The Quality of the Museum Experience in the Light of the Digital Age

Prof. Saeed Hassan Abdul Rahman
Interior Design, Faculty of Applied Arts, Helwan University.
prof.saeedhassan@gmail.com
Prof. Ola Mohamed Samir
Interior Design department, Faculty of Applied ARTS, Helwan University
olabeer@yahoo.com
Researcher. Hanan Ebeed
Interior Design, Faculty of Applied Arts, Helwan University.
hananmebeed@gmail.com

Summary:

In the time of the Information Revolution, societies are being reconstituted through the rapid advancement of information technology, which has allowed the connection of far places and the creation of unimaginable societies in the past. The rapid development presents many challenges, as many human societies lose the identity of their cultural heritage quickly, and a new generation emerges on cultural traits different from that of its parents and grandparents. The museum as a cultural intermediary between generations reflects its role and mission in the way its program is presented to visitors, its involvement and attracting its attention. Where the research problem arises which is the need to improve the quality of the museum experience and keep pace with the changes in the digital age. The research aims to study the elements of increasing the value of the visitor's experience by employing digital technology in the museum display.

The research deals with the development of museum science during the digital age and its impact on the quality of the museum experience, through Two main topics: The first is: the evolution of museum science in light of the information revolution. This research deals with the development of museum science during the digital age and its impact on the quality of the museum experience.

The most important results: the evolution of museum display methods and the use of digital technology in museum presentation with the aim of engaging the visitor interactively, which can raise the value of the experience and attract a larger audience.

The research problem: the need to improve the quality of museum experience and keep pace with the changes of digital age.

The research significance: emphasizing the necessity of benefiting from techniques of digital technology in developing museum show that is targeting the attraction of larger number of audience through the providence of effective visit experience.

The research goal: studying the potentials of elevating the quality of visitor's experience by functionalizing digital technology in the museum show.

The research assumption: functionalizing the potentials of digital technology in developing methods of museum show is directly affecting the quality of the museum visitor's experience.

The research methodology: inductive and descriptive, analytical approaches.

Keywords:

Digital age, Museum experience quality, Museum display, Information Revolution.

Introduction:

In the age of information revolution, the presentation of information technology is speeding up along with its various means, computers, networks and digital systems have dramatically increased the ability to gain knowledge, achievements and cooperation, which allowed the wide spread of data transfer on a large scale, connecting long distant places and build communities that weren't possible to be even imagine in the past.

That rapid progress is representing many challenges as many humane communities could rapidly lose their cultural heritage, and then new generations will be raised on different cultural features which differ from the ones that ancestors had before. Museums play the role of cultural mediators to build bridges of communication among generations. Museum role and message are being reflected in the way that its message is being transferred and its program is introduced for their visitors, and how are they being involved in that program? The research is handling the introduction of information revolution and studying the effect of the variables of digital age on the quality of museum experience.

The research steps:

First: evolution of museum science under the light of information revolution:

"Information Technology Revolution":

It is identified as "the transformation existing in the various fields of life from economy, sociology, industry, policy, technology and medicine depending on information and communication technology".

Digital technology is representing the linking role in knowledge community with the help of paths of information technology, computer systems and high speed wiry and wireless communications that connect the entire globe, such wide net is gathering all people and cultures and generates new social dynamics. Digital revolution is being pushed by content, and as museums are organizations which are rich with content and able of creating multimedia content. Its ability to create multimedia content nowadays keeps them connected to visitors who rapidly receive data across new platforms while they are being developed.

Museum science under the light of digital age:

Museum science is known as: "the study of scientific, social education that grows gradually and is about laws, principles, entities, and methods of possession, maintenance, study, search and show of the original pieces which are transferred either from nature or society as a primary source of knowledge which formed the theoretical role for museum work and museum methodology".

Evolution of museums science:

Museums science is witnessing a huge transformation during the digital age as it has affected all aspects of the modern society, which caused a cultural transformation all over the globe. That's why it was necessary to formulate a study about museums science, through main four closely connected compositions in the digital age; place, society, culture, technology. Museums could benefit from digital changes in all the basic functions that could be clearly developed through the use of systems and programming as tools for improvement. looking at the fact that museums work for purposes of education, study and fun. Museum has become more focused

on the needs and special interests of its visitors, it has become necessary for museums to adapt with changeable society.

All basic museum functions are deeply affected by digital technology which include:

- Running groups which includes; search, maintenance of all archeological pieces.
- Design and create the show, introduction of information in a creative way.
- Create experiences which visitors can participate in.

First topic: management of groups:

The appearance of 3D technology (prototyping and light scan) has enabled the building of inclusive database for digital museums with easy and fast access to all users.

Example: documenting data of the British museum, classifying groups and positions of halls and introducing virtual tours.

Second: show design and explanation:

Many museums have turned into building a gradual explanation of the shown materials starting from watching them, then creating a shared experience with the audience, through applied interactive learning. There are many tools of information and communication technology that could be merged in contemporary museums shows to create a museum path that allow the visitor to have a successful experience. Besides those tools the digital content created by museums is of no less importance, for instance; rapidly responsive, interactive web designs are considered as significant standards when building a website for museums' foundations on the internet.
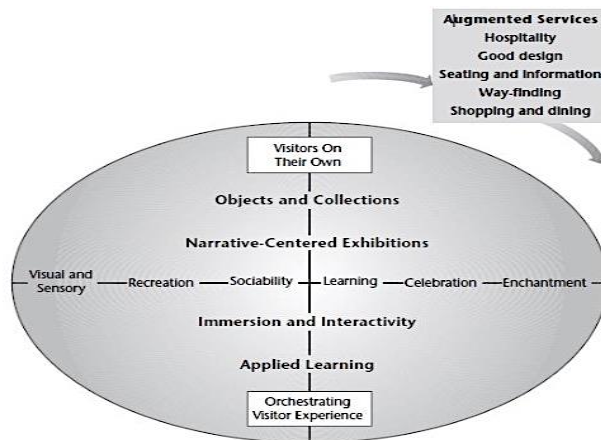
Shape 1: illustration that shows the degree of design and coordination.
Museum experience (content graduation).
Kotler N. et al, (2008). Museum Marketing and Strategy, San Francisco: Jossey-Bass.

Third: Creating participatory visitor experience:

The experience of interactive participation for museums' visitors is considered specifically important for the understanding of the displayed materials and connect them with comforting and entertaining way. The major basis of museums' audiences are the generations that are connected with digital applications, the social networks, participation platforms, strength of common information and new communication channels are considered a reflection for the digital identity of a museum.

Example: the game of "the father and son" that was released in 2017 is a 2D interactive game and it is the first game to be produced and distributed by a museum, it was produced by the National Archeological Naples Museum.

Second topic: Quality of museum experience:

The museum experience:

It is the focus on the visitor and its relation with the various elements inside the museum, instead of focusing on the collection of the display. With time new kinds of museum experiences have appeared as experiences are being enhanced through interactive, digital medias at many scientific and technological museums.

Design directions of museum experience:

There are many directions in the world of museums that could influence the museum experience, such as; development of museums from just being centers of exhibits to being a social center of the public, also audience is participating at museum visits in more than way. Interaction at museums is aiming to:

A- Dialogue participation with the audience.

B- Variation and expansion of the public range.

C- Use of new technologies such as "internet of things IOT- do it yourself DIY"

"Evaluation of the Quality of a Museum Experience":

The identification of quality is based on the user, that is the basis for many costumer protection legalizations. According to this definition; visitors experience will be of high quality at a museum or monumental sites when their needs and expectations are met or exceeded, yet the measure of the user satisfaction with museums or archeological sites is originally a hard thing as museum is representing an experience that has a chain of elements that together form the whole experience instead of only one element.

Researches have pointed at the fact that creating experimental value for visitors is linked to the process of aesthetical appreciation as the aesthetical appreciation in the museum experience contains two dimensions:

1- A direct visual attraction of the design of the museum exhibit.

2- The influential sides of the experience (entertainment and amusement) when visitors turn from being audience to participants, their evaluation of aesthetical elements is moving towards the creation of the intrinsic value as an essential value in that context, a sense of escaping from regular dull days is being created while participating at activities and adventures. Based on those concepts; the experimental value in the museum context has many basic sides; visualized call, entertainment, enjoyment and escape.

"Attracting Visitors' Attention":

Management of attracting visitors' attention is considered from the basics when designing any exhibit. Designers should understand how to attract their attention, concentration, motivation and what could prevent their interest.

Attention is: possession of the mind in a sharp, clear way, towards one of the things that look diverse or possible thinking paths at the same time, it means withdrawal from somethings in order to deal effectively with other things"

Stages of Visitors' Attention:

Visitors' attention could be imagined as a connected chain of three stages that involve; catching, concentration, and participation.

An impact on emotions and senses as well as on the intellect are required for visitors' participation:

Visitors' participation requires influencing emotions, senses and thinking. Researchers think that the attracting motive for visitors towards museums is about the element of feeling within the experience rather than being about the element of information.

Active participation depends on using senses and evoking feelings as it enhances the quality of the visit to a great extent.

Aesthetic appreciation:

A mental image is one of the basic ways that individuals use to appreciate art. It is nonverbal, internal representation for cognitive information inside the memory. Mental image realizes the feeling of aesthetical enjoyment. The system of building vivid images within the basic elements is being shared through building an aesthetical experience, through unifying sensual entrances with emotional cognition and signified data, then merge data and feelings to redefine and reevaluate what a person feels and knows. Researches in aesthetical appreciation say that mental images in art appreciation have a gradual watch process, according to the attention control theory; there are two types of main psychological processes which individuals use in processing daily information:

1- From top to bottom monitoring: which symbolizes a mental process when directing and controlling the optic attention towards targets as thoughts or control intentions are directing their optic attention. For example: looking for a red circle among circles with other colors, monitoring is done through informational directing about something.

2- From base to top monitoring: symbolizing a process when optical attention is more spontaneous and influenced by external catalysts without previous directing towards a certain target. For example: attracting attention towards something that is special from the surrounding.

"Effectiveness of verbal and visual cues relative to the experimental value of the visit":

Visualized signs are considered more relatively effective in attracting audiences' attention during circumstances when individuals rely on the methodology of processing information from base to top, within the context of the research around the touristic experiences in art museums, it is suggested that verbal signs versus the visual ones to increase the experimental value. That assumption is backed up by double justification:

First: verbal signs versus the visual ones are the best for methodology of mental images from top to bottom for tourists in art museums regarding aesthetic appreciation, as visitors usually follow the process of mental images from top to bottom to enhance the aesthetic appreciation.

Second: compared to visual signs, verbal signs could help in more effective way in getting mental images that are related and of meanings, opposite to visual signs that make imaginary scenarios easily available, with verbal signs, individuals have no choice but for mental imagination and imaging the described scenario themselves. That process allows individuals to use personal knowledge to form their mental images, which is a form of processing from top to bottom. That's why within the context of artistic appreciation of a museum, verbal signs versus the visual ones should be compatible in a better way with the process of mental imaging from top to bottom specifically.

The digital mediation effect via imagery vividness on a visit's experimental value:

Image vitality is known as "clearance of the individual's mental image" vital mental image is largely participating in the aesthetical experience. It is said that mental image is the basic, psychological mechanism that is behind the effects of elements of virtual design enhancing experiences of museums' visitors. Building hypothetical existence helps individual to successfully create mental images, in that case the process of mental imaging from top to bottom is being activated, through such circumstances, verbal dynamic signs should be compatible in a better way with the process of mental imaging from top to bottom, which provides a better experience among museums' visitors, subsequently; realizes more experimental value and higher Willingness to Pay for the experience. **"Willingness to Pay" "WTP more"** on the contrary, when visitors are subjected to natural environment or a habitat where they see low level of existence.
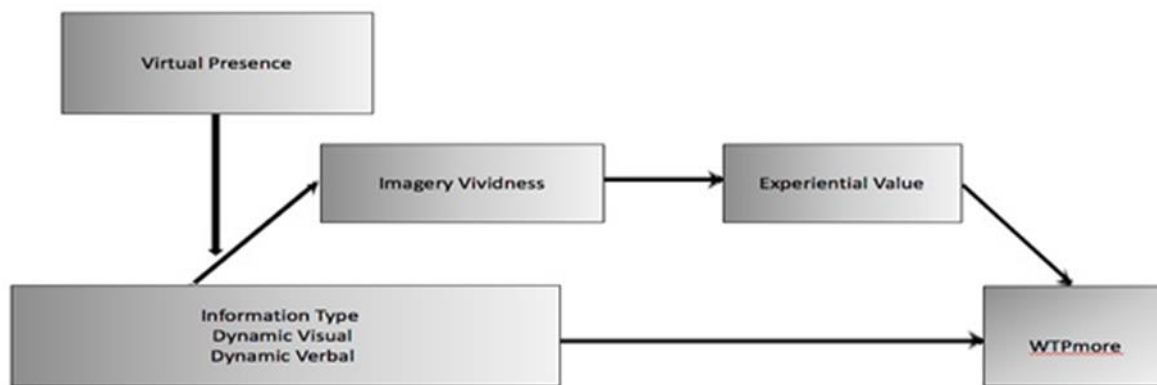
Shape 2: the effect of digital mediation via image vividness on a visit's experimental value.

https://www.sciencedirect.com/science/article/pii/S0261517718300475
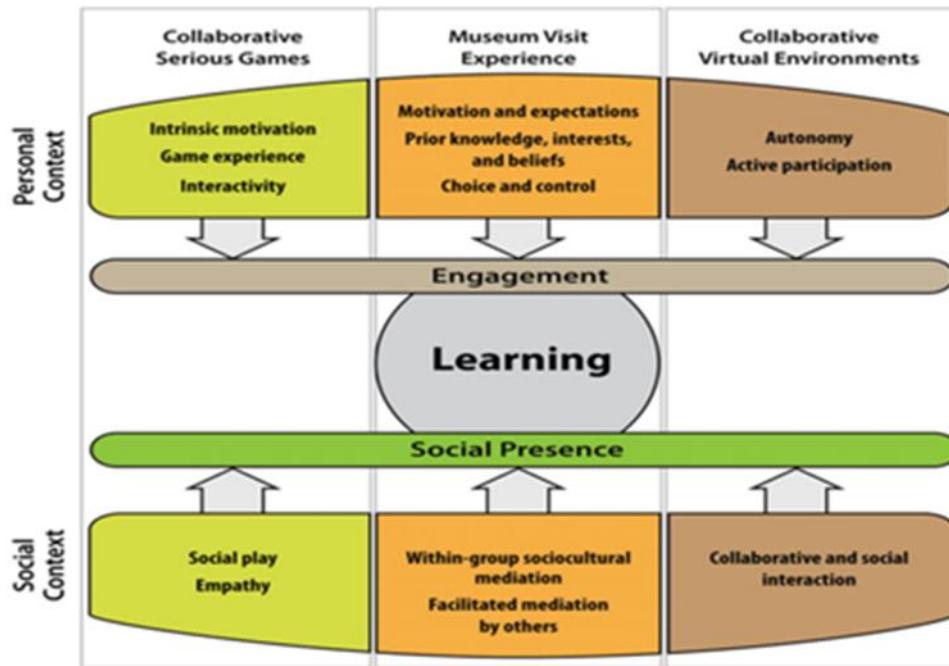
Interactivity and museum experience:

Interactivity is a significant element in enriching the museum experience by enabling multi-senses dialogue and discovery. Information gained by witnessing the art pieces in an exhibit has become more common at public places such as exhibitions, museums and libraries.

"Effectiveness of digital technology within museum experience":

Digital games and developed technology are inseparable part of public culture especially children and youth. Studies have proved the efficiency of using digital games in:

A- Support social participation for youth.

B- Motivate educated people using the element of enjoyment.

C- Ease education by putting the recipient in simulation experiences.

Interactivity has been studied and its influence on education within the context of virtual environments (VEs), which is one of the main used techniques to simulate real world experiences that have proved its efficiency.

Shape 3: illustration that shows the differences between sharing the content of interactive, educational games in an individual form and sharing games in a group form.

Vermeeren, A. &others., Museum Experience Design: Crowds, Ecosystems and Novel Technologies, Switzerland, Springer International Publishing, 2018, p24.

Results And Recommendations:

- Museum experience is targeting the focus on the visitor and his/her relation with the various elements of the museum.
- Interactivity at a museum aims for:
1- Audience participation.
2- Expanding the public range.
3- Design short experiences inside the museum.
4- Creating a dialogue between the museum and the audience.
- Quality of the museum visiting experience is basically relying on acquiring the visitors needs and expectations, in addition to basic elements such as museum location, belongings, program of the show, and opportunities for visitors' interactivity.
- Experimental value of visitors is linked to the process of aesthetical appreciation that has two main dimensions:
1- Optical attraction of the design of the museum show.
2- Aspects of the visiting experience (imagination, entertainment, participation).
- The visual show is representing more powerful triggers and easier to be stored within the memory of the less enthusiastic persons, and ability to process information mentally. Verbal signs are increasing the experimental value of the visit.
- According to the previous it is recommended when designing show programs at contemporary museums that the display style should be based on introducing an effective museum experience that targets visitors' attraction by satisfying their expected needs or

involving them in the display program whether by interactive shows or by creating mental dialogue during the visual show and verbal signs.

References:

1)Bitgood, S., Attention and value: Key to Understand Museum Visitors, America, Left coast press,2013.

2)Black, G. The Engaging Museum: Developing Museums for Visitor Involvement, Routledge, New York, USA, 2005.

3)Smith, S. Museums in The Digital Age: Changing Meanings of Place Community and Culture, UK, Altamira Press.

4)Raymond, E.& Others, preparing for the Revolution Information Technology and the Future Research University, The National Academies press, Washington,2002.

5)Vermeeren, A. Calvi, L. Sabiescu, A. Trocchianesi, R., Stuedahl, D. Giaccardi, E. & Radice, S., Museum Experience Design: Crowds, Ecosystems and Novel Technologies, Switzerland, Springer International Publishing, 2018.

6) Zhen, CH.& Qiang, W., China's Information Revolution, USA, Washington, The World Bank,2007.

Researches & Scientific periodicals:

1) Hanif M, Fatin, A., AMER International Conference on Quality of Life Holiday Villa Beach Resort & Spa, Langkawi, Malaysia, Human Visual Quality: Art gallery exhibition, Malaysia, Universiti Teknologi MARA, Elsevier,2013.

2)Minoska, M., Digital Strategies for Museums, Macedonia, Journal of Sustainable Development, Vol.9, Issue 22,2019.

INTERNET WEBSITES:

1)Final Mission: USS Tang. https://www.nationalww2museum.org/visit/plan-your-visit/interactive-experiences/final-mission-uss-tang-experience, read on 25/11/2019.

2)Frisach M. Digital Invasion of The Museum, https://www.miradorarts.com/digital-invasion-of-the-museums/, 3/2019,read on 9/2019.

3)Muse logical Working Paper, http://network.icom.museum/fileadmin/user_upload/minisites/icofom/pdf/MuWoP%202%20(1981)%20Eng.pdf ,read on 9/2018.

4)https://www.google.com/search?client=safari&rls=en&q=what+is+Gamification&ie=UTF-8&oe=UTF-8, read on 25/11/2019.