

The Role of Participatory Design as a Contemporary Approach in Creating the Contemporary School Buildings

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Abstract - Contemporary global changes in the design patterns that are used in the creation of contemporary school buildings are an attempt to exit from the traditional frameworks used in choosing previous patterns of school buildings, in a manner that ensures achieving compatibility between educational spaces and the contemporary functional and formal requirements of users, And after discussing previous architectural studies that discussed the foundations and methods used in creating modern school buildings, It was found that it called for the necessity of active participation of users and their different locations in developing their visions into a set of proposals and requirements related to their actual needs, including changes in contemporary educational and teaching methods, Up to creating school building models that are satisfied and accepted by users, However, the studies did not show and clarify what the participatory design is, what its principles are, the obstacles to its use, and even what levels and stages should be followed by users to present their proposals within the appropriate stages and levels of the design process ,Therefore, the research problem can be determined by (a knowledge deficiency related to clarifying what is participatory design, its principles, obstacles to its use, levels and stages of user participation, for its use as a contemporary approach in creating school buildings) Then, the research goal that states (building a cognitive model that compensates for the deficiency in the statement of what participatory design is, its principles, obstacles to its use, levels and stages of user participation, to be used as a contemporary approach in the latest school buildings) is determined, and with a major research hypothesis stating (To know what Participatory Design as a Contemporary Approach in Creating the Contemporary School Buildings, Role to clarify the vision for users in how to present proposals and solutions and within any of the planning and design levels and stages), To achieve the goal of the research, the research will follow a descriptive approach to know the knowledge links of participatory design and what are its principles and obstacles to its use, in order to demonstrate the most important stages and levels to be followed by users to reach educational spaces appropriate and responsive to contemporary educational and educational needs, so that the research reaches the multiplicity of visions about what is participatory design and its multiple levels And the stages of involving users within the planning and design levels used in creating modern school buildings.

Key Words: Participatory design, school buildings, contemporary design patterns, User participation

1. INTRODUCTION

In view of the contemporary global developments in the design of school buildings and the multiplicity of design patterns that are compatible with spatial and morphological variables to achieve functional and formal appropriate, in order to achieve the satisfaction and conviction of users, it has created interest in research and architectural studies that examine the reasons and modalities for developing and modernizing school buildings, The studies indicated the necessity of calling for activating the actual participation of users in giving programs and proposals that are appropriate to the special educational and teaching methods compatible with the time and place of the school building. The research goal was to build a knowledge framework that clarifies the vision of the school building users and their different connections by explaining what is participatory design and what levels and stages should be followed by users to present their suggestions within the planning, design, construction and evaluation levels of the school building.

1-1 The general aspect of the research (the contemporary school building and the development of its design patterns):

The great diversity of school buildings that were designed over the past ten to fifteen years illustrates the use of morphological and spatial forms, some of which follow traditional patterns while others differ from them, as the choice of a particular pattern depends on the structural characteristics of the school, the level of education, and the number of pupils, as it will depend Also on the school's philosophy, climatic conditions and location in the region (urban, suburb, or countryside). In particular, the educational type, which includes different educational methods, usually has a strong impact on the spatial design of the building, for example flexible open-plan classrooms that are preferred over traditional classroom plans, a careful study of the concepts of served spaces and server spaces [1]. For the purpose of clarifying the set of contemporary design patterns globally, the patterns will be reviewed according to the OCED classification as shown in the following:

1-1-2 Design patterns for contemporary school buildings, according to OCED:

The basic criteria for developing these patterns were the formation and internal planning, and the latter strongly influences the properties of some spatial patterns that are essential to the planning of school buildings, and include, for

example, a hierarchy between different areas within the facility and coexistence between classrooms (or its development) and sub-regions. The following is a detailed review of the set of contemporary design patterns for school buildings:

1-1-3- The Courtyard Type:

This pattern is considered to be one of the most used patterns in the past, and in schools where the external spaces are very important, as the standard feature of this type is a protected area in the open air that can be cleared easily and psychologically reassuring, and this pattern has two main effects: the first is its significant contribution to creating feelings Ownership within the school community; the second is to provide a visual focus on the interior spaces, as the feeling of being inside a closed area, with different degrees of openness, gives the impression of luxury. This pattern has three subtypes: closed and closed courtyards, and multiple courtyards, (shown Figure 1).



Fig.1: The Courtyard Type

In this type, the choice to leave open or fully enclosed areas depends on the location where the school is located. In urban areas, it is preferable to use protected and enclosed areas externally. On the other hand, rural or suburban landscapes are an important component, so open courtyards are often used as The Letter L or U, and since the inner school spaces are the main area in which social networking activities occur, they are usually designed as just places of movement, where most of the buildings follow the old traditional design, with a corridor allowing access to the classroom, an example of this style is "th4 Gymnasium school in Amsterdam" (shown Figure 2).



Fig .1: th4 Gymnasium school in Amsterdam

1-1-4- The Block Type:

This style is characterized by two main features, the first being compact sizes and simple interior layouts, while the second feature of this type is a large (and unique) space for social communication that leads directly to the main learning spaces (classrooms, studios, and laboratories). This pattern, with its various configurations (middle courtyard and learning street), tends to improve the areas of movement and provides a flexible layout of educational spaces, (shown Figure 3).



Fig .3: The Block Type

at Hazelwood School, Glasgow, the movement planner is designed simply, which is a street Curvy interior, to facilitate a sense of orientation for people with multiple disabilities (shown Figure 4).



Fig.4: Hazelwood School, Glasgow

As for Ørestad College School in Copenhagen, which is a classroom-free building around a central space where a complex system of stairs allows access to open areas for learning and rest, as the space can be used for different activities at one time, and provides practical access to the parts Other than the building, the effectiveness of this type depends on the condition that the main social space is used effectively, and if this space does not provide multiple and flexible capabilities for activities, then it will be just a trading area and become a "service space" (shown Figure 5).



Fig.5: Ørestad College School in Copenhagen



Fig -7: Castelet Elementary School - Oslo

1-1-5- The Cluster Type:

The main feature of this type is that the building is divided into different sizes, which can represent independent educational units if a group of spaces are provided that go beyond traditional classrooms. These units can be considered "small educational communities" every "school within a school", usually It has a specific spatial nature, and the goal is to make it more identifiable and to enhance a sense of belonging. This pattern contains a number of variations, depending on the movement plan and at the level of the building as a whole and the educational units: it can contain either a longitudinal layout or the central courtyard, (shown Figure 6).



Fig.6: The Cluster Type

examples of these differences are the Castelet Elementary School - Oslo, which movement within this pattern of regions Private to public areas are filtered by interfaces that are an advantage for all mini-educational communities. These buffer spaces play a major psychological role for pupils because they enable them to identify themselves in a small group, gradually towards the rest of the building (shown Figure 7). This is important to connect the independent blocks to a public place for gathering, defining the general personality of the building, as in the case of Thomas Deacon-England Academy in this facility, the large covered hall is the unified element that connects to all educational units, (shown Figure 8).



Fig -8: Thomas Deacon-England Academy

1-1-6 The Town-Like Type:

This type is characterized by the multiplicity of spaces and functions, and then borrowing the city plan by surrounding the most public buildings, "the town hall square", which corresponds to it in the school building, the most important spaces (library, hall). A wide range of case studies that can be considered similar to the city led to the identification of two types Two sub-branches of this pattern are complex blocks, composite structures, (shown Figure 9).



Fig -9: The Town-Like Type

and as an example of the first type, the Jatta Vocational School, for example, (shown Figure 10). consists of a cubic size and a number of patios that bring daylight even in most of the interior. Within this "square", the motion diagram is designed in different spaces, with "squares" and "streets". The second type, and the second type, "composite structures", consists of a variety of sizes arranged freely. The concept of urban space is created by the complexity of interior spaces and the richness of three-dimensional shapes. The Orenkulti School, Helsinki, is a good example of this classification, (shown Figure 11).



Fig -10: The Jatta Vocational School



Fig -11 The Orenkulti School, Helsinki

After reviewing the contemporary design patterns of school buildings and their developments, and clarifying the advantages and uses of each style, and each of them is compatible with a set of spatial and temporal characteristics and requirements as well as their compatibility with certain types of educational methods, this leads us to research in innovative design approaches that work to find a ground Common between the designer and the user and the required spaces that serve as the container in which the curriculum revolves and benefit is accrued from it in increasing the efficiency of educational outputs. Therefore, the reason for choosing participatory design as one of those curricula or contemporary design methods was a for use in the process of contemporary school building events, and in order to extract the research problem, we will review a set of architectural literature that indicated the use of the concept of participatory design or called for the involvement of educational cadres in making the planning and design decisions necessary for the events of contemporary school buildings.

1-2 Previous architectural studies that dealt with the concept of participation in the design of contemporary school buildings:

1-2-1-Study (School Design and Learning Environments in the City of Espoo, Finland-2018): The study clarified the review of the school building review team in the Finnish city of Espoo, a series of key topics to encourage further discussion and exploration by Espoo teachers and city officials in their search for strategies Effective to guide investments in the education sector, as these topics include: the need to find the right balance between cost-effectiveness and the promotion of effective learning environments; the value of systematically engaging the school community in the design process; the importance of providing the necessary support for teachers to transition to new educational environments, through Develop and implement An effective spatial professional development program [2].

1-2-2-Study (RIBA-2016): Better spaces for learning: The study clarified in its recommendations directed to the authorities and agencies responsible for preparing designs for contemporary school buildings to the necessity of rethinking how schools and their educational owners are involved in building programs, including how to ensure For schools to usefully engage in building design summaries, the study also indicated in its second recommendation to the necessity and clarity of the authorities responsible for preparing designs when dealing with their partners about how they want to know the basic standards and designs used during the design process, are they the standards that they expect to build all Joel According to her, or do you want the bidders to clarify the best way to propose and exceed standards. To enable this, the study focused on clarifying whether baseline designs are flexible and ensuring that technical and design consultants from education agencies encourage contractors to exceed the minimum space

requirements as much as possible, provided that the area is expanded within the limits of cost constraints [3].

1-2-3-Study (Teresa V. Heito-2015) –School Building Rehabilitation Thinking Strategically Towards Excellence: The study focused on the importance of participatory review as a useful tool in the design process, because it provides an opportunity for interested parties to review the design during its development for school users, as review is an opportunity Good for verifying that design solutions meet user needs and that the architect's assumptions about how to use the building are correct. It also provides a useful opportunity to discuss how to solve new problems, after collecting relevant information, thus creating a concurrent planning and learning course [4].

1-2-4-Study (CABE-2010) - Creating excellent primary schools-A guide for clients: The study indicated that the successful design of school buildings is the result of hard work and cooperation between designers, contractors, and committed clients, as the study demonstrated the need to engage users of school buildings through Giving an opportunity for the educational staff and students to participate in expressing their opinions and ideas about what they would like to see and act in the school building [5].

1-2-5-Study (Ulrike Altenmüller-2008-Concepts and Transferability of Contemporary Finnish School Design): The study focused on direct cooperation between local authorities and school administrators, teachers and architects designing for Finnish school buildings, through this direct cooperation between all stakeholders and unusual flexibility In the planning process, spatial arrangements provide educational spaces to support a wide variety of different teaching methods, evolving instead of applying a preset room layout that does not always suit the specific needs of the community or users[6].

1-3 Discuss previous architectural studies and elicit the research problem.

Previous architectural studies dealt with the concept of participation and advocacy to involve users in general and their different positions in expressing their opinions and proposals that contribute to the appropriateness of planning and design processes with contemporary pedagogical and educational methods, but what was revealed through the discussion of previous architectural studies is general in offering without clarifying what is Participation and what are its principles and challenges for completing it, in addition to not clarifying the stages and levels necessary for the participation process, and accordingly we can define the research problem (a knowledge deficiency related to clarifying what is participatory design, its principles, obstacles to its use, levels and stages of user participation, for its use as a contemporary approach in creating school buildings) Then, the research goal that states (building a cognitive model that compensates for the deficiency in the statement of what participatory design is, its principles,

obstacles to its use, levels and stages of user participation, to be used as a contemporary approach in the latest school buildings). To achieve the goal of the research, the research will follow a descriptive approach to know the knowledge links of participatory design and what are its principles and obstacles to its use, in order to demonstrate the most important stages and levels to be followed by users to reach educational spaces appropriate and responsive to contemporary educational and educational needs.

1-4 The special aspect - Participatory design (historical concept, levels, and stages):

The concern for beneficiaries' participation within the stages of the design process is an important and modern approach to creating new ideas, based on the fact that participation has become an essential part of new product development research. Such as: Co-design, Co-creation, Cooperative design, Design thinking, Contextual design, participatory design, and most of these methods make the end user as a design center, and they are applied across phases and tools Various techniques, to know the user's needs and incorporate it into the breeding processes and evaluation of design ideas, and to ensure that the final product will fulfill it [7].

1-4-1 Participatory design from a historical perspective.

The concept of participation in the design, manufacturing and marketing processes as a way to improve communication with customers and beneficiaries has spread in recent decades, according to the principle of: Design for Use before Use, where the growth in means of communication and social communication has established the term participatory culture, so the boundaries between Designer, producer and user [8]. In this context, Bannon considered participatory a term concerned with the participation and cooperation of stakeholders, especially users, developers and planners, to adjust or amend systems and technologies in ways that suit the needs of those who will use them more appropriately [9]. The first core of participatory information has emerged, in the field of designing information and communications technology, and, according to Greenbaum, it was intended to seek end-users in the development of information and communications technology, based on the political visions rooted in democracy in North America and Scandinavia, though in various forms and sometimes with less intensity, due to the pragmatic and moral arguments for involving users in design [10]. In the same context, Erling pointed out that participatory design has become more involved in daily life, in search of a new environment for innovation and production, and the transition from democracy at work to democratic innovation, which in turn is based on the idea that ideas develop from bottom to top in cooperation between stakeholders and through tools. Make key users new experts who drive innovation [11].

In this regard, participatory design is referred to simply as (PD) and takes its basic values from new meanings and forms that stem from the concern for the participation of stakeholders in experimental innovation practices, which in turn are based on open creativity processes and value-sharing strategies. On the pattern of values that define the strategic direction of participatory design, Ehn outlines two parts: the first lies in the social and rational idea of democracy as a value that leads to the fulfillment of the conditions for sound and legitimate participation of users, and the second is the incorporation of the tacit knowledge of the participants in the design process [12].

In this regard, early research for participatory design has sought to involve users in technology design, and has created a space in which all stakeholders can meet and exchange ideas in interactive processes to bring about the required development, as a series of participatory design conferences began since 1990 with the first conference in Seattle, and since then. Then, many international conferences were held to discuss the values, characteristics and future practices of this method, and the focus was on establishing mutual learning among stakeholders, as a basic link of participatory design research, and participatory approaches and concepts are still changing and evolving and is being researched considerably across wide areas of application, has helped to consolidate the participatory culture in the design and produced patterns several of the concepts applied and output of creative style, which has contributed and continues to change the physical contexts and economic community industrial [13].

1-4-2 What is participatory design?

Participatory design, according to Hurst, is defined as the active contribution of end-users to the design process [14]. Realizing this contribution, according to Hippel, puts key users at the heart of the user-led creativity process [15]. On the same framework, Guiaa described this method with an approach that aims to engage all stakeholders to improve the design process and procedures, communicate to a better understanding of needs, and achieve ease of use [16]. Ford also emphasized that participatory design helps designers to empathize with potential product users, and to understand the functional, personal and social contexts in which it operates, especially during the creative stages of the design process [17]. Ehn also considered that this method attempts to direct a path between traditionalism and genius, that is, between the tacit knowledge of the participants and researchers, in a more abstract and analytical way [18]. In this context, Sanders considered that the participatory design style is based on the direct participation of the user and other stakeholders in the design and development of products, which helps in identifying their experiences [19]. Franke also emphasized that users participate because they are interested in the principle of "do it yourself, Chesbrough described user-generated innovation with open innovation, which is a new model for exploring cooperation across organizational boundaries [20]. Spinuzzi indicated that this

method aims to study the implicit and invisible aspects of human activity, and it is assumed that these aspects can be examined in a fruitful way by establishing partnerships in which designers and participants collaboratively design products and work environments [21]. Whereas, Ehn considered that this method supports resource-poor stakeholders and develops strategies that enhance their legitimate participation, in addition to ensuring that existing skills can be a resource in the design process [22].

On the role of participatory design in fostering social innovation initiatives, Manzini noted that design is no longer just a tool for developing innovative products, but is increasingly seen as a process of bringing about fundamental change, i.e. developing collaborative systems, environments and services that support more sustainable lifestyles and make them realizable [23]. According to DPEO, the core of participatory design is based on beneficiaries' participation in the design process, through three facilities: adherence to basic principles, appropriate process design, and the application of correct tools and methods [24]. On the most important challenges facing participatory design today, Erling pointed out that it is represented in how to explore alternative perspectives and methods for organizing innovative circles geared towards participatory, more than traditional circles that focus on expert groups, as well as challenges related to how to provide a mechanism that allows the transition from a point of view A professional that dominates innovation, to a destination that allows difference, controversy, and trouble shooting and exploration [2].

Based on the foregoing, it can be concluded that participatory design as a contemporary approach supports and establishes the value of the user in general and the user of contemporary school buildings in particular, because of the role of users in expressing opinions and suggestions about the compatibility between the spaces designed and the actual needs of contemporary educational and educational methods, and the extent to benefit from those environments Educational in the short and long period. Consequently, the importance of participatory design as a contemporary approach in constructing the way out from the traditional frameworks used in creating school buildings to more innovative and creative ways that bring together the participating departments from the designers and the users bodies, in order to reach interactive educational environments that meet the functional and formal needs.

1-4-3 Levels of participation in the design process:

Design approaches for use have evolved greatly, from an overall focus on product functionality and ease of use, to various methods of testing and integration of potential users in the design process. According to Ehn, participatory design falls within the recent trend as a contemporary trend based on designing expertise with a focus on creating user

experience as collaborating designer's co-designers [25]. According to Smith, thinking about how to shape design processes in a contemporary society fast-moving in practical and ethical terms helps to elicit meaningful participation and creative spirit that recognizes the unique qualities, needs and contributions of individuals [26] Regarding what new product innovations and their officials are, Erling considered that the answer to questions regarding what are the innovations? Who invented? Where and under what conditions is innovation? It is what determines the shape of the discussion arena within today's societies [27]. From the perspective that the participation of users has become a major requirement in achieving competitive advantages in product development operations, the levels of participation of those users ranged from: negative participation is represented in participation in what is designed for them, which is known as target-oriented, where the stakeholders are told what they want and enough, to Positive participation is represented in support in achieving their goals, which is known as the process-oriented process, where the stakeholders actively participate in activities and contribute to the formulation of development plans and responsibilities for creative decision-making. Perhaps this approach is more overall than the Priti classification of participation, which includes verbal participation that tells As people want, and enough is enough, and interactive participation, the people involved in the drafting and analysis of the action plans [28]

And between these two images there are other forms of participation, and given the increasing frequency of using concepts that express the participation of users and customers in the design literature, some of these concepts can be clarified as follows [29].

- 1- **End user:** It is the most effective component for identifying and extracting ideas and concepts for new products. According to experimental studies of innovation conducted by Harhoff, end users often contribute great benefits in relation to innovation processes in products and processes.
- 2- **User participation:** Effective participation is achieved when the user plays an active role as an innovator and developer, and according to Kujala, the inclusion of end users in design activities can have positive effects on the efficiency and speed of the design process, and on achieving conformity between the product and user preferences and satisfaction.
- 3- **User innovation:** It is achieved when the user uses his own tools to develop a new product in an innovative way, and according to Hippel, many innovations have been developed by users and that any company seeking to generate new ideas, it usually collects information from users because some of their ideas may Become an innovative product.

- 4- **Co-creation:** Refers to the creativity of an environment in which users can conduct an active dialogue, build personal experiences, create value, and come up with new product innovation.
- 5- **Co-design:** A group creativity process that applies throughout the design process, and allows to know what users want, understand and interpret their needs, and allow them to work as co-designers if they have the necessary level of experience, passion and creativity.

1-4-4 Stages of user participation:

After what has been mentioned is that participation is a multi-meaning idea, and in the field of design there is an increased interest in achieving user satisfaction or satisfaction, and despite the direct contact between the user and the designer, it may be considered a risk if it is not organized, the user's participation is necessary to obtain various ideas for drafting decisions The final design process, and the involvement of users or stakeholders early in the design process (based on the idea of user participation) is a key part of the project's success. Each design process passes four stages: planning, design, construction, evaluation, and despite the division of these stages into several parts according to their time or parts, the user's participation appears at different levels in the stage and as follows [30]:

- 1- **The planning stage:** This stage means the stage of preparing policies or the stage of knowing what the user is thinking to do so it is the architect's responsibility to inform the user how to participate in the thinking of the planning process.
- 2- **Designing stage:** The vital factor in this stage of participation is that the design reflects the needs and values of the user and as a result the architect chooses or supervises the level of user participation carefully, the decisions at this stage are the most important for the entire process.
- 3- **The construction stage:** Although many users ignore this stage, but it is important and appears as a second self-help project, the main purpose of participation in this stage is to reduce the cost of the building and to assist the architect in managing the budget and financial decisions of the project for its value at this stage.
- 4- **The evaluation stage:** Not much is taken into consideration by the users, the importance of this stage is the evaluation of the building from the user experience for him after a sufficient period has passed since its use, so the architect can define the advantages and disadvantages of the building after using it and improve similar designs in the future.

1-4-5-User Participation level

The level of participation depends on several factors, the most important of which (the user, the architect, the project, the culture and democracy of society). These indicators divide the level of participation into parts or levels, according to the control of the architect or the user of this part in the architectural design process as follows [31]:

1. **Non-Participation Level:** Participation at this level is non-existent, as the architect controls every movement in the design process, while the user does not participate in any of the four stages of it, in other words the point where the architect is located, the user does not exist.
2. **Low participation level:** At this level, the user's participation is small and minimal, where the architect will take into account the main requirements of the project and at this level the architect defines the priorities according to the user's ideas and makes decisions that improve the design process.
3. **Equally Balanced Level of Participation:** In this case the user's opinion equals the architect's opinion, the only thing they demand is the requirements. The architect and the user collaborate with each other to complete the project and that reflects the user's and community's culture.
4. **High Level of Participation:** This level of participation appears when the user has a great strength that enables him to manage the project stages, which means that the user is able to manage the project towards making decisions according to the ideas of participation.
5. **Top Level Participation:** At this level the architectural level does not exist and the user is considered the first official who controls the project, and specifies the requirements of the design process (ADP), architecture without the architect.

Based on the above, it is clear that participatory design has multiple levels and stages that users must follow to provide appropriate suggestions for changes in educational and pedagogical methods and curricula.

Conclusions:

- 1- Plurality of visions about what participatory design is, as it focuses in its entirety on a contemporary approach that gives more value to the user by giving them the opportunity to present requirements and its options that are compatible with his functional, personal and social needs within the creative stages of the design process, as well as an attempt to exit from the traditional paths in the design process to the tracks Innovative creativity, and participatory design calls for a

study of the implicit aspects of human activity by establishing consensus between designers and participants in the development of their products.

- 2- Participatory design has principles related to how to adhere to the basic principles and choose the appropriate design through the application of tools and methods appropriate to the actual needs of users.
- 3- Participatory design has a set of obstacles related to how to achieve the mechanisms that allow the transition from traditional to innovative circles that allow discussion, debate, problem solving and exploration.
- 4- Participatory design has several levels illustrated of how users and customers participate in the design literature, which ranges from effective participation in generating ideas for new products as well as the role in generating ideas with a positive dimension in the design process to achieve a process of user satisfaction and contentment, down to the level of generating creative ideas by users according to the level Their requirements and experience in achieving their needs, as well as the level of creativity of environments through which users can conduct an active dialogue and build personal experiences and create value to reach innovation of new products, Likewise, the level of joint design that gives importance to the needs of users and their interpretation, and allowing them to work as co-designers, as they have the necessary level of experience, passion and creativity.
- 5- Participatory design has a set of stages that the user can have a role in presenting his proposals, and these stages include: the planning stage, the design stage, the construction phase, the evaluation stage, as the planning stage shows how to prepare policies that also represent the stage of what the user thinks of doing and whose responsibility falls on The architect is responsible for informing the user how the proposals are evaluated at this stage. As for the design stage, it is the vital stage that shows the extent to which the design provides solutions to the needs of users. As a result, the architect's role is in determining the level of user participation or supervision of what These decisions are of significant influence on the design process as a whole. As for the construction phase, the main purpose of the user's participation at this stage is to reduce the cost of the building and assist the architect in managing the budget and taking financial decisions in a correct way. As for the evaluation stage, its importance in assessing the building from the users 'experience after a period Sufficient time of use so that the architect can determine the advantages and disadvantages of the building after its use and improve similar designs in the future.
- 6- The level of participation of the user depends on several factors, the most important of which (the user, the architect, the project, the culture and democracy of

society), as these levels are divided into parts, according to the control of the architect or the user of this part in the architectural design process to the level of lack of participation and the low level of participation and the level of participation Balanced, high participation level, and finally the higher level in which the user is considered the first official to control the project, and specifies the requirements for the design process, architecture without the architect.

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