

CHAPTER II

REVIEW OF RELATED LITERATURE/SYSTEM

This chapter will present the review of related literature and systems that will help the proponents develop a thorough understanding and insight into previous work and even make comparisons between the findings of other similar studies. It will assist the proponents in searching for a guide in the formulation of the conceptual framework and in the preparation of the research design, methodology, sampling techniques, instrumentation, and statistical analysis.

Related Literature

To improve this project, related literature that is relevant to this study will be studied and assessed. These texts will also aid in the organization, interpretation, and interpretation of the various concepts that may emerge during this project.

The utilization of Interactive Website to Museums

New technologies are changing the way businesses communicate and interact with customers, and the tourist sector, and museums are no exception. As a result, the usage of digital communication tools has become widespread, considerably broadening the horizons of communication Fernandez, Crespo, & Fernández, (2022) and at the same time, it has provided alternative visitor interactions and many advantages Kabassi, (2017). The main focus of this study is to design and develop a website that could improve the visitor experience. The proponents discovered that there is no existing website for Casa Real Shrine that could efficiently highlight the museum's uniqueness and services to its target audience. According to Anggai, Blekanov, & Sergeev (2015), The web is the most powerful platform when it comes to dealing with problems being faced by museum institution, these problems include time, distance, and space problems. These stated problems are present in the museum. For this reason, the proponents proposed a website system that could efficiently display and inform visitors of what to expect in the museum and be able to reach information about the museum to a much wider audience online.

Over the years, the website operations have changed, based on modern web technologies, responsive web pages have been designed to be interactive and dynamic. Museums, which are present in the global network, seek to present to their visitor's information about their collections and cultural activities in an increasingly interactive and innovative manner, as does any institution tuned into the dynamics that have changed since the emergence of technology in our daily lives. The internet has changed the tourist sector, influencing new trends. It has altered the way individuals and organizations, such as museums communicate Komarova (2015). The goal of this study is to develop an interactive museum website for Casa Real Shrine. Presently, the museum has a Facebook page that only displays basic information about the museum. Being able to attract visitors at the first glance of the website is important in order to effectively encourage them to

visit the physical museum, thus why, the proponents will prioritize the interactivity of the website.

Cultural Heritage Professionals (CHP) is becoming more involved in the development of interactive technology. The growing access and affordability of digital technology enables CHPs with less experience in interactive technologies to develop content for and incorporate these technologies into their museums Maye, Bouchard, Avram, & Ciolfi (2017). The Casa Real Shrine has already begun to adapt interactive elements and services within physical museums, and the museum's interactive website would be able to assist the museum to further adapt to technological advances and at the same time, attract bigger numbers of visitors. According to the findings of Raimo, De Turi, Ricciardelli, & Vitolla (2021), the adoption of digital technology stems from a desire to attract more visitors, decrease expenses, improve the visitor experience, and adapt to competition

The internet is critical in advertising and attracting museum visitors Cristóbal, Ramón, Daries, & Serra (2021) for this reason, the Casa Real Shrine also try to boost visitor loyalty by redesigning their services through the implementation of the museum website in order to delight visitors with pleasant experiences that would help distinguish them from other competitions. According to Madriaga, Virto, & Blaso (2017) The museum websites were originally intended to provide basic information such as hours of operation, location, and costs. But because of the evolution of digital media, websites now provide a variety of interactive capabilities, like virtual galleries as well as a variety of materials to help visitors navigate better. In order to adapt to these new trends, the proponents will design the website according to the preferences of website users and the new trends in the industry. The availability of web-based materials has opened museums to a broader and more diversified user base, resulting in a huge increase in the number of visits to museum websites Walsh, Hall, Clough, & Foster (2020).

Researchers have attempted to understand and improve several aspects of audience online and offline experiences over the last two decades, including identifying factors that motivate individuals to visit museums, elements of the visit that influence their overall satisfaction, what is retained following their visit, ways to improve online visitors' website experiences, and understanding how all these combines to encourage visits to museum websites Chen, Lai, & Yu (2021). As specified in the study conducted by Lopatovska (2015), a comparative analysis of four distinct websites that evaluated strengths and shortcomings in the sites' navigation, design, and content components revealed that a website's aesthetics were the strongest predictor of visitor's overall impressions. Through web-based interfaces, museums are improving access to their collections and enabling enhanced user experiences Walsh et al. (2020). However, Kabassi (2017) stated that for a website to attract more people to the museum, it must be useful and functional. It is indeed important to make sure that the website would appeal to the visitors therefore, the proponents will design the website according to the rules of web design, at the same time, the proponents will consider the importance of the functionality of the applied design

Online Booking Admission

One of the proposed website features is the online booking admission. According to (2019: The recent state of online booking), when the first Electronic Online Booking was created in 1995 by SAS for their airline (<https://scandinaviantraveler.com>) the way of selling tickets was much faster and avoided the problem that the ticket was being sold out. In the year 2019, the Online Booking had some minor enhancement like having an online payment, fast processing, and even paying online with cryptocurrencies that you can also book online with just a few taps using your mobile phone. The Online booking system is one of the features that will help Casa Real Virtual Museum visitors when they visit Casa Real Shrine.

Providing a hassle-free museum visit experience to the museum visitors is one of the goals of the Casa Real Shrine and scheduling a visit ahead of time will help lessen the need to process a visiting pass through a walk-in process. Online Booking is a system that allows the customer or people to self-book and pay through a website to secure their spot on the place that they want to go K Steeve (2020). That's why other businesses are using online booking because this will help them to save people time that are coming to their place.

There are many features to consider in creating an online booking system. Some examples of this are: (a) Online booking in real time may help the customer to see the available dates or if that date is fully booked. (b) Various Currencies and Language features might be considered one of the needs in an online booking system because if a customer is from another country, they can still use the system as it supports different languages and accepts other currencies in payment. (c) Intelligent Calendar/Diary, this feature provides the user a summary of all bookings. This will help avoid unnecessary work. (d) Booking management via Smartphones and Tablets is much more convenient instead of using PCs. These features can help customers access the system easily using their smartphones. Ruiz (2020)

The proponents believe that incorporating an online booking admission system into the proposed website will help both visitors and the client. The online booking system will allow a systemized visitor admission as opposed to the current manual booking system in the Casa Real Shrine, where visitors will only be able to schedule or book for a visit once they arrived at the onsite museum.

Virtual Gallery

A virtual gallery is one of the features of the proposed website, this feature will allow the Casa Real Shrine to display their collections online for the viewing of the website visitors. The researcher Tambahani, G. S., Wenas, M. B., & Somya, R. (2016) created an Online Virtual Gallery using the most recent technology, HTML5, to store files such as drawings, paintings, sketches, films, games, etc. As a result of this research, a virtual container was produced that could allow the program to hold exhibition files effectively online. It is relevant to the study since it has the same features as the proposed website, such as storing files like museum collections, relics, and more.

A virtual gallery is meaningless without its online visitors. The author Stefano, C. D., and Battisti F. (2017) designed a framework that allows the user to visit a virtual museum in which all canvases painted by Caravaggio and conserved in Rome are displayed. The synergistic collaboration between Art History and ICT provided this project a unique goal, combining the interests and demands of both disciplines to create a Digital Humanities project. One of the goals of proposing the Casa Real Shrine website is to engage people online using the proposed website, to showcase museum displays in a virtual gallery, and to encourage museum website visitors to visit the physical museum.

Alawad, A., Aljoufie, M., Tiwari, A., & Daghestani L. (2015) examines the advantages and disadvantages of a virtual gallery. Virtual galleries provide new opportunities for architects, designers, artists, and experts of other disciplines to lay the foundation for new social networks. It will be a fantastic opportunity to break down cultural boundaries. Because the internet has a wide reach on any part of the world, the online presence of Casa Real and at the same time, showcasing the collections in the virtual gallery will allow audience from different parts of the world to view the history the museum holds.

Virtual Tour Guide

Recent events that took the world to a new norm of virtual interactions, including all business. Using web-based Virtual Tours and the resource of the museum has the academic and educational approach the students need for research Wang, Y., Stash, N., Sambeek, R., Schuurmans, Y., Aroyo, L., Schreiber, G., & Gorgels, P. (2009). Famous museums are now providing these services online with the prediction that more people will visit with more personalized and engaging new or old visitors. The focus of the study is to create a virtual Casa Real Shrine with virtual tours to completely immerse the visitors in a whole new virtual world of Casa Real Shrine.

According to the article about a common fear that apparently “remains the biggest fear” for people, Mortality Threat, and technology effects on tourism Nanni, A., & Ulqinaku, A. (2020). A troubling thought through people wanting to visit museums in the middle of a pandemic and are afraid to catch something, affecting the mental and actual well-being of the person. The ideal solution is the virtual museum with a more in-depth virtual tour for the visitors to resolve the conflict of the visitor. The main study is to tackle the common threat and issues of the visitors and give a proper solution with no compromises to the visitors' well-being by creating the virtual tour.

Digital Learning

Learning via digital resources such as desktop computers, laptops, tablets, and smartphones is known as digital learning. The proposed website is designed to be responsive, thus, it can be accessed with the use of either desktop or mobile. The interactive opportunities provided by the devices, rather than the equipment themselves, are what make digital learning engaging. By allowing the learner to choose and control the flow of information through mouse-clicking or screen-tapping, certain digital tools

engage the learner. In multimedia learning, these characteristics are referred to as interactivity Chong, C., & Smith, D. (2017).

Digital technology has played a large role in shaping the new learning opportunities because digital content is far more engaging, easier to update, and it is portable and cheaper. Digital learning has the ability to maximize information absorption and excel at building higher order critical thinking abilities Aldrich, E., Bessette, K., Mueller, P., & Prakash, M. (2016). One of the objectives of the proposed website is to be able to provide learning through the use of digital media.

Related System

These Related Systems are research form books, articles, research journals, electronic source and other work that will help this research to make it more meaningful and easier to understand the purpose of the research.

Li J., Nie J-W, Ye J. (2022) conducted a study entitled, "Evaluation of virtual tour in an online museum: Exhibition of Architecture of the Forbidden City" which evaluates the purpose of how to try to construct a set of user experience evaluation methods for online museum virtual tours; and to evaluate, as a case study, the Exhibition of Architecture of the Forbidden City (EAFC), to further demonstrate and develop the proposed method.

There have been notable research evaluations of virtual museum tours, in which it describes user preference in order to enhance users' experience, navigation functions, control options, and information acquired during the virtual museum tour. These are also being evaluated as three critical qualities which are usability, entertainment, and learning. These critical qualities are simple, and the scope is limited, Kabassi (2017). made a study in a museum in Italy and concluded that the three most important parts in a three-dimensional museum are coordination of movements and performance, support of navigation, direction, and support of learning.

To meet the purpose of this study, Li J., et'al (2022) applied a quantitative approach to this work consisting of a pre-test and an official test, and SPSS was used for reliability analysis of the data. The pretest was gathered from January 4 to January 13, 2020, with 22 subjects; 18 valid questionnaires were collected, and the reliability test results showed that the Cronbach's α coefficient was 0.815 (> 0.7). The official test ran from January 15 to February 20, 2020, and Cronbach's α coefficient of all valid questionnaires was 0.932 (> 0.7). The above results prove that the scale had high reliability. This result confirmed that the virtual tour provided a poor navigation experience, but a good experience in terms of reality and other aspects.

The study supports the current proposed system in which it helps the proponents on how to make the proposed system effective by enhancing users' experience, navigation functions, control options, and information acquired during the virtual museum tour.

Implementing the most important part which are the coordination of movements and performance, support of navigation direction, and enhancing mode of learning.

Werner Schweibenz (2019) “The “Virtual Museum”: New Perspectives for Museums to Present Objects and Information Using the Internet as a Knowledge Base and Communication System” The relationship between museums and mass media as well as the possible impact of information technology on museums are described. The “virtual museum” is defined as a means to establish access, context, and outreach by using information technology. The Internet opens the “virtual museum” to an interactive dialog with virtual visitors and invites them to make a virtual museum experience that is related to a real museum experience. Some research is described on how the Internet can be used as a knowledge base and trends from surveys how museums and virtual visitors use the Internet as a communication tool.

The use of telecommunication technologies offers interesting perspectives for museums and the opportunity to add a new, digital dimension to the traditional museum, thereby creating a “virtual museum”. The foundations for the “virtual museum” are already laid. Bearman (1995b, pp. 15f) estimates that by the end of this decade over 20 million original objects will have been digitized. In this way, museums, and the digital information they offer will become loadstones of content for the growing multimedia industry and for museum initiatives for outreach to the public (Bearman 1995a, p. 12). As some statistics and research suggest, the public looks for and appreciates museum information on the Internet but has high standards that the museums have to meet. The Internet is a great opportunity which the museums should use to broaden its audience. So, there is a piece of advice for museums concerning the Web: “Be there or be square!”

Technology offers an opportunity to museums. The technology is established to access context, with the use of the internet, out of reach information can be exposed by utilizing virtual museums. Since almost everything is being digitalized, virtual museums can offer digital information. This can be an opportunity to invite virtual visitors to traditional museums.

According to Liu Z., Wang M., Qi S. & Yang C., (2019) study on the Anti-Theft Technology of Museum Cultural Relics Based on Internet of Things, With the development of society, the museum has exhibited rapidly and more cultural relics, the number of visitors has also increased rapidly, and more criminals have stolen cultural relics due to its vulnerability. The traditional anti-theft methods cannot completely block their pace. This paper proposes a museum anti-theft scheme based on the Internet of Things (IoT) technology, which identifies whether the cultural relics are within the safe range through the passive RFID readers/writers. Once stolen, the cultural relics will leave the effective RFID identification range, which results in immediately alarming, then the system starts the anti-theft plan. The method is free from the drawbacks of the traditional infrared anti-theft, door magnetic detection and the like, the proposed anti-theft method monitoring has the immediacy, and the safety factor is higher.

The traditional museum is vulnerable to thieves, this study helps the clients from

drawback of the traditional infrared anti-theft. In which case of the modernized museum in the virtual world the safety factors are higher.

In accordance with the study conducted by Albadawi, Bushra Izzat (2021) with the title “The Virtual Museum VM as a Tool for Learning Science in Informal Environment” where the study aims to verify whether a virtual museum (VM) is a tool for learning science in an informal environment for the lower grades of elementary school from a parent and child perspective. The study is a quantitative and qualitative mix of methods obtained from the main field test phase from the user's (children's and parents' perspective) in Educational Research and Development (R & R & D) methodologies, evaluation tools used as tools for parents. Using the data according to the data, they collected one of the parents for children who conducted a focused interview. The parent evaluation test gave positive feedback and the parent determined that the VM was appropriate. His parents were members of the VM with the same opinion as his degree. The child placement test was positive. The kids felt that the VM was appropriate. Children's comments show a growing interest in learning science using technology through games and multimedia. They were very enthusiastic about using VMs. This allowed him to understand the subject and navigate when searching for scientific information.

Implementing website museums can be beneficial to any age, either children or adults. This study shows a growing interest in learning using multimedia or virtual tours.

Chen, Lai, & Yu (2021) “Participating in Online Museum Communities: An Empirical Study of Taiwan’s Undergraduate Students” In 2019, the Ministry of Culture of the Taiwanese government said that the museum will adopt technology for digital applications, promote cultural participation and utilize friendly access to promote the country's cultural civil society, the digital age. Large museum-related exhibitions and events are dedicated to communication and interaction within the online community. The online museum community is unique and important. Internet-based communication allows you to discuss extended experiences and goals compared to traditional museums. The results show that perceived uniqueness not only slightly increases emotional response, but also slightly improves user engagement. The playfulness perceived by the viewer is a powerful way to increase user engagement, and emotional resonance has a weak but significant impact on user engagement. The interactivity between members and the reaction of the exhibition will encourage the audience to participate in the online community. Such a community is important for museums. Perceived relevance and respect slightly increase emotional resonance and increase user engagement. These results provide researchers and professionals with important insights into the important role that museum managers play in attracting audiences by providing an interactive experience in an online environment.

Traditional museums play a vital role in our society, however as time goes by the number of exhibits decreases and the number of visitors decreases as well. Adopting technology to advertise the museum to utilize and promote cultural appreciation and help visitors to engage in museum communities.