Kurdistan Engineering Union

Humanizing Architectural design strategies, The Effect of Human-centered Design strategies on generating Efficient Design solutions.

‘‘A methodology for prioritizing user’s Needs”

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Abstract:

Architects today still highly depend on intuition attempting to create more emotional formalistic designs while the newly formed demands in Architecture present challenges that cannot be wholly replied on using the existing design paradigms, in addition Human-centered design (HCD) concept started to develop gradually from the early 1980s to become a rapidly growing attention field, thereby advocating the viability of ‘image -driven’ design strategies approach in architecture. HCD philosophy seeks to place the space ’s users at the center of the design process by primarily understanding their needs in buildings, communities, and cities. HCD methods aim to achieve an ideal space emerging using th e human centered interaction scheme based on human body characteristics.

While the literature of architecture design is replete with design models and statements in terms of what to count as good or bad design, there has been little about conceptual analysis of Humanizing the design process and few attempts to put this conceptual into any kind of overarching framework.

This study aims to respond to this conflict, by interpret ing this novel design approach based on a written literature and connecting the data with the universal theory of design by Alexander Christopher through an architectural lens, firstly, then defining a methodology to practice and reach the optimum guideline methods of humanistic design in architecture, through integrating HCD methods with Alexander ’s universal theory of Architecture.

Research keywords:

Design strategies, Human centered Design, Image-Driven, patterns, Needs.

Introduction:

Architectural Design is not about making spaces, but about ‘making good spaces’ this concept puts the designers in a challenge of the extracting the exact meaning of good architecture. Salingaros describes " bad architecture" as that which makes the users uncomfortable or physically ill, and which follows formal or ideological concerns rather than adapting to nature and to the essential needs of ordinary human beings (Salingaros & Mehaffy, 2006). There are many professions which have a direct impact upon the functioning, appearance and quality of the humanized environment including Architectural environment. Since Architecture is the art and science of combining expression, technology, and the satisfaction of human needs, its main purpose has to be making places where people feel more human, more alive and more fulfilled (Moore, 2004) Based on this notion, there is necessity to identify specific needs of intended space users and not designing for anonymous people.

Nowadays architecture must be more about users’ experiences rather than focusing on the designed product fissionability or trendiness since the main objective behind the whole process is solving humans’ problems by offering efficient solutions and environments that are habitable in the sense that they support their occupants physically, psychologically, socially, and spiritually.

“Human-Centered Design” or “user-centered design”, is based on a philosophy that empowers the individual or group design process that tackles the core true needs of people who experience a problem by designing spaces that are occupant centered and activity oriented rather than being marketable or fashionable, despite the criticism of image-driven designers (often highly- stared architects).
In this approach of problem-solving the main focus is on understanding the perspective of people who experiences the problem, and whether the solution is truly and effectively meeting their needs or not by making them part of the final solution and preferably, when possible, part of the design process itself.

Several strategies have been referred to maintain this objective and several definitions to the notion of human centered scholarly have been produced therefore we will review this notion academically to achieve an ideal understanding to this attitude based on the human centered universal scheme for maintaining more humanistic architectural spaces.

Based on the previous introduction, Research problem could be described as bellow:

Prioritizing Image-Driven approaches in contemporary architecture design process thus lack of humanistic and users' needs criteria.The increasing number of designers using formalistic artificial mode design strategies based on inspiration from existing buildings that are not user based designed.

Research's aim:

1. The research's main aim is to incorporate the notion of the Human centered design strategies into the early stage of architectural design process using a unified universal human-based theory.

2- Identifying a methodology for prioritizing users' needs in contemporary architecture design process based on humanistic standards and mutual needs.

Hypothesis:

The study assumes that Architecture Design strategies based on users' actual needs through understanding and empathizing with their demands lead to more Efficient Design solutions.

Methods:

The paper follows a tripartite methodology; firstly, an Academic relevant literature has been conducted discussing the Human-centered design concept in general then focusing on this notion through architectural lens, secondly, following a qualitative methodology to analyze the written literature. Finally, conceptual frameworks are extracted from the literature to reach the optimum guideline methods of human-centered design in architecture through integrating HCD methods with two scientific- based design theories (The universal Design) and (The pattern language).

Limits:

Research includes both physiological requirements of human beings (Environmental, functional) and psychological ones (aesthetics, physiological) thus Human needs in Architectural spaces are comprehensively included in this paper without limitation.

1.1: Architectural design strategies:

Several starting points are thought to be the beginning of design research, Bruce Archer and John Chris Jones were two of the influential theorists in this field. The first conference on design methods took place in London in 1962 later Jones published (Design Methods: Seeds of Human Futures) in 1970 while Arthur established the "Design Research Society" (DRS) in 1976, The DRS journal Design Studies was founded in 1979 (Margolin, 2010).

Based on Design research, the act of architectural design is a complex one, Further, each architect uses his own guiding principles that can contribute to setting limits and formulating reasonable objectives. The strategies for the design process can be primarily divided into three conceptual approaches (Jones, J. Christopher, 1980):

The Logical Model of design: here the process is a rational one and can be clarified as Glass Box , it includes analyzing all the main design problems and all view points to a group of smaller problems and initial molecules that are naturally analyzed to basic components and solving each one separately, and then collect the final molecules once again to create a holistic solution(Alexander, 1977).
The Creative Model: refers the inventive ideas of the designer, which he described as Black Box, where the more innovative ideas accumulate inside the mind of the designer, in this spontaneous method the box is containing the stock of previous experience and knowledge of the designer.

The collective Model: This method represents the integration between the two previous models, here the designer activates the participation of the users during the decision-making stage which is a must, such as questionnaires that contribute to the explanation of the design positions to the users (Jencks et al., 1977).

Thus, Architectural Design Process is located on a linear scale between two opposites, Scientific and Artistic Processes, the same fact Rowe pointed to when he pointed out that design is often located in a position between the fine art and technical science (Rowe, 1987).

1:2 Human Needs in Architecture:

Humanistic architecture's " demeanor" comes from two qualities, one from its form and spatial organization connected with site and environmental characteristics to ensure the physiological needs and requirements, the other comes from the local way of life and the charm of materials bringing the humanistic experience to the users by emerging the unified theory of needs "We can use the human body as a sensing instrument for what is good and bad in architecture. Basic assumption: human feeling is universal, and people share 90% of their responses, even if individuals come from different cultures or backgrounds." (Alexander, 1977).

The "Human needs" model was first introduced by Abraham Maslow which defines human needs in a five-level pyramid, sorting needs in order from bottom upwards (Abraham Harold Maslow, 1943). It starts with the physiological needs first followed by the safety needs then the social needs, and esteem needs, which are also identified as deficiency needs (D-Needs). The final level on the top is self-actualization known by the growth needs (G-Needs) and this one is classified into four levels (self-actualization, cognitive needs, aesthetic needs, and self - transcendence) (A H Maslow, 1998).

Design briefs are often generated depending on real life situations in a general way, so architecture students are left to imagine and interpret the needs of the clients. In most cases, these interpretations cannot address specific users' actual needs, the design studio and brief statements are therefore central to architectural education that provides solutions to human needs (Bukola et al., 2015).

Before a space can become a place, it must have been lived in, experienced, and absorbed by the users into the systems of places they already have in mind. This implies that a successful architectural design will transform spaces to places that address human needs (Dayaratne, 2013). Salama developed the "theory of knowledge integration", He hypothesized that many architectural educators focus on problems important to an audience of viewers rather than concentrating on issues important to their clients, hence the need to identifying design problems (problem-based design strategy) is more important than developing concepts toward solutions(solution-based strategy) (Salama, 2012).

1:3 Humanizing design Strategies:

The terminology was coined in a 1980 publication entitled Human-Centered Systems by the Irish engineer Mike Cooley, In his work, " Architect or Bee?", he argues that even with possessing the most advanced technology, an architect can't create what a bee does. Thus, he highlights the necessity of human-centered straightforward design (Cooley, 1980). This notion is considered to be a user-integrated ideal design which is achieved by largely understanding the users' needs in buildings, communities, services, systems and products. Therefore, HCD could be defined as a process for designing and improving everything for humans who will use them, regardless of age or ability of the user (Harper et al., 2008).

Based on HCD design definitions, the characteristics of HCD in Architectural Design process can be summarized as:

- The central core of Design process is human being.
- Understanding and space users holistically and empathizing with them.
- Multi- disciplinary cooperation is required.
- Involving users during the design process.
- Making spaces functional and pleasurable.
- HCD Design strategies should be in balance with natural forces, neither homocentric (human centered) completely, nor Ecocentrists (nature - centered) entirely.

This approach is not a trend, style, or a methodology, but a solution -based strategy to improve the relationship between people and buildings to ensure a community's need by focusing on the needs, contexts, behaviors, and emotions of the people that the answers will serve.

Empathy and innovation are the basic principles of human-centered architecture. As Dr. Singh, refers to , "We spend a lot of time thinking and designing a bridge, but not enough needed time to think about the people or users who are crossing it".

Table 1: Definitions of human- centered design:

Author	Terms	Definitions
Norman (1988)	UCD	A philosophy of making the design usable and understandable based on users' needs and interests.
Jordan (2000)	Person-Centered Design	Taking wider view of person- centered design and, designing in more holistic context, taking in consideration both the design and persons who experience the outcome.
Mc Donagh - Philp and Lebbon (2002)	UCD	A design methodology that utilizes the users as a designing resource, to increase the or involvement in the process.
Brusberg (2003)	UCD	UCD aims to expand the designers' understanding, knowledge, and empathy of users.
Walters (2005)	HCD	A creative assessment of human needs, to extend human capabilities and his participation to improve the quality of designed spaces.
Alison Black (2006)	UCD	User- centered designers gather insights that derives design from the earliest stages of the design process through their active engagement with end- users to
IDEO international design and consulting f i rm).	Human factors	Combining human factors techniques with the ecosystem, not just end products. Putting people at the heart of the process. Making things "useful, usable and desirable" for people.
HCDI, Brunel University	HCD	to produce a solution which is safe, efficient, and satisfying to by using knowledge of human. capabilities and l imitations.

1.4 HCD strategies, Methodology, and process:

HCD principles help architects and designers in the essential process of investing the user's visions and demands as an approach for knowing the usefulness of a space. HCD guidelines aren't design standards (Gee, 2006) they are step by step rules that aim to build a complete understanding of the design process and space occupants. There are five processes for the human -centered design cycle to meet the criteria of usability according to the ISO standard. (Turner, 1999).

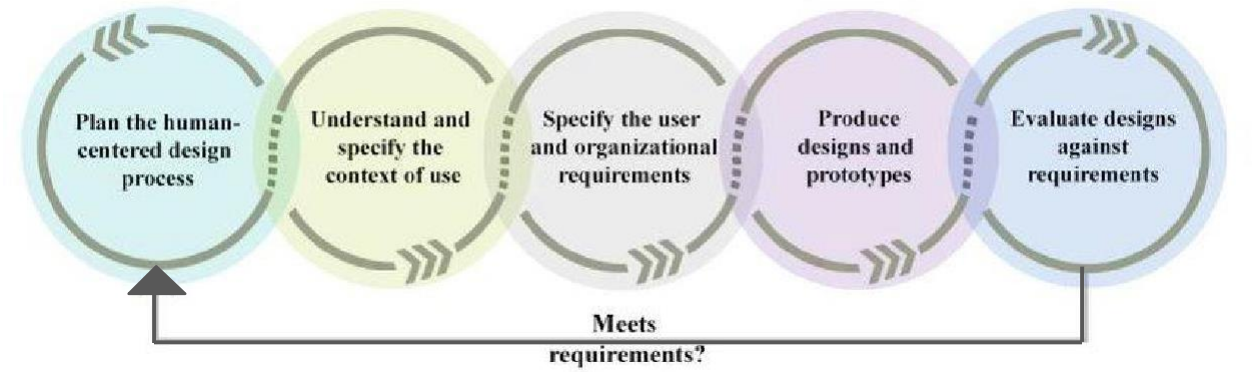


Figure 1: Diagram of human- centered design sequence. Source: (Turner, 1999)

HCD design strategies there will be no "style", recopying, or directly borrowing. The design process will start with devising a step-by-step scenario while emphasizing on aspects precisely related to utilitarian needs, designer 's actions would not be embroiled in the pursuit of his personal, single, decided method.

The HCD process includes tangible and intangible strategies of thinking through the three stages (inspiration, ideation, and implementation). Inspiration is where the designers must understand people, notice their lives, and hear their hopes and desires. Ideation suggests that designers have to utilize everything they heard from people to formulate many ideas and examine suitable solutions. Implantation indicates that the designers have to maximize the designed space 's benefits. There may only be one opportunity to provide one solution to a specific problem (because the next time the problem will be different; in architecture there will be a different site, brief, budget, or client) and so it is impossible to definitively compare the quality of that solution with another (Anderson, 2018).

Literature review on Human centered Design strategies in Architecture:

1-(Alexander, 1979):

Alexander Christopher theories about the human centered Design have had significant impacts not only in architecture, but these concepts expanded to include urban design, software, sociology. According to alexander there is one timeless universal way of building, it is a thousand years old, all indigenous structures such as the villages, tents and temples in which man feels at home, have always been made by people who were close to the center of this universal design method.

In his book he indicates that the persistent quest of the modernist aesthetic also produced examples of inhospitable uncomfortable spaces, he was amongst the most vocal critics of these un humane spaces and responded to them through his critical publications which resulted in three unique and related theories of architectural and urban design. A timeless way of building is a considerable theory for explaining complex socio-spatial issues through a clean building block format.

By his theory, Alexander refers to traditional buildings that are the product of a communally shared values system and gradually adaptation to surrounding circumstances which bring about all the ‘forces’ impacting a design into a harmonious balance. In contrast, contemporary architecture results from the obligation to formal regulations and abstract concepts upon a single design episode, creating an outcome where the ‘forces’ are unbalanced.

Alexander believes there is a central quality which is the root principle of life and spirit in a man, a building, a tow, this quality is objective and precise, but “it cannot be named” (Alexander, 1979). Alexander’s theory “The Timeless Way of Building” specifics his belief in details that this unnamed quality is the source of the inherent beauty of traditional architecture. Despite being unnamed, the author proposed several explanations for this quality such as “Beauty”, “alive”, “whole”, “comfortable”, “free”.

He claims that this quality exists, to some extent, in every person, and it luminates our way to recognize the presence of humanistic design criteria in the environment Thus, it is a "central scientific fact" (Alexander, 1979, p54)The theory states that places with this quality will become humane, alive, healthy, whole, and self-maintaining if they have the "quality without a name", and will be un whole, dead, sick and self-destroying without it. According to Alexander this quality only exists when people employ a timeless way of building. This requires an "activated populace" and enables them to participate in the design process to shape their environment through a democratic process based on unified context and shared design language and values.

Table 2: Alexander' s 15 properties of wholeness (Alexander, 1979)

Alexander's Fifteen Structural Properties of Wholeness		
1. Levels of scale	6. Good shape	11. Roughness
2. Strong centers	7. Local symmetries	12. Echoes
3. Boundaries	8. Deep interlock and ambiguity	13. The void
4. Alternating repetition	9. Contrast	14. Simplicity and inner calm
5. Positive space	10. Gradients	15. Non-separateness

The fact of living structure exists not only in human -made or -built things, but also in nature. Based on humanistic needs in architecture Alexander's viewpoint seems to be very rational and humane. More importantly, he wanted to be inspired by nature and humanistic needs to make sure that what he observed from what humans built or made also applied to nature.

Figure 2: Within the framework of common language individuals acted together to build a town which is and alive and more humane (Alexander, 1977)

2-(Salingaros & Mehaffy, 2006):

The book lies within 44 sections and is divided into two parts. Each one gives a summary of the author ’s design lectures and assignments; a coherent written text is tailored here to fit students’ needs and anyone who wants to explore more in this field. The author highlights the importance of architectural design patterns in man's intellectual advancement, criticizing the twentieth century architectural design approaches search for embellishment and form pattern.

The author believes that Things have become increasingly subjective in the lack of a humane design strategies and criteria, and what is built nowadays appears to be mostly driven by fashion, forced tastes, and an individual's ambition to draw attention through unique and often disturbing expressions Salingaros and Mehaffy (2006), p 220.

The most important highlight made in this book is referring to the significance of differentiating between a salient discipline and ephemeral fashion, while the first relies on knowledge that can be measured and verified the second is a result of market slogans and bold statements.

In chapter Eleven of this book “Pattern Language vs. Form Language” Nikos Salingaros distinguishes between two languages of architectural design in today’s architecture: a pattern language, and a form language. The first one contains rules for interaction between human beings and the built environment and forms, it codifies humanistic practical solutions and key answers developed over millennia and arose from available materials and their human utilization rather than from images, for this reason they were appropriate to local context and climate, on the other hand ,the form language, consists of geometric rules for putting materials and parts together, it is visual and tectonic un humane.

Various architectural traditions, or styles, correlate to different forms of languages. The issue is that not all forms of languages are adaptive to human needs and emotions. Those that lack adaptability will never be able to engage with a pattern language or human being therefore every adaptive design strategy must have both a pattern language and a viable form language; otherwise, they will create alien environments. Humans' adaptability to their surroundings is codified in pattern language, which dictates how and where we naturally like to walk, sit, sleep, enter and move through a building, enjoy a room, or open space, and feel at ease. The pattern language is a collection of tried- and-true solutions that maximize how the

building promotes human life and fulfillment. It summarizes how architectural form may accommodate human activities by combining geometry and social behavior patterns into a set of functional interactions.Each pattern language is tailored to distinct climates, cultures, geographies, and customs, and reflects diverse ways of living, customs, and behavior. It is the designer's responsibility to extract specific non-universal patterns as needed by evaluating the ways of life and tradition in a particular environment, and then to apply them to that circumstance. As a result, in order to send a meaningful message, a minimum level of complexity is essential; oversimplicity carries no information and the pattern can be recognized, and the relative complexity of its data string estimated using a simple visual examination.

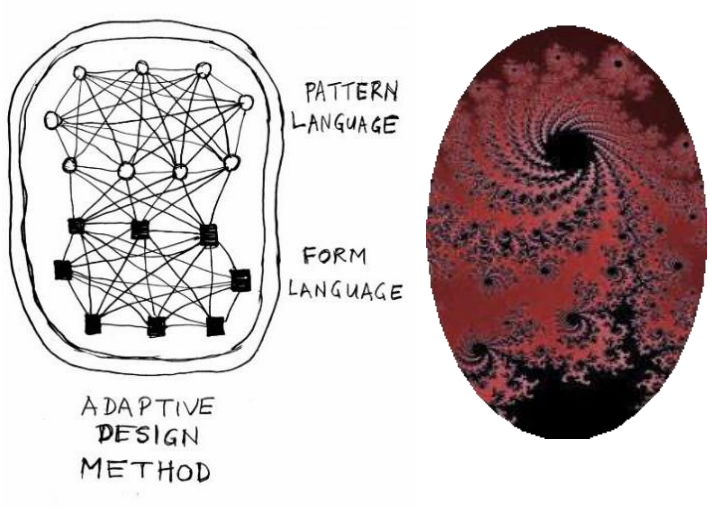


Figure 3: The Kolmogorov- Chaitin complexi (patternern language) (Salingaros & Mehaffy, 2006).

Architects and interior designers, on the other hand, have insisted on applying image-driven design guidelines to office environments for decades. These standards usually result in a typical compromise that meets nearly none of the basic needs for a good working environment. The users frequently describe those spaces as sterile to oppressive. The fact that a design process can adapt to a style but not to human use and wellbeing is a key source of misunderstanding, it could, for example, adapt to a collection of geometrical prototypes and shapes such as cubes and rectangular slabs.

Despite various and effective adaptations to local climates, situations, and applications through centuries, the Classical form language remains intact. People react to traditional architecture using their biological intuition, judging the built space and environment for their positive or negative impact on the human body.

Architects, on the other hand, are ignoring the space users' biological signals and to judge the design process according to abstract criteria resulting in harmful anxiety- provoking structures that are unpleasant for people's health and wellbeing.

A pattern language is a collection of evolved humanistic geometries on a variety of scales (urban, architectural, and ornamental) that people of a specific culture identify with and are comfortable with. It is heavily reliant on traditional and local materials — or was before the global advent of non -specific industrial materials. (It's crucial that architecture is related to humankind evolution, the physical necessities of the organism, and the utilization of information in accordance with evolved culture.) By ignoring the biological roots of human needs and behavior, architecture is detached from humanity and from the world.

Buildings with a quantal distribution of scales predominated until the twentieth century, when some architectural scales were either suppressed or distributed randomly. Although these practices were introduced as novel, they prevented the emergent properties that characterize the most coherent known buildings.
Therefore, the writer believes that Architecture is a human activity that has an impact on the natural environment since its purpose is to design structures to house humans and their everyday activities, he attempts in this book to compare and evaluate how well different types of buildings interact and connect with people and their surroundings.

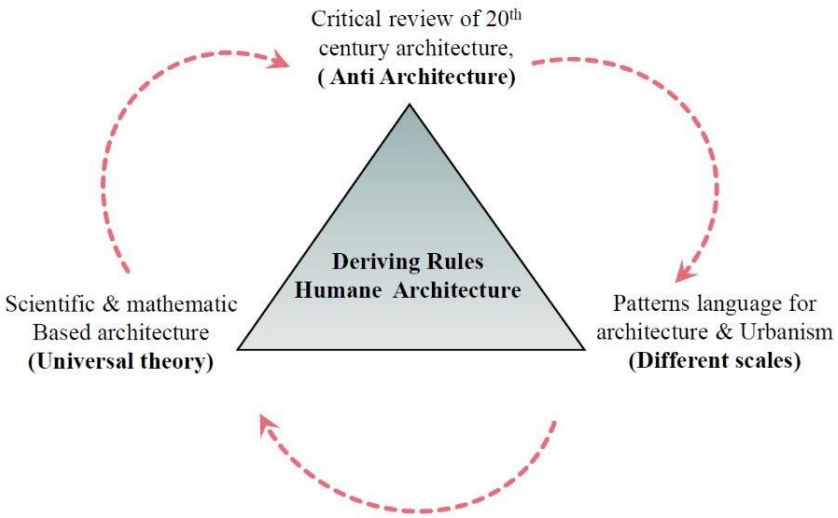


Figure 4: The Triad of Salingaros (Researcher)

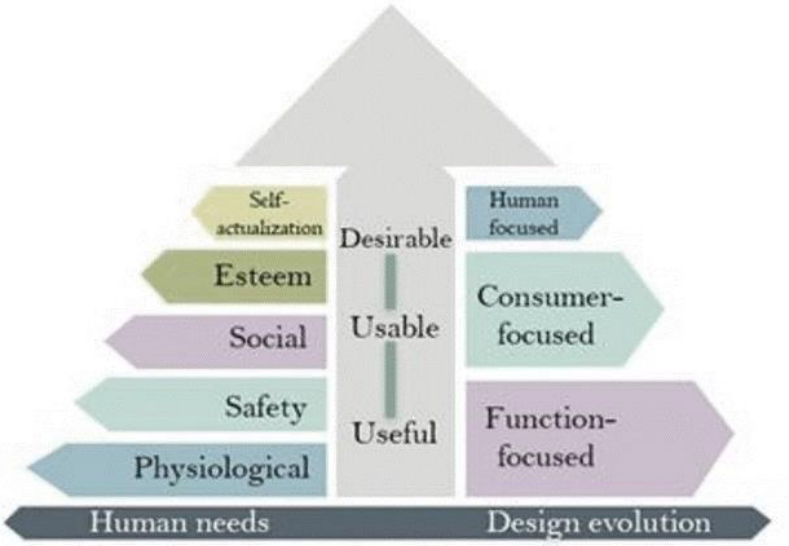
3-(Zhang & Dong, 2009):

This study suggests a conceptual model framework of human-centered design concept. It combines physiology and psychology needs through hierarchical needs of human beings then investigating the link between design methods and those needs, it also proposes a framework that explains the design evolution within societies.

According to the authors, although HCD has been a concern and a debate field of designers previously, it has different contexts in different decades and different places.

The researchers follow the model of human needs proposed by Abraham Maslow " A Theory of Human Motivation" (1945) as well as Jordans model when referring to the notion that simple human needs model includes three levels o: (functionality, usability, and pleasure) finally The 'design and society' model proposed by Küthe , a combination from the three models was used as a framework in explaining human-centered design thinking, then concluding the fact that the product's function and usefulness should also suit higher -level human demand and Future design should satisfy a wide range of human needs, even indirect needs which users have not predicted. Maslow's hierarchy of needs was considered as a

key answer when investigating users' hidden higher- level aspiration. It is a tool for design researchers to investigate the relationship between design evolution and human needs. The integrated model demonstrates that design evolves in response



to the hierarchy of human needs, from utility and usability to attractiveness.

Figure 5: A conceptual model for human centered design (Zhang & Dong, 2009)

4-(Gee, 2006):

This study explains how to make learning spaces more humane by concentrating on places where teachers and students interact, especially the classroom. Although classrooms are an important part of any school, their potential is frequently neglected. These recommendations can help lead discussions with everyone participating in any project, whether they are associate with the institution or a design firm, regardless of the project's unique functional requirements, these concepts explain this concept by stating the following guiding principles for human-centered design in these spaces:

Needs and Adaptability

Humans seek physical as well as psychological well -being. Judith Heerwagen discussed how one's well-being affects productivity, creativity, and involvement. Her studies have focused on four factors that must coexist in order to generate happy and productive environments: “cognitive efficacy, social support, emotional functioning, and physical function”(Heerwagen, 1998).

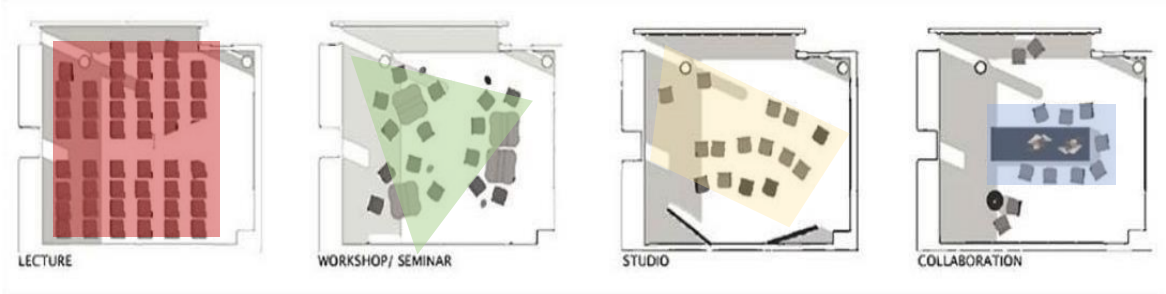


Figure 6: Alternate Floor Plans for the Same Space – Adaptability (Researcher)

4: Healthfulness:

Healthy places are designed with ergonomic and environmental concepts in mind to promote physical well-being. In a 1999 study of more than 2,000 schools, the Heschong Mahone Group found that students in classrooms with daylight their performance has improved 20 percent in math and 26 percent in reading over the course of a year than students in classrooms without daylight (Schneider, 2002)The follow-up study confirmed favorable advantages for teachers as well.(Hannah, 2013).Ergonomic factors also support and interact with the human body. Tables and chairs should be adjustable due to the wide range of human sizes. Students and instructors should be encouraged to stand up and walk around.

Stimulating:

People are drawn to stimulating environments, which encourage them to think creatively. These spaces are more humane in terms of encouraging and engaging students and instructors to teaching and learning activities, they must have variety to stimulate, which may be achieved simply by painting rooms in different colors. Transparency and visual access and connection are also important as people might feel more connected when they connect visually. The study underlines the idea that successful and more humane design is achieved when environments assist learning and generate a positive experience. This enriches the space and makes learning more effective when the physical environment is built as a powerful learning tool.

Figure 7: Stimulating Spaces for Socialization - human needs for community and solitude.

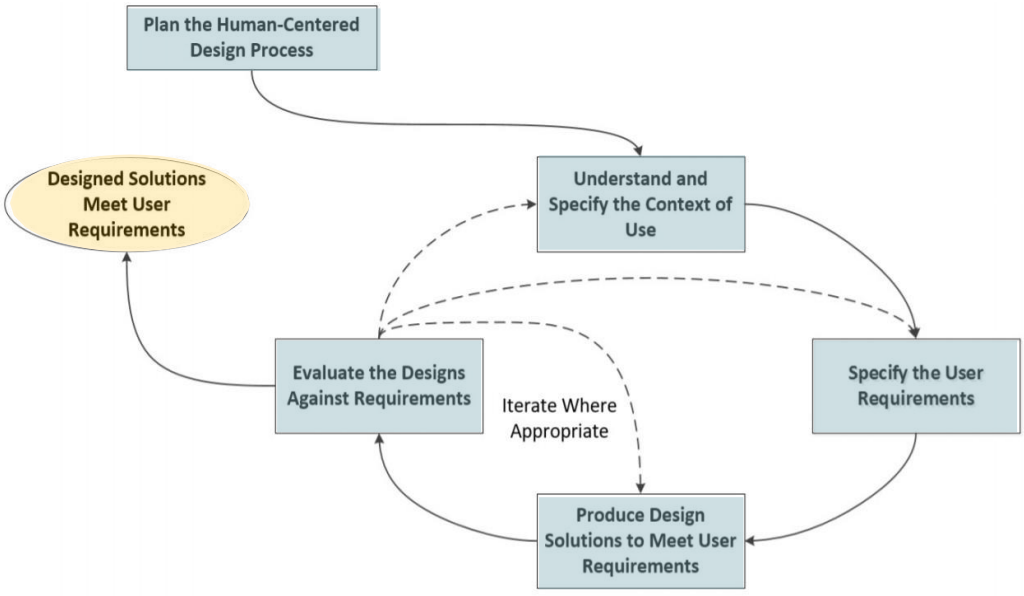


Figure 8: (Harte et al., 2017) Human- centered design has four main activity phases.

5- (El Sayad et al., 2017):

This study discusses the phenomenon of Interactive Architecture as a key tool to achieve human centered architectural Design, through defining the behavior of the human body to document and examine the buildings us ability at early design stages, the methodology used consisted initially of a literature survey discussing the Human-centered design in general and then focusing on the methods of creating an Interactive building space.

After understanding the use of each method in its field, it is concluded that in order to reach the ideal new guideline methods of design in architecture, integration must be achieved between HCD methods and interactive applications in buildings. Correspondingly, Interactive Architecture was chosen as the study's focus point because it makes use of digital technologies such as quantitative and qualitative performance-based simulation to provide a holistic more humane building design.

Finally, a matrix is created to determine the best architectural design guidelines by combining HCD methodologies with Interactive Architecture studied examples. The author also covered five projects; each demonstrated a different form of humanization experience through interaction tools depending on Human's body is the source of orienting people within a space, locating them and giving them a point of origin with which to understand the world as Christopher Day stated that: "We experience buildings not as objects but as boundaries of space" (Day & Rose, 2004)

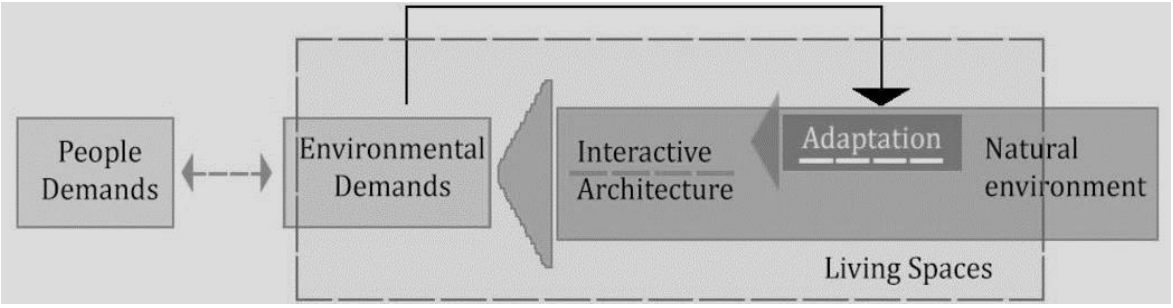


Figure 9: Shows how Architecture can respond to user humanistic demands. (El Sayad et al., 2017).

HCD approach application and analyzing:

From the reviewed literature one the main objective of Architectural design strategies towards more Human Centered buildings is developing everything for humans who will use them, regardless of age or ability , in other words, the design is based on the physical and psyc hological needs of the human users, including all aspects of the physical and spiritual designed environment, high functional spaces.An application to HCD design manifestation is “Bait Ur Rouf Mosque” in Daka, Bangladesh, built in a densely populated neighborhood the project was competed to a modest budget and funded by charitable donations .

Apart from being the spiritual center for the residents it became a community center, a place designed based on human scale Built in brick using traditional methods to gather people together, a place that is orderly, clean, and filled with light and good ventilation., this mosque is an attempt to create a language of architecture that takes essence from humanistic timeless approach in Architecture, while maintaining a contemporary expression .

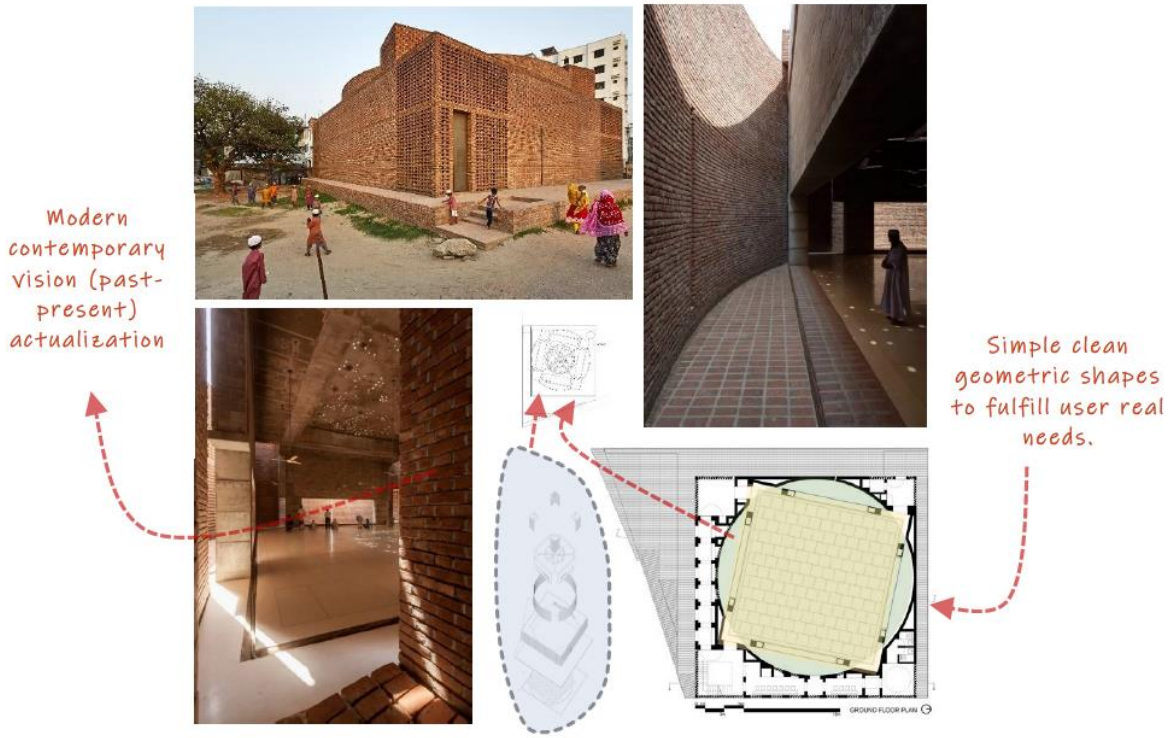


Figure 10: “Bait Ur Rouf Mosque” Photos: https://www.dezeen.com/. Analysis by the Researcher

Table 3: comparison between the studies (Author)

No.	Name of Author	Type of publication	Citation count	Country	Findings
1	(Alexander, 1979)	Book	5660	United Kingdom	New theory for architecture and Design To adapt inherited tried-and-true solutions that optimize how the built environment promotes human life and sense of wellbeing.
2	(Salingaros & Mehaffy, 2006)	Book	307	Greek	The Unified Architectural Theory articulates that. architecture must be in keeping with both form and pattern languages to create truly adaptive architecture.
3	(Zhang & Dong, 2009)	Research paper	73	China	A conceptual model of HCD by combining Maslow's. micro and psychological viewpoint with Küthe's Macro and social angle.
4	(Gee, 2006)	Book	22	USA	Spaces are human-centered and more efficient when they create positive rich human Experience.
5	(El Sayad et al., 2017)	Research paper	1	Egypt	Interactive Architecture characteristics are integrated with the HCD methods.

Conclusions:

The term Human centered design in Architecture has transient nature from different perspectives, from the viewer to the designer to the user and anyone connected to the architectural space. Humanizing Architectural design strategies can be achieved through getting inspired from nature, human body similarities, human scale, and mutual needs.

HCD is an essential tool to shape efficient spaces. Consequently, an Architecture that meets human requirements entirely, considered to be the optimum type of architecture.
HCD methods are integrated with effectiveness, well-being, and high performance of the users.
Human-centered design is not only considered as a design standardization, but it is rather a process for designing and developing everything for humans who will use them. This could be maintained by holistic understanding of humans' needs in designing buildings, communities, ser vices, systems, and products. Focusing on humanistic design strategies approach will lead to and beauty to produce Design solutions that the world did not know they were missing.

Recommendations:

The following recommendations are a few strategies that may be used to help to promote Human centered Design in Architecture:

1. Designing buildings based on human real needs in balance with nature and environment to reach the Architecture of simplicity and happiness.

2. Architects must take into consideration people's comfort, stimulating their brains and bodies for better performance.

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