

CHAPTER I

INTRODUCTION

Project Context

The internet's global expansion over the years has impacted human activities through digital media, museums are evolving to adapt to the change and encourage young netizens to access and use museum materials Chen, T. L., Lai, W. C., & Yu, T. K. (2021). However, capturing and maintaining the attention of visitors is an absolute challenge in today's world, where information can be found online. Along with the digital revolution, visitor expectations have shifted somewhere along the way, and museums are striving to meet the difficulties posed by this new wave of digital expectations from their visitors Balanchine S., (2018).

In order to adapt with the changes in technology, museums need a visually appealing, informative, and entertaining website to attract visitors. According to Butler J. (2017), digital communications has created an opportunity for many museums around the world to create connections, communities, and relationships. It gives museums new avenues to share information about their exhibits and collections with a vast number of audiences and at the same time, allows them to understand visitor experience. To create a website that accurately depicts what makes a museum unique is to implement an engaging and interactive feature into the website Charr M., (2020). An interactive website is one that allows users to engage with and communicate with the website's content. It takes a unique and entertaining approach that is sure to catch the interest of its users.

It is apparent that museum websites play a significant role in information dissemination. According to a growing body of literature: Increased online and off-line museum visits is an effective strategy to boost visitors' interest and satisfaction and encourages online website visitors to visit the actual museum Allen L. B, Crowley K. J (2014). According to Madriaga, Virto, & Blaso (2017), the websites of museums 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.

Most museums around the world offer the opportunity to purchase or book tickets online because of the threat of Covid-19 virus, museums and galleries are required to have a booking system to limit the visitors visiting the museum at the same time. This way, the spread of virus within the museum could be prevented. Billock J. (2020)

The Casa Real Shrine is one of Malolos oldest structures that was built in 1580 and has witnessed most of the Philippines political history, which is why today, it functions as a museum of Philippine political history. The museum displays the exhibits,

printing press of Malolos, display of 21 Women of Malolos memorabilia, Miniature dioramas, theatrical backdrops, interactive terminals, and original artifacts recreate these periods, from the earliest communities to the Spanish and American colonial periods through the Second World War until the present. It is recognized as one of the country's most notable museums and is one of Bulacan's pride. National Historical Commission of the Philippines (2022)

The Casa Real Shrine plays an important role in the preservation of the local culture and history. Its existence also shapes knowledge by putting together visual cultural narratives that build views of the past and consequently of the present. Which is why it is important that they be able to clearly convey knowledge and information to their visitors all the while accommodating all visitors' needs during their visit. The Casa Real Shrine is popular amongst local and foreign visitors that want to learn about the Political History of the Philippines. The museum also caters educational tours for students and researchers.

Over the years, the Casa Real shrine has used conventional techniques to spread information, generally through live exhibitions of artifacts where people must first visit the physical museum, but in this modern day and age, new trends have emerged, overshadowing the traditional way of attracting visitors. The proponents proposed the development of an Interactive website for casa real which is suitable for adapting digital advancement in the museum and be able to satisfy the needs of the visitors.

The proponents believe that the implementation of the Casa Real Interactive Website will benefit both the Casa Real management and the visitors. Through the Casa Real interactive website, Visitors who want to visit the museum could inquire and book for admission online, the website could serve as the visitors' digital itinerary and virtual tour guide as they venture into the museum making their visit hassle free. During the testing phase, feedback from end users will be gathered and used to identify recurring issues while also further improving the development of the website. Following the observation of these issues at Casa Real Shrine, the proponents would like to design and develop an Interactive Website for Casa Real Shrine.

Purpose and Description

The study aims to propose a web base system and bring the Casa Real Shrine to the virtual world as a virtual museum. The study also aims to utilize technology to freely walk and virtually visit the museum of Casa Real Shrine.

Proposing a virtual museum is the main concern of the proponents to develop an interactive museum that is user friendly, interactive and provides additional information through the web for Casa Real Shrine is the main concern of this study.

VirtualShrine is expected to provide significantly detailed information about the shrine. Besides providing information, the proposed system aims to create an interactive environment for the visitors where they can interact with virtualized versions of the

shrine's artifacts to maximize their experiential learning. Additionally, the system is expected to feature other features like audio guides, 360 visualizations of the museum and museum galleries, and digital archiving of records and documents.

It is the goal of the study to create a user-friendly system that is easily maintainable, easy to use and as cyber secure as possible. The system is also mobile friendly so people can use it no matter where they are.

Finally, the study focuses on providing an overall better experience for anyone who wants to interact with the Casa Real Shrine virtually. By enabling easy access to its artifacts, scripts, works and other historical documents, the VirtualShrine aims to bring the shrine closer to the people it serves.

General Objective

The main purpose of this study is to design and develop a “VirtualShrine: An Interactive Museum Website for Casa Real Shrine” that will be utilized to virtualize Casa Real Shrine. The purpose is to deliver more knowledge to the online museum user by improving users' experience, interactivity, and comprehensive knowledge.

Specific Objectives

In order to develop the Interactive Website, specific objectives will be considered:

1. To develop a website that can perform functionalities such as:
 - 1.1 Online Booking reservation;
 - 1.2 Virtual Museum tour;
 - 1.3 Gallery Collections;
 - 1.4 User assisting features.
 - 1.4.1 Plan Your Visit
 - 1.4.2 Audio Guide
2. To design and develop a Management System that can perform functionalities such as:
 - 2.1 Manage User Admins
 - 2.2 Accept and Reject Visitor booking;
 - 2.3 Upload Website Content
 - 2.3.1 Collections
 - 2.3.2 Exhibits
 - 2.3.3 Blog
 - 2.4 Generate and Print Admin Activity Report
 - 2.5 Booking confirmation through email after reservation

3. To evaluate the level of acceptability of the proposed system using the software quality standard ISO 25010 instrument in terms of the following criterions:
 - 3.1 Functionality Suitability;
 - 3.2 Performance Efficiency;
 - 3.3 Compatibility;
 - 3.4 Usability;
 - 3.5 Reliability;
 - 3.6 Security;
 - 3.7 Maintainability; and
 - 3.8 Portability

Scope and Limitations

The main concern of this study is to design and develop “VirtualShrine: An Interactive Museum Website for Casa Real Shrine”. This study will help to improve the current situation and will promote the benefits of using an Interactive Website to improve museum operations. The main advantage is its accessibility at any time since it is web-based.

The proponents will consider several system functionalities which will be incorporated into the proposed system as follows: (a) Online Booking Admission; (b) Virtual Museum Tour; (c) Email confirmation after reservation; (d) Create Educational and Informative Contents; (e) User assisting features; and (f) Report Generation.

In addition, the proposed system will offer features like a virtual gallery, number code to access the audio guide.

In designing and developing the proposed system, website requirements will also be considered. The website will be developed using Visual Studio Code. The Visual Studio Code is a software under the Visual Studio .NET. This application will be used in developing both the website and admin panel. PHP and JavaScript will be used as the main programming language in developing the system.

For the analysis of the system Agile Software Development will be used it is an iterative approach to project management and software development that helps teams deliver value to their customers faster and with fewer headaches.

While for the level of acceptability of the proposed system, it will be measured using the following criterions: (1) Functionality Suitability; (2) Performance Efficiency; (3) Compatibility; (4) Usability; (5) Reliability; (6) Security; (7) Maintainability; and (8) Portability.

Lastly, as a part of the limitation of the study, the study will only address the improvement of Casa Real Shrine in integrating a web based interactive museum website.

Other areas or matters affecting the structure and maintenance of the museum are not part of our research study.

The study will be utilized using a beta test to observe its purpose, potential changes, and any hazards towards the user. By this method the proponents will be able to come up with information that is vital to the research that could help improve the development of the system and will have great results once the final output is done.