ASIAN PEOPLE JOURNAL 2023, VOL 6(2), 136-154
e-ISSN: 2600-8971
http://dx.doi.org/10.37231/apj.2023.6.2.561
https://journal.unisza.edu.my/apj

PENERBIT
Universiti Sultan Zainal Abidin

ASIAN PEOPLE JOURNAL
Multidiciplinary Social Science Journal
APJ

POTENTIALS OF INTERACTIVE WEBSITE IN IMPROVING VISITORS' AWARENESS ON LANDSCAPE HERITAGE

Khalilah Zakariya[1*], Norhanis Diyana Nizarudin[1], Haza Hanurhaza Md Jani[1], Putri Haryati Ibrahim[1]

[1]Department of Landscape Architecture, International Islamic University Malaysia, 53100 Kuala Lumpur, Malaysia

**Corresponding Author Email: khalilah@iium.edu.my*

Received: 28 September 2023 • Accepted: 22 October 2023 • Published: 31 October 2023

Abstract

The development of interactive websites plays an increasingly important role in landscape heritage and edutourism, revolutionising how visitors interact with and learn about historical and cultural sites. However, most websites on heritage sites only have basic features, whereas the maps only show the locations of the attractions. This study focuses on developing an interactive website that incorporates interactive maps and illustrated narratives to promote the landscape heritage of Taiping, Malaysia for edutourism. The study examines how these elements work together to improve visitors' knowledge and awareness of Taiping's heritage values. Through a mixed-methods approach involving content design process, website design and user experience surveys on 354 respondents, the study evaluates the effectiveness of the interactive website on visitors' learning experiences and appreciation of heritage. Findings highlight the increased awareness of the heritage values of Taiping from the combined approach in fostering deeper connections, self-guided learning, and immersive exploration. The study's contribution lies in its insights into the potential of an integrated interactive website to reshape edutourism, creating dynamic digital platforms that enhance the synergy between modern technology, cultural heritage, and experiential learning.

Keywords*: Interactive Maps; Heritage; Landscape; Tourism; Website Design*

Cite as: Zakariya, K., Nizarudin, N. D., Md Jani, H. H., Ibrahim, P. H. (2023). Potentials of Interactive Website in Improving Visitors' Awareness on Landscape Heritage. *Asian People Journal*, *6*(2), 136-154.

INTRODUCTION

Effective interpretation strategies are pivotal in enhancing visitors' understanding and appreciation of heritage. The digitalisation of heritage has experienced a considerable shift recently, substantially impacting the tourism industry. Integrating digital and visual mapping approaches has become crucial for landscape heritage and edutourism. This hybrid strategy has the potential to augment how visitors interact with and appreciate the cultural and historical significance of landscapes, whether on-site or through exhibition displays. Technologies such as digital maps, interactive maps, virtual reality, augmented reality, interactive visualisation and digital laboratory make it possible to digitalise and visualise edutourism attractions, giving visitors a richer, more engaging experience and learning process (Jin & Wang, 2015; Sumarmi et al., 2023). Digital and visual mapping through websites and on-site displays may enhance visitors' appreciation of landscape heritage through experiential learning, allowing them to give attention to different landscape and heritage elements. Promoting heritage tourism and enriched visitor satisfaction can be achieved by offering interactive maps that let visitors explore and interact with the heritage site (Mehmood et al., 2018). The experience can also change visitors' attitudes and intent regarding the place.

An interactive website has enormous potential to close the gap between heritage, education, and tourism, given the growing digitalisation of information and the changing preferences of tech-savvy tourists. Websites can allow tourists to interact with and learn about a location's natural and cultural history. They can virtually tour the area, access in-depth information about its significance, history, and conservation efforts, and even engage in interactive activities like games or virtual tours (Hoeven, 2018).

This digital strategy improves the travel planning process and encourages visitors to have a stronger connection to the culture. Interactive websites make it easier to reach a wider audience with information about the place. These websites can provide information on the destination's background and cultural significance and highlight specific features of the attraction (Gretzel et al., 2015). These innovations make it possible to develop digital information systems that aid in recording, understanding, and preserving cultural landscapes (Yang & Han, 2020). Digital resources can digitally represent heritage places, enabling cultural heritage preservation and innovative interpretation. Therefore, this study explores how landscape heritage can be digitally mapped through an interactive website to increase appreciation and potential for edutourism.

LITERATURE REVIEW

Landscape Heritage and Edutourism

Landscape heritage, characterised by its intrinsic cultural, historical, and environmental significance, has become a pivotal focus in heritage tourism. It covers preserving both natural and man-made components of a landscape, such as landmarks, natural features, historic locations, long-established settlements, and cultural objects (Zhang & Li, 2020; Albert, 2020). Edutourism denotes a contemporary approach wherein tourists seek immersive and informative experiences different from their day-to-day activities. It describes a type of travel that combines educational and cultural activities. It entails travelling to places with the primary goal of learning about the area's history, culture, and environment (Buckley, 2012). The combination of landscape heritage and edutourism presents a compelling tourism product, as it allows visitors to engage with and appreciates the natural and cultural narratives woven into a region's physical environment.

Over time, the idea of landscape heritage has changed, moving away from a pure focus on architectural legacy and emphasising the significance of daily life and cultural practices in forming landscapes (Zhang & Li, 2020). Maintaining cultural identity, increasing tourism, and supporting sustainable development depends on identifying and preserving landscape heritage (Misni & Basir, 2022). By intertwining educational components with the unique settings of the destination, landscape heritage and edutourism hold the potential to bridge the gap between conservation, education, and sustainable tourism. Tourists can discover the historical background, customs, and environmental preservation activities related to a particular area by visiting landscape heritage sites (Albert, 2020; Yang & Han, 2020). Edutourism encourages cultural understanding and appreciation and helps preserve and sustainably manage the landscape's cultural assets (Buckley, 2012).

Several crucial elements play a role in edutourism and help tourists have a fulfilling and enjoyable experience. Edutourism can encourage learning, cross-cultural dialogue, and sustainable growth experience through these components: educational content, interpretation and communication, authentic experiences, sustainability and conservation, community involvement, and evaluation and feedback (Hall & Lew, 1999). Interactive learning experience allows visitors to actively connect with local history, culture, and natural surroundings. It offers a chance for hands-on activities and practical experiences that visitors can use to learn directly in the field (Insani et al., 2022). Edutourism can be enhanced by interactive learning through creating an engaging and effective learning environment that encourages participation, deepens comprehension, and improves the overall learning experience. In-depth awareness and enjoyment of the place are typically fostered by skilled guides and immersion in activities that aid this process. Consequently, edutourism delivers an enriching experience that goes beyond the typical sightseeing as it incorporates learning as part of the experience.

Interactive Maps

Interactive maps are now an indispensable tool in the tourism industry, providing several benefits that enhance visitor experiences. Some interactive maps incorporate geographic information systems (GIS), global positioning systems (GPS), and real-time data to enable users to explore destinations and plan their itineraries. They offer dynamic and personalised navigation, which can be crucial for enhancing the tourism experience and providing information to visitors. The maps provide tourists with a visual representation of tourist destinations, monuments, and points of interest, which helps them better comprehend the site (Mohamed et al., 2021). With this graphic representation, tourists may choose where and how to maximise their journey time (Mahajan et al., 2016). Furthermore, interactive maps usually include layers of information, such as historical monuments, regional attractions, dining options, and cultural insights, allowing for a better understanding of the destination's unique characteristics.

Using interactive maps can improve the learning opportunities for tourists participating in edutourism. By integrating spatial data with educational information, these maps provide a platform for visitors to learn about the historical narratives of a destination. Visitors can explore and engage with the destination in exciting and interesting ways by using these maps to visually represent the region's cultural and natural landmarks (Ballantyne et al., 2011). Maps make it possible for tourists to have an experience that is more gratifying and informative when they have more awareness about the history and background of the place. Interactive maps can also incorporate multimedia elements like images, movies, and audio files to reach a wider audience virtually (Perera & Chandra, 2010). Tourists can access the interactive maps and join virtual tours before visiting the destination or as a virtual visit. This approach to self-directed learning encourages independence and critical thinking while enticing visitors to actively seek knowledge and draw connections between various aspects of the heritage.

Another alternative to GIS-based maps is illustrated maps. Illustrated maps' aesthetics and visual appeal make them quite popular in tourism. These maps offer a visual picture of a location by graphically portraying its distinctive characteristics, landmarks, and attractions (Rossetto, 2012). Illustrations on maps can visually capture a location's essence and character by highlighting its significant cultural, historical, and natural features. The illustrations might draw attention to essential attractions like famous structures, landmarks, or natural landscapes, inspiring tourists with a sense of surprise and expectation. Tourists can more easily understand the layout of the destination from the map's visual depiction of the information. Illustrated tourist maps can also express local identities by merging elements of artistic visual expression and map design. Airikka and Masoodian (2019) found several components that an illustrated tourist map should consider: cartographic element, built environment, icon, colour, pattern or texture, visual style, illustrations, and overall design theme. The maps can enhance the travel experience and leave a lasting image of the destination by fusing practical information with imaginative design to spark curiosity and promote a more engaging experience.

METHODOLOGY

The case study for this project is Taiping, a township in the state of Perak, Malaysia. Taiping has a significant history that has grown since the 18th century when tin mining, ore exports and trading began (Lai et al., 2013). The town is well renowned for its distinctive features, especially its shophouse buildings, which are historically and architecturally significant because they are connected to Taiping's early growth as a former tin mining town (Azmi et al., 2017). When the tin mining industry ended, most of the former mining reclamation land had been developed into housing areas and lake garden. Taiping was chosen as a case study because of its urban and landscape heritage significance. First, the Taiping Municipal Council recorded at least 33 ‘firsts’ of Malaysia in Taiping, such as the first museum, the first railway station and the first market, which dated back to the early 1800s (Yeoh, 2014). Second, Taiping Lake Garden is home to several trees, such as the Rain Trees (*Samanea saman*), that are more than 130 years of age (Wan Ali @ Yaacob et al., 2016). The landscape heritage of Taiping has shaped the history of Taiping from a former mining site to a thriving town with buildings and shophouses and a public park with outstanding natural features that came from reclaimed land.

This project was conducted by four lecturers and 22 students from the landscape architecture programme. The development of the interactive website for Taiping was one of the significant outputs of the whole project, aside from organising an exhibition for visitors to experience by showcasing the interactive website, virtual reality, augmented reality, video documentaries, and physical display panels. The project adopted the Ecological Planning Model (Steiner, 2012) as the larger framework that guides the process from framing the project, inventory, and analysis to public participation. For edutourism, the adaptation of this model enabled the researchers to ensure that the educational component of Taiping for the aspect of landscape heritage is well integrated into the interactive maps and website design. In ensuring the project remains relevant to current technological and digitalisation needs, it also integrates the *CompoStudio Model* (Zakariya & Nizarudin, 2021), an interactive method for immersive project-based learning experiences in built environment studios. Eight phases were employed throughout the project as groundwork towards developing the interactive website, comprising a multi-methods approach for data collection (refer to Figure 1 and Table 1).

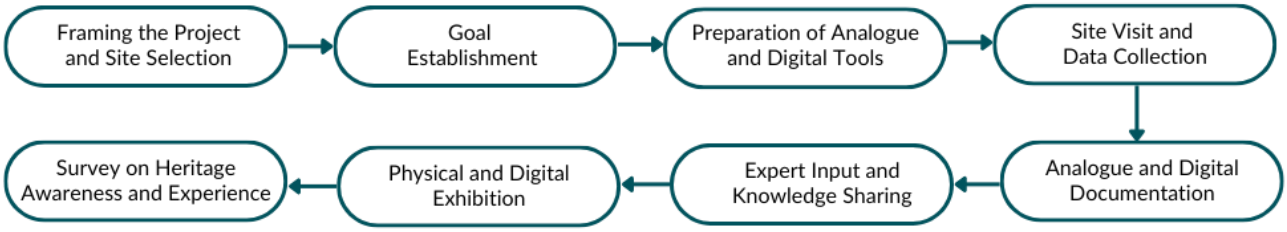

Figure 1: Flowchart of hybrid and multi-method phases for landscape heritage study

Table 1: Descriptions of hybrid and multi-method phases for landscape heritage study

Phase	Description
1. Framing the project and site selection	• Taiping, Perak as a heritage site • Identification of built, cultural and natural heritage • Aligning with UNESCO's Charter for the Preservation of Digital Heritage
2. Goal establishment	• To map Taiping's heritage assets using digital and visual mapping • To develop an interactive website to document and disseminate the findings to the public • To transfer knowledge to the public through digital and physical exhibition
3. Preparation of analogue and digital tools	• Analogue: field mapping, community interviews, observation and survey checklist • Digital: collaborative online spreadsheet and Canva, digital apps, digital photography, videography, drone imaging
4. Site visit and data collection	• Mapping heritage typology: built heritage of Taiping Town, natural heritage of Taman Tasik Taiping, natural heritage of Kuala Sepetang • Stakeholder engagements: Majlis Perbandaran Taiping, Pejabat Hutan Daerah Larut dan Matang, Galeri Perbandaran Taiping, residents of Taiping, visitors of Taman Tasik Taiping • On-site discussions: progress mapping and data processing
5. Analogue and digital documentation	• Analogue documentation: visual timeline, sketches and illustrations, visual analysis, mapping analysis • Digital documentation: digital mapping, digital illustration, video documentaries, timelapse animation of historical processes, digital drawings

		for virtual reality, digital drawings for holograms, digital drawings for augmented reality
6.	Expert input and knowledge sharing	• Conducting online webinars on the topic of natural and cultural heritage conservation, and digital heritage
7.	Physical and digital exhibition	• Organising a physical exhibition called THE:DAWN, which stands for "Taiping Heritage Exploration: Digitalisation and Appreciation of Wondrous Narratives" • Exhibition materials such as maps, models, posters, sketches, wall panels, images, interactive websites, video shows, holograms, augmented reality and virtual reality experiences, and guided tours for the visitors • Publishing the exhibition materials on a website for an online interactive map experience: https://www.heritagetaiping.com/
8.	Feedback survey on heritage awareness and experience	• Conducted pre-exhibition and post-exhibition visit surveys to the visitors to evaluate the level of experience and awareness

The project team and a web developer developed the website under the domain name https://www.heritagetaiping.com/. The website features "THE: DAWN", the name given for the project that means "Taiping Heritage Exploration: Digitalisation and Appreciation of Wondrous Narratives". The framework for the website design focuses on four main interactive maps that highlight the landscape heritage of Taiping, supported by nearby natural heritage attractions in the same district and general information about the project's background (refer to Figure 2). Visitors can view, scroll, read, and click the textual narratives, graphic illustrations and map icons that explain the built, cultural and natural heritage of Taiping. Links to external resources such as video documentaries, e-books, sketchbooks and virtual reality videos complement the website experience.

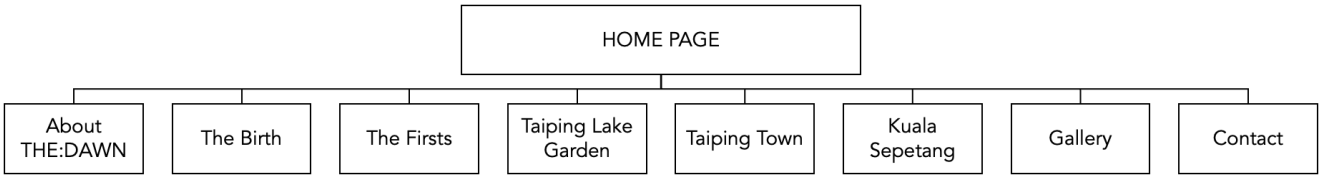

Figure 2: Website structure

The interactive website was put on display for visitors to experience during an exhibition at the university that was open for one week and was visited by 1,463 visitors from the university, such as students and staff, government agencies such as representatives from the Malaysian National Commission for UNESCO and local municipals, and the public. 354 respondents answered the pre-exhibition and post-exhibition surveys to measure

the overall visitor experience, which also included how the interactive features, such as the website, had increased their knowledge about the landscape heritage of Taiping. The limitation of this study is that the survey was done for the overall exhibition experience. Visitors could experience the interactive website and other displays, virtual reality and videos, which have been embedded into the website for online experience.

RESULT AND DISCUSSION

Website Design and Interface

The "Home page" shows eight tabs at the top bar (refer to Figure 3) and clickable shortcuts at the bottom of the page for ease of navigation (refer to Figure 4).

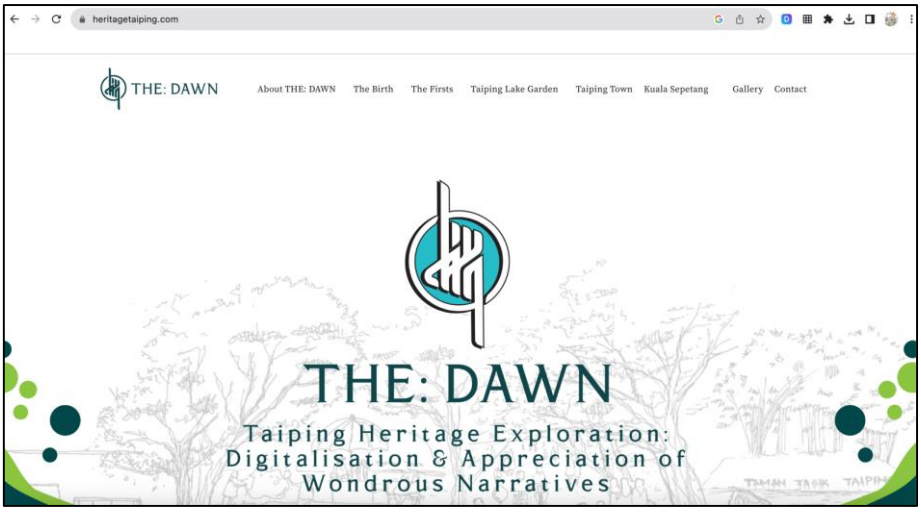

Figure 3: Website home page

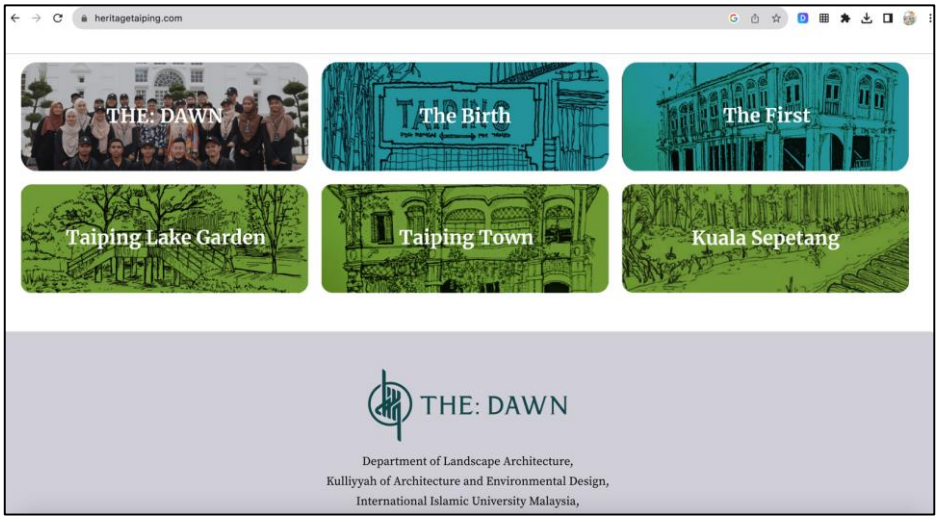

Figure 4: Website short cuts

The "About THE:DAWN" page explains the background of the project, aim and objectives, the project team and acknowledgement to the funder and collaborators (refer to Figure 5).

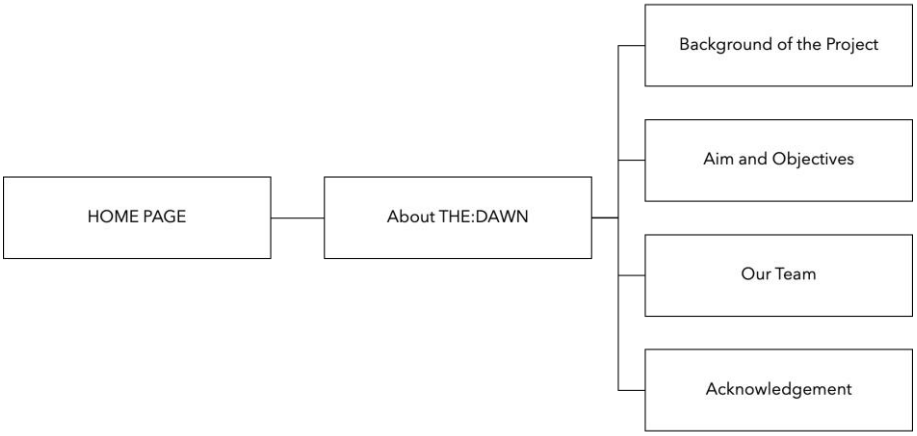

Figure 5: Structure for the "About THE:DAWN" page

"The Birth" page shows the historical timeline of Taiping from 1844 to 1937 using visuals and short narratives (refer to Figure 6 and 7).

Figure 6: Structure for "The Birth" page

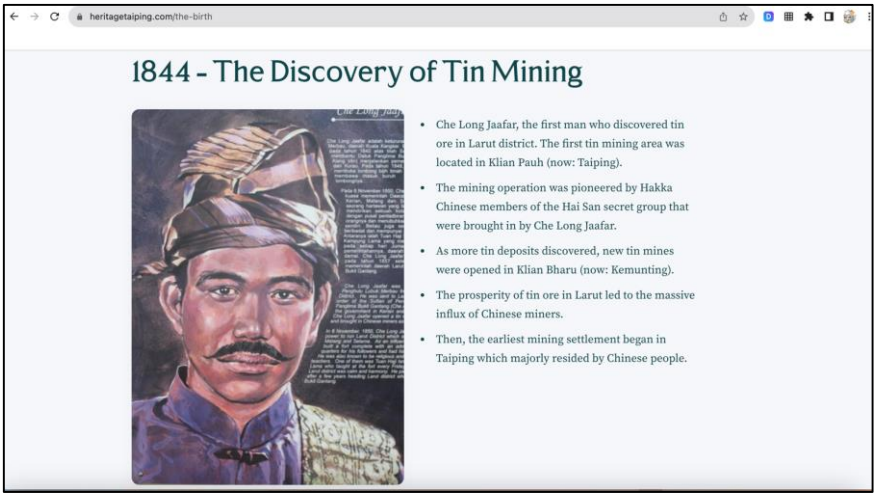

Figure 7: Visual and textual narrative to explain the history of Taiping

"The Firsts" page shows an interactive map of 33 "firsts" in Taiping (refer to Figures 8 and 9). The icons on the map are clickable. Once clicked, an image and information about the place will appear (refer to Figure 10).

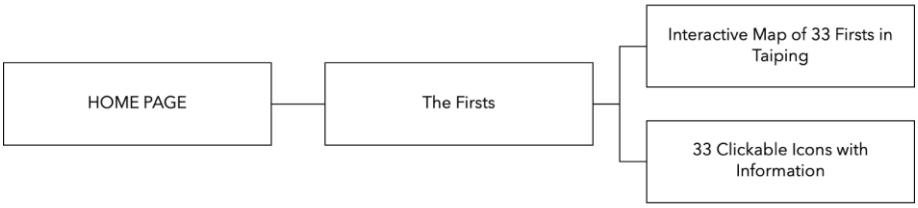

Figure 8: Structure for "The Firsts" page

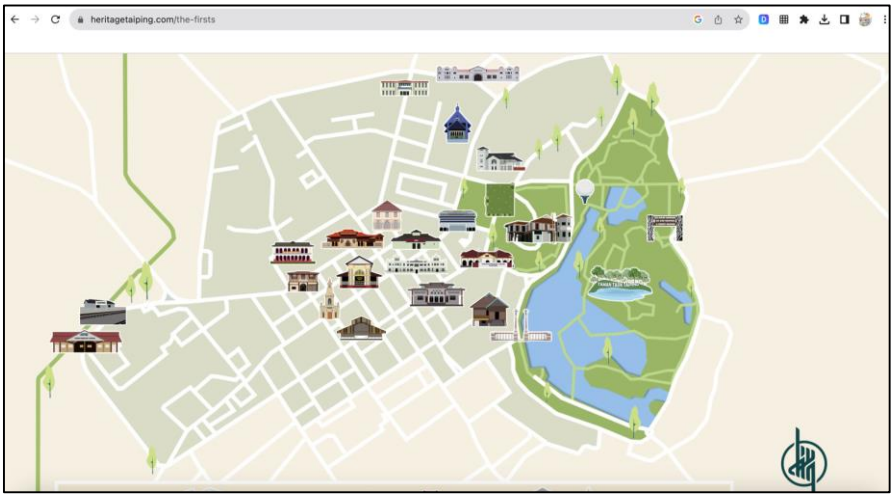

Figure 9: Illustrated maps with clickable icons of the "Firsts" in Taiping

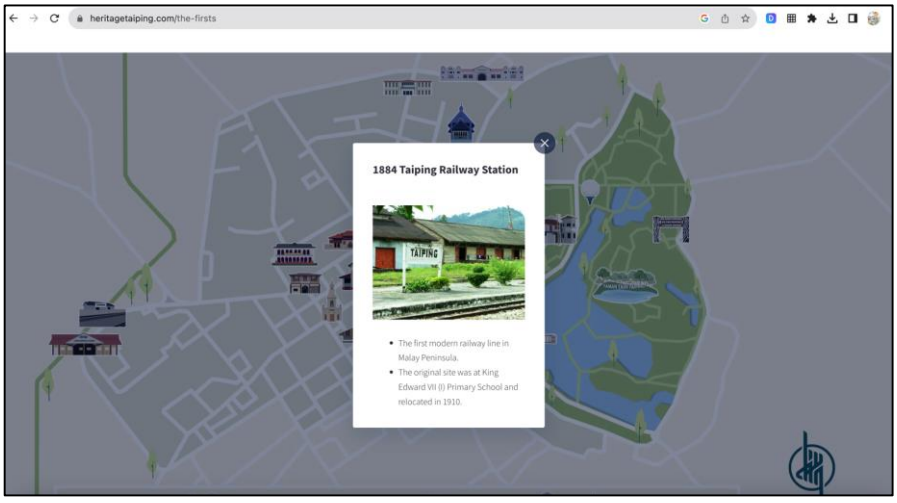

Figure 10: Pop up information for each clickable icon

The "Taiping Lake Garden" page shows five illustrations on the reclamation of the tin mining land and a map that shows the attractions at Taiping Lake Garden. The icons on the map are clickable, with images and

information appearing (refer to Figures 11 to 13). This page also shows a map of Taiping heritage trees, accompanied by ten clickable illustrations with images and information about the heritage trees (refer to Figures 14 and 15).

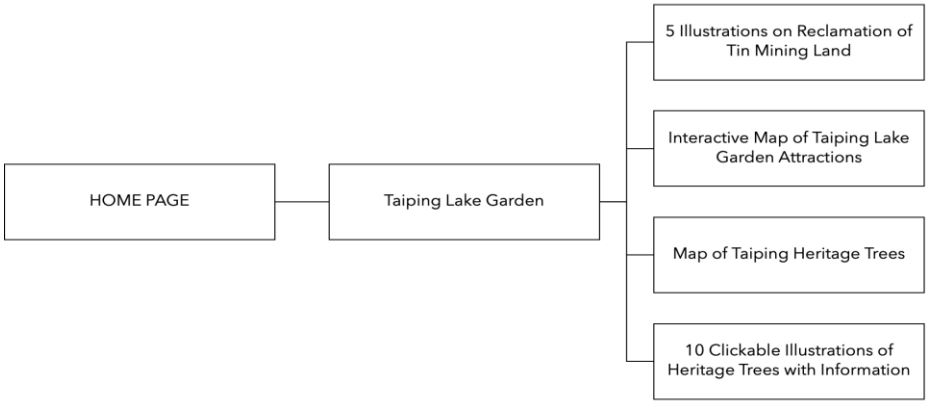

Figure 11: Structure for "Taiping Lake Garden" page

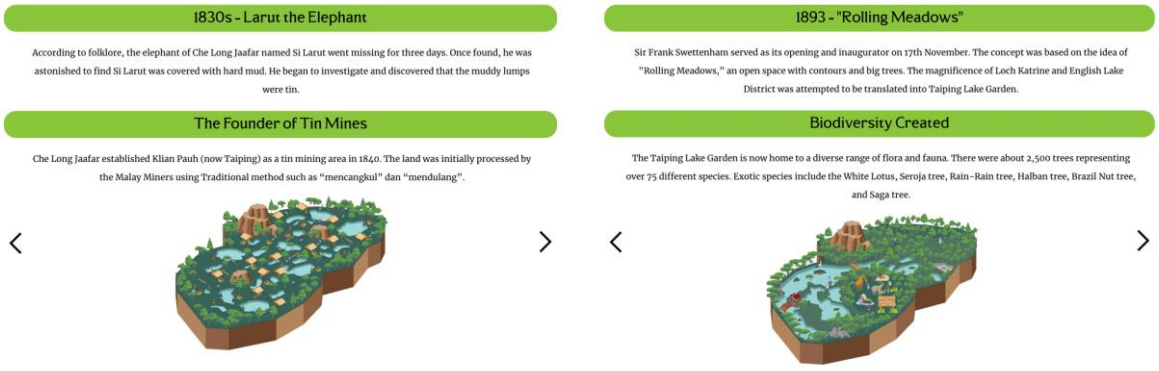

Figure 12: Slide illustrations of mining land reclamation

Figure 13: Attractions at Taiping Lake Garden

Figure 14: Attractions at Taiping Lake Garden

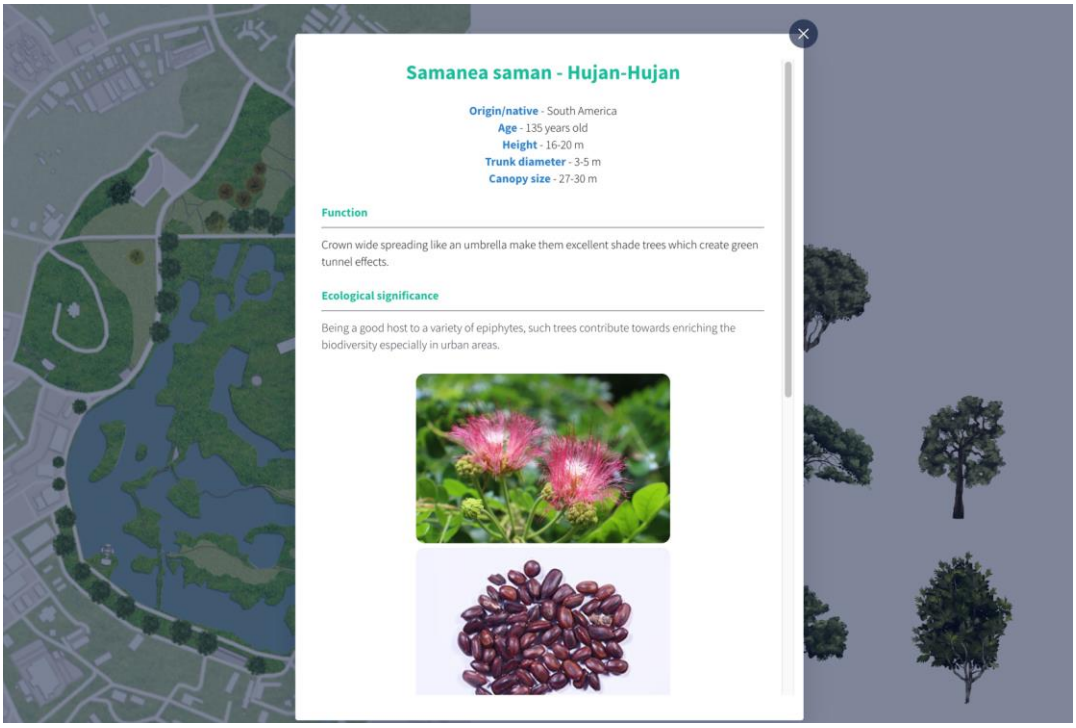

Figure 15: Clickable illustrations of heritage trees with information

The “Taiping Town” page shows six illustrations on the Taiping town development and a location map of 19 heritage architectural styles in Taiping (refer to Figures 16 and 17). Each building image is clickable, where images and information about the building and architectural styles will appear (refer to Figures 18 and 19).

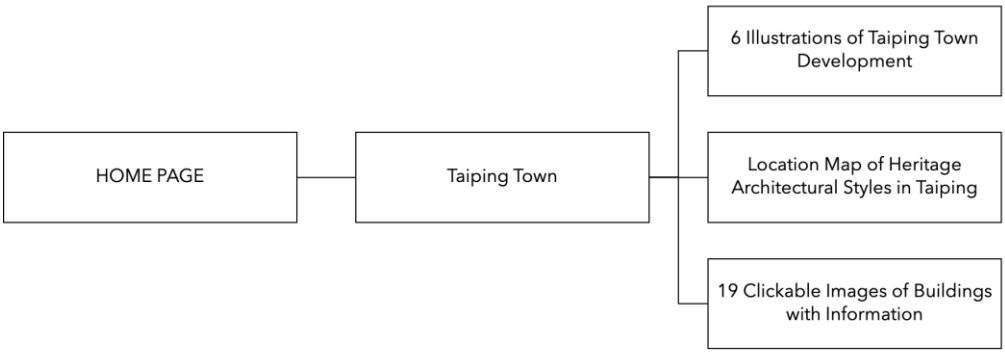

Figure 16: Structure for "Taiping Town" page

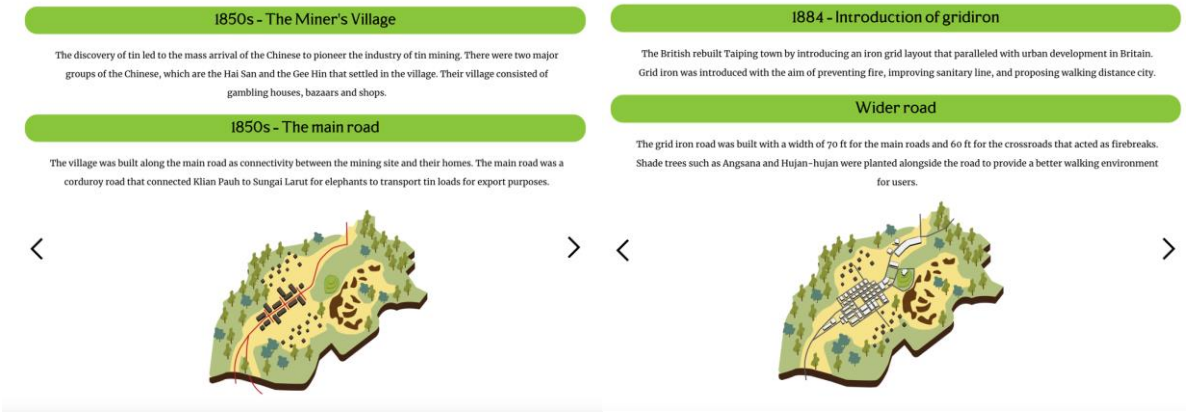

Figure 17: Slide illustrations of Taiping town development

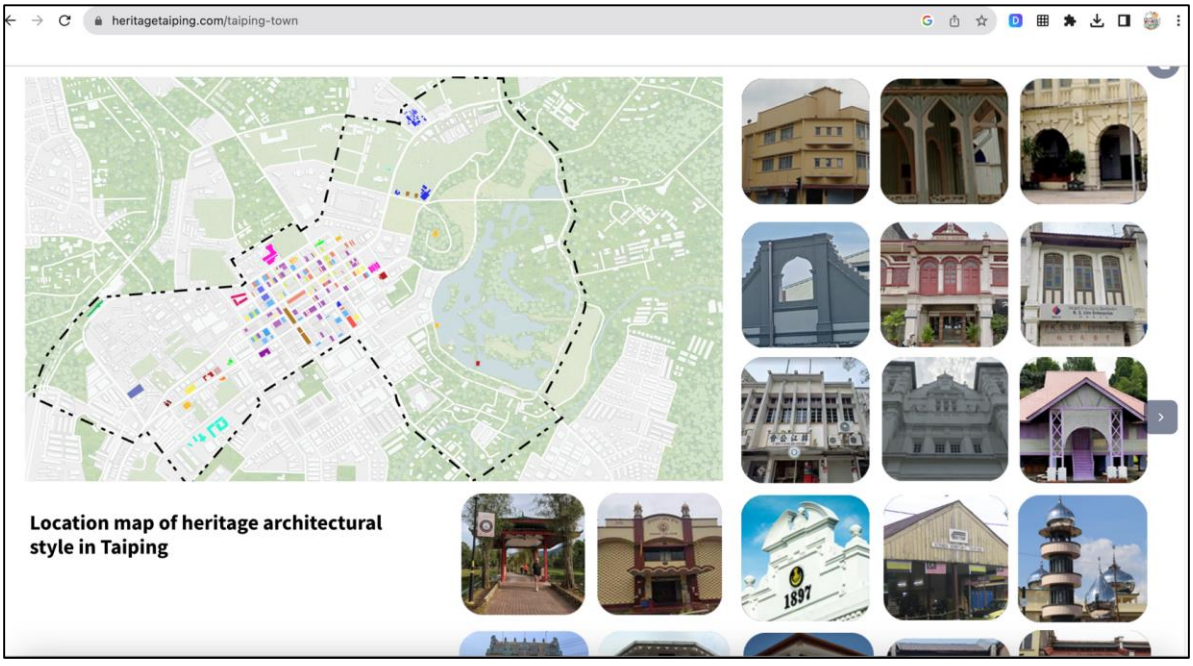

Figure 18: Clickable photos of heritage architectural styles in Taiping

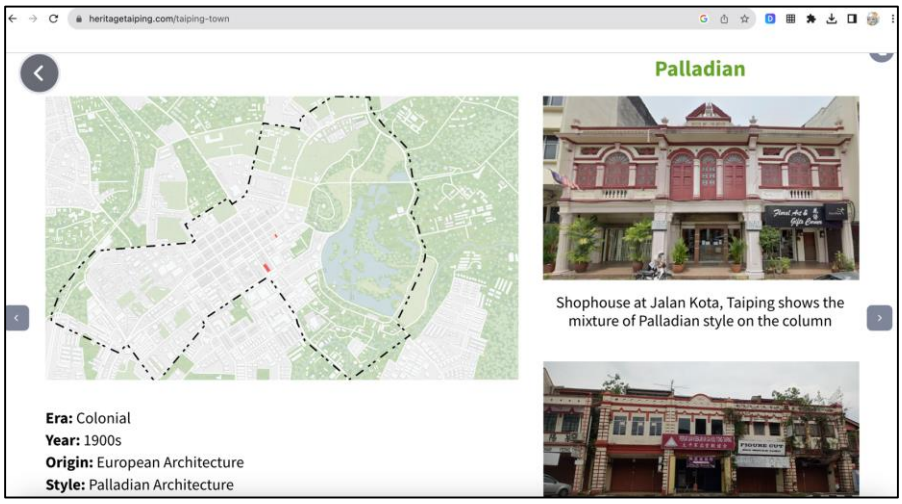

Figure 19: Pop up information about the architectural style

Kuala Sepetang is a natural site within the districts of Larut and Matang. It is located 15 kilometres from Taiping. The site is rich with mangroves and a fishing village, where the local community produces charcoal for their livelihood. “Kuala Sepetang” page displays information and images about Mangroves, Charcoal Factories and Fishermen's Villages (refer to Figure 20 and 21).

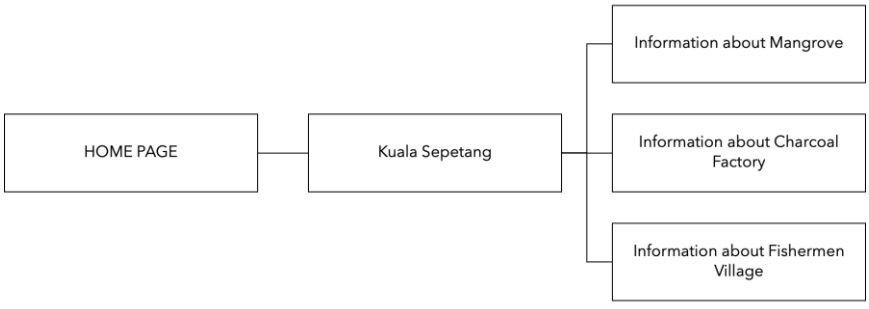

Figure 20: Structure for “Kuala Sepetang” page

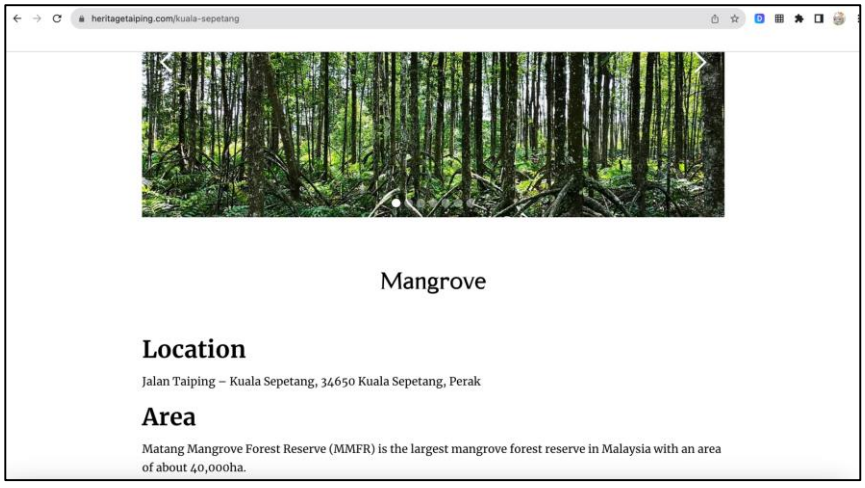

Figure 21: Scrolled down information with images and information

The “Gallery” page links other supporting videos, e-books and sketchbooks (refer to Figures 22 and 23).

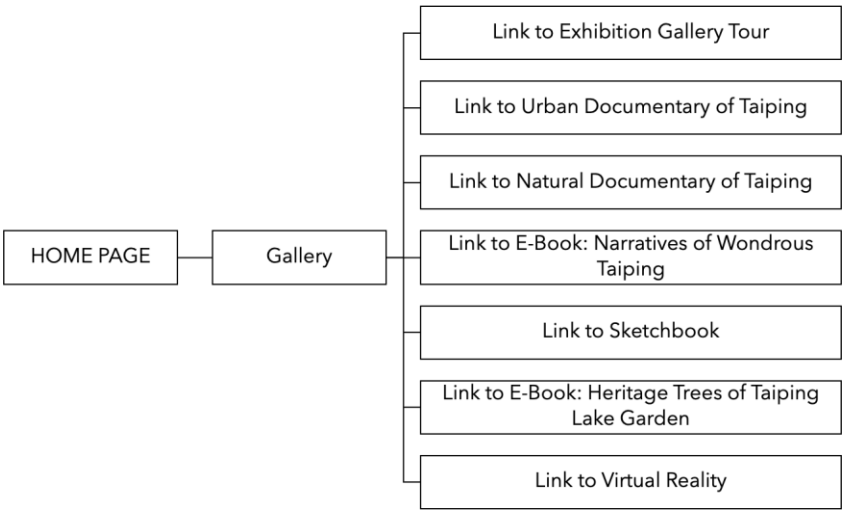

Figure 22: Structure for “Gallery” page

Figure 23: Links to other supporting platforms such as e-books, video documentaries and virtual reality video

Visitor Experience

During the exhibition, students guided the visitors using the website and demonstrated how to navigate the pages (Figure 24). The interactive website was displayed using a touchscreen monitor for visitors to interact with the maps. The simplicity of the website structure and layout was found to be easy for the visitors to use (refer to Figure 25). Based on our observation, visitors could interact with the website even without the students' guidance. Visitors from the government agencies expressed that they found the website to be exciting and easy to use and was an excellent platform to document the heritage assets of a place. Students, staff, and public visitors also expressed their fascination with the clickable icons and were intrigued by Taiping's rich heritage.

Figure 24: Interactive website display on touch-screen monitor

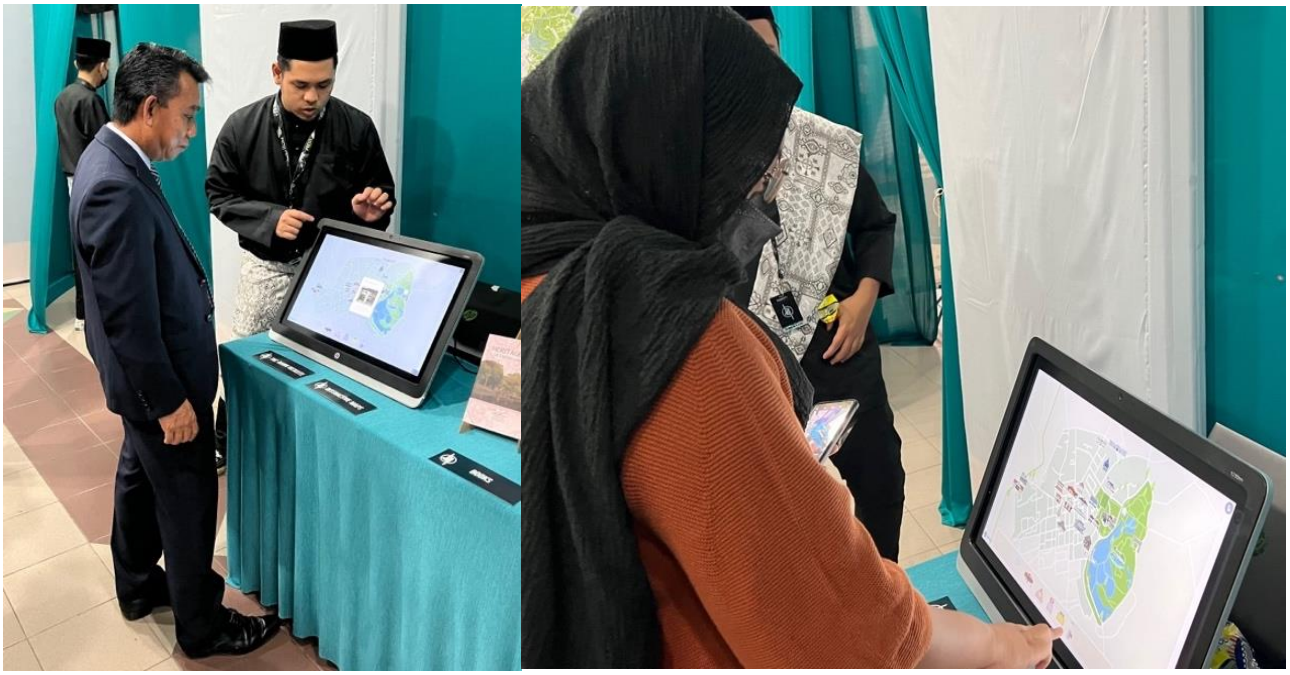

Figure 25: Visitors interacting with the website and maps

Based on the survey results, 49% of the visitors have visited Taiping before, while only 10% have visited an exhibition about Taiping. Their awareness about the heritage values of Taiping was measured before and after their visit to the exhibition, which included the guided tours, seeing the displays, experiencing the interactive websites, virtual reality, and video documentaries, all of which are the materials that have also been embedded into the website. Overall, their awareness of the heritage values of Taiping has increased after visiting the exhibition, as shown in Figure 26.

Figure 26: Visitors' awareness on the heritage values of Taiping

CONCLUSION

The study found that the interactive maps in the website design have improved visitors' awareness of Taiping's heritage values. The interactive website in this study signified that it could be an effective tool for edutourism by integrating technology to discover and learn about landscape heritage. The illustrated and interactive maps enhance the interpretation of landscape heritage by providing a visually appealing interface and integrating historical narratives, natural landscape heritage and urban history. Visitors can learn about Taiping through various dimensions, such as its historical timeline, significant built and architectural heritage, and heritage trees. This finding further emphasises how crucial interactive maps are to edutourism. Interactive maps benefit edutourism, which aims to give tourists immersive and informative experiences before, during or even after their visit. They can engage in a self-guided learning experience. Interactive maps accommodate different learning methods and preferences by allowing visitors to obtain in-depth information about Taiping's heritage values at their leisure. The approach fits with the educational component of edutourism and improves tourists' comprehension of the destination's historical, cultural, and environmental values. Additionally, interactive maps can allow visitors to plan their visit by focusing on particular areas of interest and connecting with the heritage values that most appeal to them. The website could benefit more if it had another language option for Bahasa Malaysia to meet the needs of Malaysian visitors.

The visitor experience is augmented in line with the changing expectations of modern-day tourists by incorporating technology and interactive maps into the website design, which they could access from a computer or smartphone. In addition to enabling more informed and active tourism, this technology-driven strategy also supports preserving heritage values by raising people's knowledge and awareness. Ultimately, developing the

interactive maps and documenting the landscape heritage produces an encouraging result that benefits visitors in edutourism and Taiping's built, cultural and natural heritage. The website can also become a reference point for learning for students, researchers and the public. Other heritage towns and landscape heritage assets have significant potential to be documented and developed into interactive websites through illustrations and textual narratives. These maps can be placed at visitor centres, galleries, and museums to allow visitors at other attractions to learn about the heritage assets that the destination has. By integrating creativity and technology, interactive websites can provide a more individualised and immersive learning experience. The websites may also be customised for different tourist segments, such as children, youth, and adults, and offered in different languages to reach a broader tourist segment.

Landscape heritage is rich with tangible and intangible components. Applying creative design strategies, such as illustrated maps with embedded animations or videos, could further capture visitors' attention and heighten their experience. Illustrations can highlight the unique identities of the destination, where tourists can experience the site through storytelling. The slide graphics provided on the website of this study enabled visitors to visually see the changes that Taiping town has gone through over the years. These graphics are also presented as a video documentary linked to the website for visitors to learn about historical narratives through simple animation and audio. Moving forward, the development of interactive websites can foster collaborations with local artists and cultural experts to enrich the educational content.

In conclusion, the development of an interactive website in this study has shown a practical and transformative approach to educating visitors about the landscape heritage of Taiping. The study demonstrated the potential of integrating illustrated maps and interactive websites as a digital platform to improve visitors' awareness and connection with the heritage values of Taiping. As technology develops, incorporating digital maps, visual maps, and interactive design spurs an engaging and inclusive future for edutourism. Ultimately, this study emphasises the crucial role of interactive websites and illustrated maps in transforming how tourists connect with landscapes, cultures, and histories and opening the door for more knowledgeable and enriching exploration.

ACKNOWLEDGEMENT

This project was funded by the Malaysian National Commission for UNESCO (MNCU). The authors would also like to thank the 3rd Year Landscape Architecture Students (Session 2021/2022) for their contributions in successfully organising the project, as well as the Department of Landscape Architecture, Kulliyyah of Architecture and Environmental Design, and International Islamic University Malaysia for their support throughout the project and exhibition. Our appreciation goes to Majlis Perbandaran Taiping, Galeri Perbandaran Taiping, St. George School, and visitors and residents of Bandar Taiping and Taman Tasik Taiping for assisting our team in collecting on-site data. Thanks to Rimbun Ceri and Team Omma Cadin for the generous sponsorship.

REFERENCES

Albert, K. (2020). Introducing historical landscape in the cultural heritage conservation through the example of the Tokaj wine region in Hungary. *Auc Geographica*, *55*(1), 112-122. https://doi.org/10.14712/23361980.2020.8

Airikka, M., & Masoodian, M. (2019). *A Survey of the Visual Design of Cartographic and other Elements of Illustrated Tourist Maps*. Paper presented at the 23rd International Conference in Information Visualization - Part II, IV-2 2019. Retrieved from https://aaltodoc.aalto.fi/handle/123456789/41026

Azmi, N. F., Ali, A. S., Zaini, S. M., Harumain, Y. A. S., & Abdullah, M. (2017). Character-defining elements of shophouses buildings in Taiping, Perak. *Journal of Design and Built Environment, Special Issue,* 139-149. https://doi.org/10.22452/jdbe.sp2017no1.12

Ballantyne, R., Packer, J., & Falk, J. H. (2011). Visitors' learning for environmental sustainability: Testing short- and long-term impacts of wildlife tourism experiences using structural equation modelling. *Tourism Management*, *32*(6), 1243-1252. https://doi.org/10.1016/j.tourman.2010.11.003

Buckley, R. (2012). Sustainable tourism: Research and reality. *Annals of Tourism Research*, *39*(2), 528-546. https://doi.org/10.1016/j.annals.2012.02.003

Gretzel, U., Sigala, M., Xiang, Z., & Koo, C. (2015). Smart tourism: Foundations and developments. *Electronic Markets*, *25*(3), 179-188. https://doi.org/10.1007/s12525-015-0196-8

Hall, C. D. & Lew, A. A. (1999). Sustainable tourism: A geographical perspective. *Choice Reviews Online*, *36*(05), 36-2893-36-2893. https://doi.org/10.5860/choice.36-2893

Hoeven, A. V. D. (2018). Valuing urban heritage through participatory heritage websites: Citizen perceptions of historic urban landscapes. *Space and Culture*, *23*(2), 129-148. https://doi.org/10.1177/1206331218797038

Insani, N., Narmaditya, B., Habibi, M., Majid, Z., & A'rachman, F. (2022). Mobile GIS application for supporting edutourism at UNESCO Global Geopark Batur Bali, Indonesia. *IOP Conference Series Earth and Environmental Science*, *1039*(1). https://doi.org/10.1088/1755-1315/1039/1/012043

Jin, X. & Wang, J. (2015). Research on the construction of the heritage corridor dynamic tour system: The grand canal (Hangzhou section) as an example. *WIT Transactions on the Built Environment*, *168*, 817-829. https://doi.org/10.2495/sd150722

Lai, L. Y., Said, I., & Kubota, A. (2013). The roles of cultural spaces in Malaysia's historic towns: The case of Kuala Dungun and Taiping. *Procedia - Social and Behavioral Sciences*, *85*, 602–625. https://doi.org/10.1016/j.sbspro.2013.08.389

Mahajan, K. B., Patil, A. J., Attarde, R., Gupta, R. H., & Pawar, B. V. (2016). *A design and development of prototype web based tourism information system (WBTIS) for the Maharashtra and Goa States of India*. Paper presented at the 2016 International Conference on Computer Engineering and Information Systems. https://doi.org/10.2991/ceis-16.2016.103

Mehmood, S., Liang, C., & Gu, D. (2018). Heritage image and attitudes toward a heritage site: Do they really mediate the relationship between user-generated content and travel intentions toward a heritage site?. *Sustainability*, *10*(12), 4403. https://doi.org/10.3390/su10124403

Misni, A. & Basir, A. K. (2022). Sustainable spatial settings of Kuala Kubu Bharu. *Planning Malaysia*, *20*(4), 240-254. https://doi.org/10.21837/pm.v20i23.1164

Mohamed, A. R., Gawad, Z. A. E., & Voda, M. (2021). Using web GIS for marketing historical destination Cairo, Egypt. *Geographia Technica*, *16*(2), 193-204. https://doi.org/10.21163/gt_2021.162.16

Perera, K., & Chandra, D. (2010). *How Museums in the Digital Age Become More Dynamic*. Paper presented at the International Conference on Qualitative and Quantitative Methods in Libraries (QQML2010).

Rossetto, T. (2012). Embodying the map: Tourism practices in Berlin. *Tourist Studies*, *12*(1), 28-51. https://doi.org/10.1177/1468797612444192

Steiner, F. (2012). *The living landscape: An ecological approach to landscape planning*. New York: McGraw-Hill.

Sumarmi, S., Putra, A. K., & Tanjung, A. (2023). Developing digital natural laboratory based on edutourism for environmental geography. *TEM Journal*, *12*(1), 224–232. https://doi.org/10.18421/TEM121-29

Wan Ali @ Yaacob, W.N.A., Hassan, N., Hassan, K., & Mat Nayan, N. (2016). The morphology of heritage trees in colonial town: Taiping Lake Garden, Perak, Malaysia. *Procedia – Social and Behavioral Sciences. 222*(2016), 621-630. doi: 10.1016/j.sbspro.2016.05.219

Yang, C. & Han, F. (2020). A digital information system for cultural landscapes: The case of Slender West Lake scenic area in Yangzhou, China. *Built Heritage*, *4*(1). https://doi.org/10.1186/s43238-020-00004-8

Yeoh, D. (2014, August 29). Historical town boasts of many firsts. *New Straits Times*. Retrieved from https://www.nst.com.my/news/2015/09/historical-town-boasts-many-firsts

Zakariya, K. & Nizarudin, N.D. (2021). *COMPOSTUDIO model: An interactive method for immersive project-based learning experience in the built environment studios (poster). Copyright.* Gombak: IIUM.

Zhang, D. & Li, H. (2020). *Study on the identification and protection of the historical landscape of traditional settlements of the De'ang nationality based on the theory of rural landscape heritage.* Paper presented at the 2nd International Conference on Architecture: Heritage, Traditions and Innovations (AHTI 2020). https://doi.org/10.2991/assehr.k.200923.040