Calculation for Small Houses:

- Average No. Household = 6 Persons
- $*14,387/81 = 177.6$ per/acre
- Density in 1 Acre = 177.6 per/acre (low density) since it is a low density area, so if we allow 60 sqyrd house with Ground + 2 provision
- 60 sq.yd. of houses with 6 (avg. per) = 1,440 person/acre
- $*4840/60=80.6 \Rightarrow 80 \times 18=1440$
- 80 sq.yd. of houses with 6 (avg. per) = 1080 person/acre
- $*4840/80= 60.5 \Rightarrow 60 \times 18=1080$
- Similarly walkup apartments can also increase the present density of the area.

Besides the redesigning of quarters, the whole area needs to be redeveloped as there are many other issues found in the studied area. The sewage system needs a total revamp. It was designed for a much smaller population which was not upgraded with the rising population and their needs. Therefore, to resolve the above-discussed issues, there is a

need to maintain the basic fabric and planning structure of the quarters as is.

- A comprehensive planning for sewage, drainage, water supply system for the entire quarters is required with a focus on implementation tools and mechanisms.
- Roads need up-gradation: construct a Tarmac or Pavers road surface with controlled runoff of rainwater.
- Cantonment Board Clifton (CBC) to upgrade their main sewage line adjacent to the Martin Quarters.
- An order must be issued for the supply of energy and telephone lines.
- The playground to be built with a walking track to be allocated.

Table-10: Requirements for future redevelopment- By laws
Source: Author

Description	Standards	Future Consideration
Roads, streets and paths	22% of the total area	For proper circulation
Commercial	5 % of the total area	For the betterment of economic condition
Park and play ground	5% of the total area	For communal need of neighborhood
Education	3% of the total area	to provide comfortable approach
Flats for medium income group	500 person/acre	To incorporate the present density and also for the extended families
Flats for low income group	650 person/acre	
80 sq. yards plots	500 person/acre	

- A water tower (in the playground) to be built that will supply the colony with water and fire hydrants within the colony. Fire safety is essential consideration for high-rise high density apartment so this aspect is necessary to be taken seriously.
- A Youth Community Centre to be established where advice is given for the job applications and social entrepreneurship. (Both aspects are within the experience of the Core Group).
- Communal spaces to be built for gathering for festivals and different celebrations
- Existing Government school and clinic are adequate and seem to be running well.

A Survey of the area indicates that 60% of the total residents are living in the quarters which were allotted to their grandparents or any other ancestors, 10% are original allottees but they have been retired, and 30% are living on rent that is illegal settlers. Therefore, it is recommended that relocation/eviction of 30% of rental quarters that are illegally occupied is necessary till the completion of the redevelopment phase. This could be done on the way.

After redevelopment of 30% evicted low-density area into the high-density area as per by-laws, its residential units have to be allotted to half of the residents who are living in an undeveloped area and then the development of 10% of quarters could be started and then the same process will be repeated for the remaining 60% area into two phases. After the development of the whole area, it is suggested to sell out or rent out 20% of living units to those who were living there illegally. It will generate revenue for the government as well and the status of occupants will also be changed from illegal to legal occupiers.

CONCLUSION

Karachi, a city with economic opportunities attracts intercity migrants leading to haphazard development and increased need for housing to accommodate the flux of people. The occupancy ratio of housing in certain areas is also high in

comparison to the central parts of the city. Any vacant parcel creates the risk of being illegally occupied and the constant rise in housing needs has escalated this trend. This study talks about the occurrence of unregulated and illegal housing development in one of Karachi's central areas, as well as the adverse consequences of such growth. It observed the rapid pace of urbanization in Karachi resulted in a degraded urban environment.

Concluding, it is more appropriate to redesign and upgrade the existing dilapidated areas within the city instead of launching new housing schemes in the suburbs. The reason behind this is that most of the people belong to low-income groups and they are more comfortable to live in the city as they get more opportunities of earning and commuting is also easy within the city. Therefore, this area is proposed to be redeveloped to settle the dispute of residents and government and to not only provide a healthy environment to its residents but also to accommodate more people. The proposals of redesigning Martin Quarters will not only cater to the needs of the current generation but will keep in mind the accommodation needs of the future generation. This project can be a model for redeveloping any other similar area of Karachi. The area is required to redevelop in phase wise process, in which resettlement of residents will be done easily without any hurdles.

This is a preliminary study on the social learning and experiential learning channels via which individuals build opinions of the government's housing redevelopment plans.

Acknowledgements

The author wishes to express deepest thanks to students, Architect Shajeeya Nadeem for her contribution in this research and Architect Fazal Noor for his help in compilation of data. Completion of this study would not have been possible without their help.

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HISTORY AND ARCHAEOLOGY: AZAD – JAMMU AND KASHMIR – A STUDY BASED ON LITERARY EVIDENCE

Muzzaffar Ahmad, A Publication of Meezan House

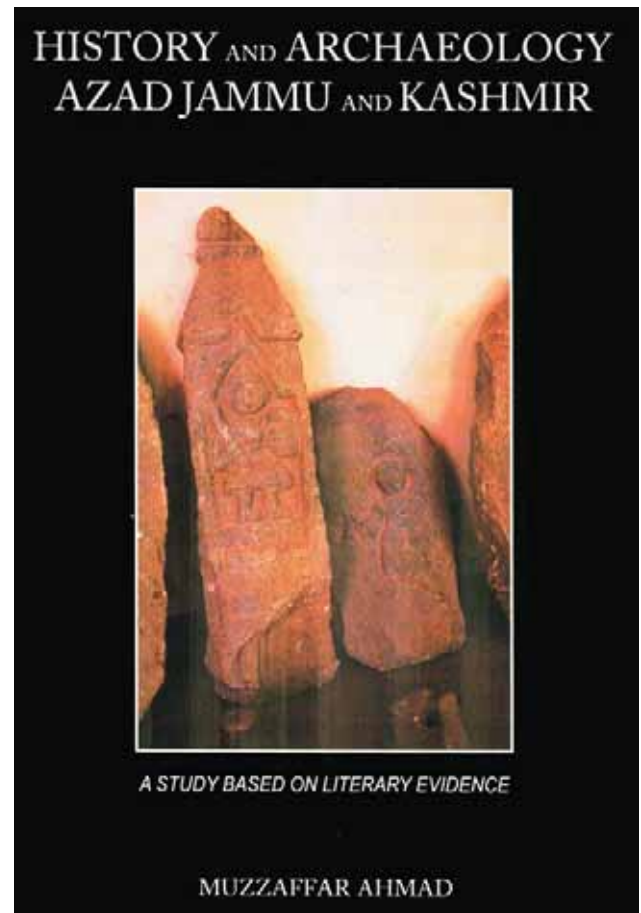
Reviewed by Hussain Khalid*

BOOK REVIEW

Archaeology is the study of human history and prehistory using the tools and methodology of surveying and excavating land to seek and discover artifacts, both ordinary and extraordinary, in order to examine the history they witness and get a better knowledge of human culture. Many ancient prehistoric cultures with unwritten histories have been discovered thanks to archaeology, and archaeological remains of any place are a testament to the lived experience of events by humans before us.

The book "HISTORY AND ARCHAEOLOGY- AZAD JAMMU-AND KASHMIR, A STUDY BASED ON LITERARY EVIDENCE" is based on Muzzaffar Ahmad's MPhil thesis, which he submitted to Hazara University. The book, which was published in January 2019 by Meezan Publishing House, is an attempt to create an inventory of Azad Jammu and Kashmir's archaeological legacy based solely on literary evidence. According to the author the book tries to create a historical portrait of Azad Jammu and Kashmir, as well as a literary examination of the archaeological data. The book can be considered as a collection of literary evidence supporting the history and archaeology of AJ and K gleaned from publications from various times as well as oral accounts backed up by surveys of the region's archaeological sites.

The book is organised into six chapters to provide the reader with information about various aspects of the context of Azad Jammu and Kashmir, such as its geology, geography, administration, ethnic settings, and climatic conditions, before expanding into Azad Jammu and Kashmir's history and archaeology, as well as literary sources from various eras and places. Ahmad also verifies and double-checks the data gathered through the literature review for accuracy and reliability. The table of contents reveals the book's structure; it lists all of



the topics covered in each chapter. Following that is a list of Maps and Plans nevertheless, some of the maps are difficult to read.

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While the purpose and methodology of Ahmad's body of work, which we can refer to as a guide to History and Archaeology of AJ and K, are straightforward, it is the author's intent that makes it a labour of love; he curates prehistoric and historic information and anecdotes in chronological and geographical order. The book is a work in progress that serves as a basis for archaeological study in the region; the information is sparse and has to be fleshed out more, as the author himself states in the introduction. To the authors' credit, it is a useful resource for beginning to learn about the archaeology of the region through history, and it can be pivotal in conducting systematic exploration and field work for archaeologists, but it falls short in providing a holistic insight into the history of each time period for general readers, despite the fact that this was not the author's primary goal in compiling this study.

What remains intriguing is the author's technique to organize the collected information on the region by district; this strategy prevents the material from becoming overwhelming while making it simple for the reader to find the information they seek. Furthermore, the book's core is the set of columns listing the names of archaeological sites by district, historic writings on them and their origins. In my opinion, these columns give the book a useful introduction to the archaeological heritage of Azad Jammu and Kashmir. The final piece of Ancient Routes is the cherry on top; it connects the Azad Jammu and Kashmir territory to the larger context, making the region's rich history and archaeology understandable.

Ahmad's effort in compiling this book is admirable, and it would be valuable to experts and visitors interested in learning more about Azad Jammu and Kashmir's history.

INVITATION FOR PAPER CONTRIBUTIONS

ISSN 17728-7715 (Print), ISSN 2519-5050 (Online) - listed in Ulrich Periodical Directory

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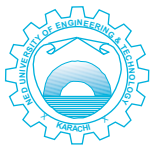
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