

INNOVATION IN SMALL SCALE SCIENCE CENTRE DESIGN

Tushar Kaushal, Assistant professor Sunil Kumar,

School of Design, Interior and Furniture Design, Lovely Professional University, Punjab.

Abstract

The primary purpose of a science centre is to provide education along with entertaining visitors. This research paper is based on innovation in small-scale science centre design to achieve an adequate interest of the visitor. It is the responsibility of the interior designer to design and create such an environment that incorporates the latest techniques, information, equipment, and technology, and thus to keep up with the technological advancement and evolution. Alongside technological improvements, the incorporation of sustainable factors also aims to enhance visitor's health as well as an environment-friendly approach towards preserving the environment. A significant part of the design of the small-scale science centre is the effective presentation of the target area and information with an exhibition gallery. Through enhancing user experience by the implementation of interactive interiors and other aspects, the sole aim for this design concept is to attract more visitors and bring small scale science centres into people's consideration.

Keywords

Science centre, Small scale, Exhibition design, Technology, Interactive interior, Visitor experience.

Introduction

Science centre is a place which attracts two categories of population, one is for entertainment and another which includes mainly children who came for the sake of curiosity of learning and fun. Such a storehouse of fun and knowledge is best described with a single term 'Edutainment' which means education with entertainment. A kind of place where knowledge is embedded in entertainment.

In a repository learning environment comparable to the science centre, types of exhibitions covering multiple disciplines are knowledge-based incubators and emphasize active explorative learning. The nature of the presentation of the show significantly influences the kind of thought that the visitors are engaged in. Dynamic translation methods do give extra, sure results in guests pulling. In spite of this, the analysis of the inner parts correlated with its social activity findings appears to be immature, especially when it comes to small scale science centres. As they lack in holding visitor's interests due to traditional design layout, simple interiors, and many other factors which lead them straight out of the people's interest list. Due to which people don't prefer visiting small scale science centre, hence we don't see much of these facilities around us or in every city. Nonetheless, even if it is a small scale, the sole aim of a science centre is to accommodate science and womb-to-tomb learning.

Methodology

The research methodology is focused entirely on a wide range of research from various occupying organizations in the science city and their innovations, which encompass the overall capacity and aesthetics of the science centre. A change in the traditional design theme of the science centre to a creative presentation style would improve public participation. Universal analytics provide insight into the acceptable presentation without overshadowing the showpieces. At some point in this subject, science centres that are able to share technical advances and absolutely specific views with a wider target market integrate visual learning (LED

displays, Augmented Reality, Interactive projection structures, three-dimensional projector, simulators, three-dimensional modeling, lights sensors). The research consists of main elements, along with efficiency, effectiveness, aesthetic appeal, target user engagement, and visuals.

Approach

1). Framing desire & enthusiasm:

New spaces and displays provide for versatility in the concept. If we go to any science centre and notice people's behavior, merely 5 percent of people read the text or the information letters, so we need to design things as explainable as possible. Exhibits show descriptive text, graphics, audio, and interactive elements that are used to create a far more realistic experience and add to the frame through which visitors see the subject on display.

2). Implementation of dramatic effects:

When each element of science is depicted in a more dramatic manner, it helps in widening the range of visitors. Interaction and experience of the audience regarding dramatic effects can be improved by using special effects like lighting, Audio logs, videos, and darkness. Colours, lighting, and decoration also lay an effect on the psychological, emotional, and behavioural experiences of the visitors. Light and shadow/darkness are useful strategies for bringing drama or dramatic effects to any design.

3). Sustainable aspect:

- The use of solar energy by installing solar panels. With the use of such a renewable source of energy, it'll meet that requirement which can significantly reduce the carbon footprint of the building.
- The use of low VOC or zero VOC paints in interiors doesn't have any side effects on human health which ultimately provides a better air quality inside the premises.
- Adapting sustainable flooring options such as slate flooring, epoxy which is resilient and do not require much maintenance.

4). Interactive aspects:

The introduction of advance digital technology in the science centre's interiors boosts user engagement and draws more visitors to the museum.

- Viewers can experience both tangible as well as intangible elements.
- The use of digital media projections and projectors to express exhibition narratives and maximize the overall quality and presentation to the viewer.
- The use of advanced and improved digital technologies such as mixed reality i.e. Augmented reality and Virtual reality will attract more visitors to the science centre as well as increase the audience engagement within the premises.
- Augmented reality is the method of using software to overlay pictures, text, or sounds on top of what a human may see with the use of a smartphone or tablet to modify the original image with an application. The science centres are designed to teach people and provide them information in every possible way. So, by using augmented reality, information might easily be shared. Using augmented reality to illustrate stuff means that AR can add three - dimensional models to real-life so that the viewer can explore them properly.

- Virtual Reality provides a complete immersion into a separate reality. It replaces what the viewer sees with an alternative reality. In VR, rather than seeing a video on a screen in front of them, users will interact with the 3D world, because in virtual reality, people will witness something similar or entirely different from the actual world.

Conclusion

Through the exhibitions, the science centre aims to spread science by encouraging the overall presence and prestige of the centre. The design and concept techniques used in the exhibits were part of the small-scale science centre's attempt to create an atmosphere with a more enjoyable science perspective-providing a whole new experience. In comparison, what separates the small-scale science centre from the traditional small-scale science centre is that the centres now try to participate in more engaging communication with the public which mainly focuses on more public interaction. Earlier their overall designs were typically plain and simple with empty areas. The aim was to change the understanding of what people will discover inside the centre, and ultimately also encourage new visitors. In order to attain this improvement in outward experience, the science centre needed to deliver by encouraging interest, excitement, and diversity. The research underlines the significance of experience-driven approaches and strategies for exhibition design such as science centres. The value of aesthetics and escapist experience is to be in harmony with the entertainment and learning experience at a science centre. Science centres encourage this approach by providing visitors with opportunities for interaction with the exhibition area as well as the environment around them, to interact with technologies and media, and to encourage social contact between visitors. The purpose of the small-scale science centre design is to have a cohesive choice that incorporates all of the key components of the centre and triggers all human senses. Technology plays a vital role in the area of design and architecture. Although technology is still evolving, and so there's no dead end to it, and there is always much more to occur in the future.

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