Interactive design as a source for developing interior design and furniture

Prof. Ashraf Hussin

Professor of Interior Design Furniture Faculty of Applied Arts, Helwan University

ashrahus@gmail.com

Prof. Ola Hashem

Professor, Department of Interior Design and Furniture, Faculty of Applied Arts, Helwan University

o.a.hashem@hotmail.com

Assist. Lect. Marwa Zenhom

Assistant Lecturer, Higher Institute of Applied Arts, Fifth Settlement

marwa.zenhom1404@gmail.com

Research Summary:

The digital revolution and interactive technology have made a huge shift in human life, as well as numerous transformations at all levels, which resulted in a breakthrough in the design of interior design and furniture elements, and for this the interior design elements of facades, floors, walls, ceilings and furniture appeared in a new and interactive way as a product of development. The remarkable progress in the field of computer technology and the close relationship between individuals and electronic devices, which are constantly evolving and the need to keep abreast of developments in the manufacture of interior design and furniture elements and catch up with this technological component. This paper deals with the study of interactive design and its importance as a source for developing elements of interior design.

Interactive design is a set of overlapping many sciences such as computer science, cognitive science, psychology, and finally organizational science in an attempt to understand how people use and interact with technology. This is where the need to study modern interactive design standards to reach an interactive, smart system to enrich the internal void with new designs and intellectual approaches through the use of modern technological means that have emerged, which have advanced ideas and solutions that contribute to solving many design and implementation problems and have an effective role affecting the individuals receiving technological developments and modern interactive technologies.

This is where interactive design is one of the most important mechanisms for self-learning in which the learner practices the self-experience in forming educational experience through touching, understanding and convincing, as it is important that the learner learns how to learn, and it is not important to give the information and test it in its ability to retrieve it, but positive education must be emphasizing and change stereotypes that depend on understanding and persuasion through experimentation, observation, through promotion, self-learning deduction.

The research problem has determined the answer to the following questions, what is the extent of the impact of the emergence of many interactive applications on the development of internal design elements in form and content? Is interactive design a humanistic design that takes into account the level of user awareness?

While the importance of the research lies in the importance of this research in presenting the most important modern and advanced interactive systems to reach an interactive system to

enrich and develop the elements of interior design and furniture. The research aims to monitor and analyze the impact of interactive design applications on the development of interior design and furniture, and access to the determinants of human interactive design in internal spaces. Where the research depends on the descriptive analytical method. The research included the meaning of interactive design: it is the communication between the user and the computer, whether direct or indirect, and the direct interaction includes control and dialogue with comments and indeed throughout the work, while the indirect interaction may include background only or some sensory treatment, but the important thing is the user's interaction with the tool via the computer to accomplish or processing a specific task. Interactive design can be divided into three main parts, namely, information design, interaction design, and design of feelings, and the equipment used in interactive design, which is a sensor is a device that detects or responds to a physical or chemical stimulus such as, movement or heat, and the valve interacts directly with the exciting medium. The energy transformer is always used for energy transformation. The sensors interact directly as well as respond to the stimulating medium surrounding it. The detector that always uses this term to refer to the group consists of a valve with a shape that can be used as well as to be measured. A mechanical actuator is a device that converts the input energy into a kinetic or mechanical act.

To analyze the extent of the impact of interactive design as a source for developing the elements of interior design and furniture by setting a design strategy to analyze the elements of interactive design and includes: the stage of the general vision: "achieving the visual identity of the interactive design": it depends on achieving the visual vision through the formation of a mental image with innovation and a specific concept through the interactive elements. The stage of the interactive scenario: It includes the interactive idea, in terms of choosing the appropriate interactive elements for the design according to the purpose required by it. The stage of the interactive tasks: The plan responsible for implementing the interactive tasks designed in the interactive scenario. The effect of interactive design as a source for developing interior design and furniture. It includes: Influencing the recipient: It includes: Did the interactive design consider the recipient? And did the interactive design help raise the awareness of the recipient? And the effect on the development of the elements of interior design and furniture. By analyzing these elements through an analytical table, after explaining the effect of modern interactive technology on the elements of interior design. Then the researcher explained both:

First: Interactive Interfaces: In terms of making use of modern interactive systems and methods in interactive interface technology, it allows the user to control the interactive interfaces of buildings through a smart application via the phone: "Copenhagen's Danish Industrial Confederation Headquarters" as it allows passersby to control the architecture by using the application on their mobile devices through touch on their screens.

 It also includes a dynamic interactive interface using the "flare kinetic ambient reflection" technique: this system consists of an irregular prism made of reflective metal that is installed in the form of a metal and a hydraulic frame that controls its movements. Each hydraulic arm works independently and is controlled by the mechanical program. The different movements allow the degree of openness of the interface, which allows the entry of sunlight and adjustable ventilation. It also creates a reflective effect that allows light to enter the building through the use of a dynamic change system.

Then secondly: Explaining interactive walls: the main goal of interactive wall design is to communicate and interact directly with the user. The idea of interactive walls is used, for example, in teleconferencing, where it has the advantage that users feel intimate and interact as if they were in the same place, where the interaction among users and each other in separate places through a system consisting of information display units that interact with users.

Interactive design applications are mentioned during a timeline and a specific time line in the interior design of interactive museums through the interactive wall at the Cleveland Museum of Art and Interactive Walls in the Museum. Picasso for the arts and taking advantage of modern interactive systems and methods in interactive three-dimensional surfaces, allowing the user to interact with them and respond to him/her with programmed reactions for his/her actions and explaining modern interactive systems and methods in wall-to-wall technology. It provides the user with distance education.

And thirdly: Interactive floors to explain the benefit of modern systems and methods in interactive floors, as it provides the user with interacting and responding to it with programmed reactions: This technology provides optical displays that provide an enjoyable interactive experience and effective interactive participation.

Fourth: Interactive furniture: Taking advantage of modern interactive systems and methods in furniture design, as furniture design was affected by new concepts of interior design, which arose as a result of the remarkable development in the field of computer technology, so the term "interactive furniture" appeared, as this type of furniture depends on the integration of sensors and a processor of very little data inside the furniture. Includes:

An explanation of the interactive woman, who has many different uses, such as distance education, play and entertainment, and then addresses the modern interactive methods of the interactive woman, transformed into a smartphone. It is an interactive smart mirror that integrates and is compatible with the Apple Store for mobile applications "App Store", allowing the user to access more than 500 favorite applications and programs and interact with him/her in the same way on the screen of the smartphone, it eliminates the need to carry it completely.

Then explaining the interactive table which opens new horizons for educational and cognitive means. This table is distinguished by its ability to identify the things on its surface, where the table integrates and identifies the site on which the object is located through the computer equipment inside it. An explanation of the features of the interactive platform enables the lecturer to control these means from the platform to facilitate and provide flexibility when dealing with these devices during the presentation, including Internet connection, by integrating digital technologies, communication technologies and multimedia elements such as sound and image. And take advantage of modern interactive systems and methods as a new intellectual entrance in furniture design by forming three-dimensional furniture pieces by using interactive digital pens. The explanation included pictures illustrating the effect of modern interactive technology for interior design and furniture elements. Each of the previous sections was followed by an analytical explanation table from the researcher's analysis.

Then he explained the results of the research: namely, that the interactive design adds a new framework for the development of the design, by working to raise the level of user awareness. Interactive design contributes to translating valuable information structures into physical formulas that allow the integration of interactive components with physical structures in interior design and the use of modern technologies in interactive interfaces, which allow the recipient

to be creative, design and share through the application's use of a number of users simultaneously the use of modern technologies from interactive design also leads to providing the time factor because of their modern techniques that save time and effort, especially in museums and restaurants, and that the use of modern interactive means and modern techniques in designing interactive furniture for students helps in its ease of assimilating information and creating a psychological atmosphere that encourages science and learning. And the use of time maps inside interactive museums has a great role in creating many visual relationships to link information using the interactive design technology to display information and benefit from modern interactive systems inside museums leading to the creation of databases which is a masterpiece that helps in researching and preserving the museum's heritage and gives an opportunity to display more of the largest possible number of museum pieces.

The researcher's recommendations are represented in the importance of the interior designer being familiar with modern interactive technological means and methods because of their effective role in finding new intellectual entry points in the internal space. And that the interior designer's awareness of modern technological methods is one of the design standards and an important tool that helps in resolving many design problems. And interest in studying modern interactive methods contributes to reaching effective solutions to many design and implementation problems, especially in light of the massive technological revolution that we are witnessing now. And interest in the study of interactive furniture as one of the facets of interactive life. Because we have become in a time when technology is growing amazingly and taking advantage of modern interactive systems and methods provides a time factor which contributes to distance learning, which facilitates an increase in education, exploration and scientific research, and benefit from it in the educational and cognitive process.

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