

## User's behavior in the Space of the interactive Activity's Hall

**Prof. Saeed Hassan Abdel Rahman**

**Professor of Administrator Design – Department of Interior Design and Furniture –  
Faculty of Applied Arts – Helwan University.**

[saeed\\_hassan2020@yahoo.com](mailto:saeed_hassan2020@yahoo.com)

**Prof. Doaa Abdel Rahman Mohamed**

**Professor of Administrator Design – Department of Interior Design and Furniture –  
Faculty of Applied Arts – Helwan University.**

[doaagoda2018@gmail.com](mailto:doaagoda2018@gmail.com)

**Researcher. Basma Mohamed El-Said Gabr**

**Interior Designer in cultural Palace, Department of Interior Design and Furniture –  
Faculty of Applied Arts – Helwan University**

[b.mohamed888@yahoo.com](mailto:b.mohamed888@yahoo.com)

### **Abstract:**

The interactive inner space has become an integral part of the internal spaces that aim to spread culture and learning, to facilitate the delivery of thought and culture to all groups of the interacting society within the vacuum in all its age groups and also urges them to be creative and innovative. The interior designer aims to integrate the interior space with interactive technology, To discover every new result of technological progress, it may start by trying to employ new materials that technology has produced.

And the research study here touched on to highlight the user's behavior inside the vacuum taking into consideration the type of activity taking place, and how to interact with the user by studying his behavior within the interactive activity environment to reach the highest efficiency and benefit from the interaction and integration between reality and imagination taking into account the requirements of functional, aesthetic, human and technological internal design.

The interactive activity environment is a virtual environment in which reality and imagination are combined using modern methods and techniques, in which different forms of interaction between the user and the user occur, and between the user and another and finally between the user and interactive space tools and design elements. The interaction environment is an integrated continuous interactive circle through the compatibility of internal design elements such as walls, floors, roofs and work surfaces to serve the activity in the internal space with a study of the age group of users and their requirements and psychological and technological factors during the interaction; hence, that system is activated by choosing the appropriate interactive system to serve and enhance the requirements of the internal space Interactive.

Thus, the circle of interaction within the vacuum is closed by the presence of an integrated vacuum in terms of the interactive system and communication between it and the user under the supervision of the specialist, and that the system includes methods for learning and innovation and obtaining new information related to the activity, the presence of specialists and educating those in work in the activity halls how to deal with and facilitate the interactive system On users. With clarification by mentioning an application of interactive activity within the space of a digital interactive museum for children.

### **Key words:**

Interactive technology, Interactive space, Interactive Activity's environment, User.

- **Importance of research:**

The importance of the research study lies in touching upon studying the effect of interactivity on user behavior in the interactive space.

- **Research problem:**

Attention to the human aspect when designing interactive spaces.

- **Research objective:**

Addressing the user behavior in the interactive space.

- **Research Methodology:**

Descriptive analytical approach: through studying the child's behavior in interactive spaces such as (interactive museums, interactive exhibitions) with mentioning of interactive applications.

- **Research hypothesis:**

- The use of interactive technologies in the internal space of the interactive museum of the child and interactive exhibitions, which helps to guide the user and enhance the activity.

- Knowing the user's behavior inside the interactive space and how it interacts with the activity.

## **Introduction**

With the development of means for the process of communicating culture to people and making the issue of education and self-education a likable issue for everyone, that is the spread of culture is not only taking into account the design of the origin from an architectural point of view, but also with how to design the interior of the activity halls to integrate the activity with the internal environment to create ways to connect culture with integration with modern technology. Thus, this origin is invested in the best way, taking into consideration the impact of technology on the user and the promotion of activity in a space.

### **First: the impact of interactive technology**

Interactivity has a positive effect in terms of enjoying learning and performing activity, motivation, understanding and public participation in establishing cultural activities, in addition to the diversity of creativity methods.

#### **1- The designer view of modern technology**

The task of the designer has two directions, one linked to the imagination and the so-called postmodernity and the other related to the job, modernity is an attempt by the creator to reveal the uncommon aesthetic reality, and the design process needs a renewed designer to keep pace with modern technology. The discovery by the designer of everything new resulting from technological progress may begin by trying to employ innovative materials that have been produced technologically, to produce everything new in design to create a more flexible and interactive environment with the user and the surrounding changes. (Kamel, January 2015)

#### **2-Interactive space design**

**To design any interactive space, several important points must be considered:**

- The target group in terms of nature of activity and age group.
- What are the materials used and the nature of the space used?
- The nature of the use of space. (The researcher)

## **Second: the user and interactivity**

### **1- The effect of technology on human behavior**

When applying modern technology, consideration must be given to the extent of its suitability with the surrounding environment and inherited cultures, and the selection of what adds to society according to its traditions and its impact on the behavior of the individual within the vacuum.

With the current technological development and the use of modern technology in the internal spaces for the welfare of man and providing him with comfort: smart homes, interactive furniture and self-cleaning Nano materials, this major change in the internal spaces led to a change also in human activities and behavior.

### **2 - Study the user's behavior towards interactivity**

#### **Study user behavior in interactive spaces**

The psychological aspect is one of the most important aspects facing the designer, he is responsible for the behavior, where the designer studies it to make the design appropriate to the user's cognitive, mental, emotional and social capabilities, the user of the interactive activity goes through three stages when using the interactive space: (Khairi, October 2017)

## **Third: interactive activity**

### **1- The interactive activity environment**

It depends on the use of modern interactive technologies, where each user has the required interactive system for the existing activity.

- a. The presence of an integrated space in terms of the interactive system and communication between it and the user under the supervision of a specialist.
- b. The system should include methods for learning, innovation and obtaining new information related to the activity.
- c. The presence of specialists and educating those in work in the activity halls how to deal with the interactive system and facilitate it for users. (The researcher's point of view)

### **2- Forms of interaction in the virtual environment**

The forms of interaction vary in space, as follows:

#### **a) Routing and user-based interaction**

The mentor provides assistance, guidance and shares his experience to activate and prepare the user to knowledge and development.

#### **b) Interaction between one user and another**

Interactivity and inclusion increases when participating and integration and response increase.

#### **c) Interaction between the user and interactive space tools**

Virtual reality increases participation between users and between the elements of space design and the tools used to implement the system of interaction in space, which increases their response and integration in the virtual environment and their exit from the physical reality to the imagination.

## **Results:**

Through the research study, we reached the following:

1. The interactive design of the internal spaces of cultural and educational activities has become imperative to advance the design and user.

2. The design of interactive spaces is based on determining the type of activity that exists within the space and studying user behavior according to its age groups to complete the interactive process to reach the highest efficiency of the interaction.
3. Interaction in interactive spaces includes the internal space and the devices based on it and those who guide with the activity and users, as an integrated circuit for the success of the interaction.

### **Recommendations:**

1. The tremendous technological development in the recent years has become necessary in the process of culture and learning to clarify the basic goal of establishing the internal space and stimulating the intellectual and cultural development of the users of the vacuum.
2. The importance of using interactive design in the space of the Taf Museum to direct the movement of the user and benefit from his visit to the museum to spread cultural awareness.

### **Arabic references:**

1. Ramadan, Sahar Ezz Al-Arab "Criteria for Assessing the Compatibility of Interior Design of Residential Buildings with its Residents in terms of (Mental and Physical Health), published research, International Journal of Architecture, Engineering and Technology, 2.19.
2. Khairy, Aya Ismail Mahmoud, "The Impact of Interactive Digital Design Patterns on the Egyptian Child's Behavior", published research, Journal of Architecture and Arts, Faculty of Applied Arts, Damietta University, Egypt, Issue 8, October 2017.
3. Jamil, Samira Jamal, "Technological Culture Implications and Their Impact on Future Trends in Architectural Design", published research, Journal of Engineering Sciences, Assiut University, Volume 36, First Issue, January 2008.
4. Samir, Ola Mohamed, "Smart Architecture and its Impact on Interior and Exterior Design", Ph.D., Department of Interior Design and Furniture, Faculty of Applied Arts, Helwan University, Year 2006, p. 116.
5. Saeed, Mohamed El-Sayed: Technology, Al-Ahram Center for Political and Strategic Studies, Cairo, 2001, p. 23.
6. Mohamed, Essam Abdel Aziz: Building Technology for Developing Countries, Conference - Inter Build94, Cairo, 1999, p. 4.

### **Foreign references and websites:**

1. Kamel, Mai Samir ""Interactive Fashion Design with "SCB" Technology", International Design Journal, Published 1st of January 2015.
2. A. Pirhonen, H. Isoma`ki, C. Roast and P. Saariluoma (Eds) , Future Interaction Design, pdf, p.71
3. <https://www.smithsonianmag.com/smart-news/interactive-digital-art-museum-opens-tokyo-180969439/> Accessed(15-2-2020).
4. <https://www.tech-wd.com/wd/2010/11/07/interaction-design/> Accessed (26-2-2020).
5. <http://mw2013.museumsandtheweb.com/paper/transforming-the-art-museum-experience-gallery-one-2> (29/8/2017).