The Impact of Using Interactive Interior Design on Enhancing the Performance of Public Service Buildings

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Abstract:

The interior designer faces many challenges to make interior design compatible with society; environmental, cultural and religious conditions, by means of modern technology that has led to successive architectural transformations in response to the many developments in communication and information technology.

Within the magnificent development in technology and communications, many new concepts appeared in the field of interior design that seek to meet human needs and future requirements. These concept, in turn, aimed to benefit from technology to ensure comfort and safety for humans. Such as interactive design, "the design in which the interaction between the user and the design is achieved through the use of computer technology integrated within ", which has become widely spread because of its role in changing the tasks and forms of interior spaces in a way that is reflected on the service performance of public facilities, because of its impact on Changing the shape of the interior spaces and achieving the function and the process of interaction between the user and the space in a positive way, which pushed the interior designer to reconsider the common design methods in order to integrate with the era of digital design, as interactive design gave a new meaning to form, space and function, in addition, it became possible to implement some functions of interior design elements that were not easy to implement, which changed the traditional concepts of interior design, that is, it's become possible for interaction between the spaces and the human being, with respecting the internal and external.

The research reviewed the impact using interactive design in service facilities, specifically in commercial facilities, by employing interactive design in interior design space (ceilings, floors, walls), in order to meet the evolving needs and requirements of users, whether social or environmental, in addition to the interaction of space with individuals' desires.

Key Words:

Research Introduction:

Interior Design is the interaction between man and space and time and the process of culture, where the world has seen in many recent developments in the field of technology used in the field of interior design that meets human needs and requirements of the future, through the information associated with the automated computer and application technology of different areas of life, as a result of this tremendous development in technology emerged many concepts in the design, including interior interactive design, "a design in which the interaction between the user and the place between the design is achieved through the use of integrated computer technology in his inside " represented by Interactive Space, where the Interactive Space is an environment to interact with existing users to create a response to their activity and the interaction is through various Visual presentations, Auditory, and Kinetic, and Haptic, where it has begun to spread significantly to get a major role in changing the functions and forms of internal spaces as reflected on the performance of public service facilities, because of its impact on changing the shape of the interior spaces and achieve the function and the process of interaction between the user and the space in a positive way. Where many functions have emerged for the elements of interior design so it was not easy to implement, traditional concepts of interior design.

Undoubtedly that this change in the interior design has a significant impact on the internal spaces of the facilities, and this development is based primarily on the change of the required function, where the needs of the attendees respond to these places. It is possible that a qualitative unique leap has been happening in the concept of functionality, internal spaces are no longer considered just an inanimate determinant by human use as it was known before, but it is able to be a sensor for users and to identify and interact with and adapt to their wishes.

Research Problem:

Scarcity of interactive design solutions in the interior design of the various spaces in public service facilities, which lacks the development and improvement of internal service activities and shortcomings in the achievement of the requirements and needs of users for their well-being.

Research objective:

The research aims to shed light on the role of the interior designer in the treatment and development of internal spaces in public service facilities, including working to achieve the requirements and needs of users inside, interactively improves the user experience, and to develop guidelines for how to provide the best solution in the treatment and the formation of the internal vacuum for those facilities.

Research Perceptions:

The research assumed that taking advantage of the positive impact of interactive design in public service facilities helps to reach the optimal method in achieving functionality and users can connect with the space surrounding them and interact with it.

Research Importance:
The importance of the research in monitoring the positive aspects of interactive design in the development of spaces in public service facilities, and how to use them in developing appropriate future perceptions of the environment and meet the user's needs and improve his/her experience.

Research Methodology:
Research follows the descriptive analytical approach by studying the concept of interactive interior design, in addition to interactive design techniques that contribute to the formation of voids by addressing the internal spaces in the determinants of public service facilities.

What are the public service facilities?
It means the public service establishments according to the definition of most EU countries, they are any origin available to a number of categories of users with different kinds, and some details differ, the Czech Republic is defined as any non-residential origin.

Classification of public service establishments:

Public service establishments can be classified into several categories according to their purpose and activities.

Commercial facilities:
The interest in interior design of commercial facilities at the present time is very important, where the owners of shops are only interested in nature of sales and the amount of profit.

Interactive interior Design :
The interactive design term generated as a result of being influenced by the thought of the designer revolution that emerged from the information technology and try to keep up this development; as information technology requires a shift from traditional thinking in the product, such as having three dimensional Sensors or any added time factor as far as the fourth, which creates smart products that create interaction with the user.
- The interactive design can be divided into three phases or key parts as follows:
1. Information Design
2. Interaction Design
3. Sensorial Design

- From the above; it can be concluded that interactive design aims to include:
• Identification and behavior of environments, systems and products, by selecting the shape and how to anticipate the impact on the use of human relations and explore dialogue between products, people and contexts (physical, cultural, and historical).
• Provide environments, products and systems, realistic, meaningful and ethical.
• Emphasis on entertainment and fun and enjoy improved user as aspects of experience.
• Easy to learn and use.
• Safety (safety in use).

The foundations of interactive design:

The interactive design process had to be designed with full knowledge of the basics of interactive design and to be implemented during the stages of the design process. As the interactive design principles include: blurred vision, feedback, constraints prevent the error, consistency, configuration or possibility.

Equipment used in interactive design:

There are many devices that are used in interactive design, including the following:

- Sensors
- Detectors
- Transducers
- Actuators

For more in depth study of interactive design, and understand what interactive spaces, the research reviewed some interior design elements:

1. Flooring
2. Interactive Ceilings
3. Interactive Walls
4. Interactive furniture

Discussion and conclusion:

Based on the above it can be concluded that working on the use of interactive design techniques in the spaces of commercial establishments as a model for public service facilities may contribute positively to improving the user's experience towards the service provided, thus increasing the chances of the user's desire to repeat the experience and visit the facility again to enjoy what is offered to him/her, services that deal with his senses effectively, working to achieve the pragmatic goals of shopping centers in increasing the number of customers and thus increasing profits, by providing a distinct commercial climate that attracts different brands to their desire to take advantage of that climate, which in itself represents an additional attraction for a larger segment of targeted customers.

On the other hand, it provides more opportunities for the same facility or service providers to achieve additional profits, whether direct or indirect materials, through the possibilities of employing the various design elements available in the shopping center's space, such as floors and walls, for example, advertising interfaces or games, for or without payment, according to their purpose.

3. Interactive design enhances the positive aspects of design by providing an entertaining and fun design that the user can enjoy by employing different senses and improving the user experience.

4. The possibility of employing the available spaces by applying modern interactive techniques to achieve direct or indirect material profits.

Search recommendations:
1. The need for the interior designer to pay attention to the technological development that serves the interior design of service facilities.

Research Results:
1. Interactive design can change the perception, interaction, and continuity of the surfaces that make up the interior space of commercial facilities.
2. Interactive design reduces the negative aspects of the design and provides an innovative and purposeful design that is easy to learn, practice and use.
3. Interactive design enhances the positive aspects of design by providing an entertaining and fun design that the user can enjoy by employing different senses and improving the user experience.
4. The possibility of employing the available spaces by applying modern interactive techniques to achieve direct or indirect material profits.

Research Recommendations:
1. The need for the interior designer to pay attention to the technological development that serves the interior design of service facilities.
2. The necessity of employing interactive techniques in proportion to the nature of the targeted space in the design.
3. Enhancing the competitive aspects of designing the mall as a model for public service facilities through the application of interactive technologies.

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