



Article

Preserving and Promoting the Values of Historical Relics in the Resistance War in Vietnam: Issues and Solutions

Phuong Thi Nguyen 

Ho Chi Minh City University of Technology and Education, Vietnam

Correspondence: ntpuong@hcmute.edu.vn

Abstract

Vietnam's historical relics from the Resistance War era, including those from the Indochina and Vietnam Wars, serve not only as cultural and historical artifacts but also play significant roles in socio-economic development through educational and tourist engagement. This research investigates how preservation efforts of these relics can be optimized to harness their full potential for sustainable socio-economic development. It specifically examines the application and integration of advanced technologies like HBIM, VR, and AR in preservation and promotion efforts.

This research employs a mixed-methods approach to gather data, which includes document analysis, case studies, and direct observations. Techniques such as interviews with site managers, visitor feedback analysis, and on-site technological assessments were utilized to compile comprehensive insights into the current state and effectiveness of preservation practices.

It concludes that while substantial efforts have been made to preserve and promote Vietnam's historical relics, significant gaps still need to be discovered, particularly in the adoption of advanced technologies and community engagement. The research suggests actionable strategies to enhance the educational and economic value of these relics, emphasizing the need for greater technological integration and public participation in heritage conservation processes.

Keywords: Preserving and promoting, HBIM, Historical relics, Resistance war, Socio-economic development, Sustainability.

Suggested citation:

Nguyen, P.T. (2025). Preserving and Promoting the Values of Historical Relics in the Resistance War in Vietnam: Issues and Solutions. *International Journal on Culture, History, and Religion*, 7(SI2), 983-1009. <https://doi.org/10.63931/ijchr.v7iSI2.476>



Introduction

Vietnam, a country with a civilization spanning over several thousand years, has been the site of numerous conflicts, particularly the Indochina War (1946-1954) and the Vietnam War (1954-1975) (Do & Ngo, 2023). These wars have left behind a rich tapestry of historical relics that embody the resilience, culture, and history of the Vietnamese people. The preservation and promotion of these relics are crucial for honoring the past and leveraging them for sustainable socio-economic development. Despite the recognized importance of these relics and commendable efforts by various levels of government and communities, there remains a significant challenge in harnessing the full potential of these historical assets (Communist Party of Vietnam, 2021). This challenge is amplified by the underutilization of advanced technologies such as Historic Building Information Modelling (HBIM), Virtual Reality (VR), and Augmented Reality (AR) in their preservation and promotion.

This paper aims to illuminate the preservation efforts of Vietnam's historical relics from the Resistance War era and explore how these efforts contribute to the country's socio-economic development. It seeks to identify the gaps in the application of technology in these efforts and propose strategies for enhancing these relics' educational and economic value.

The objectives of this research are as follows:

1. To evaluate the existing policies and practices regarding preserving and promoting historical relics from the Indochina War and Vietnam War in Vietnam, focusing on both national and provincial levels.
2. This study analyzes the role of historical resistance relics in educating the younger generation of Vietnam and assesses their potential for contributing to sustainable socio-economic development.
3. This study aims to investigate the application of advanced technologies such as HBIM, VR, and AR in preserving and promoting these relics and identify barriers to their adoption.
4. To propose actionable strategies for improving these historical relics' preservation efforts and promotion, emphasizing technological integration, education, and socio-economic development.

Through achieving these objectives, this research endeavors to contribute to the broader field of cultural heritage preservation, offering insights that can inform policy, practice, and future research in Vietnam and similar contexts globally.

Theoretical Framework

The theoretical framework of this study is anchored in the concepts of cultural values and historical artifacts, as well as the nuanced distinctions between preservation and conservation. This framework provides the basis for understanding the significance of historical relics in the context of Vietnam's Resistance War and the broader implications of their preservation or lack thereof.

Cultural values: Cultural values represent the ideals and norms that society holds dear, guiding behavior and influencing the social fabric of communities. These values are often reflected in and transmitted through cultural artifacts and historical relics, as tangible links to the past. According to Edelheim et al. (2022), cultural values are deeply embedded in tourism practices, significantly shaping collective identity through exposure to cultures different from one's own. This exposure, they argue, has the potential to foster personal growth and insights, illustrating how cultural values are explicit or implicit, distinctive of a group of people, and enduring, thereby highlighting their role in shaping collective identity.

Historical artifacts: The study of historical artifacts is framed by several pivotal theories emphasizing their significance beyond mere objects. A central tenet is the notion of intentionality; artifacts are primarily defined by the intentions of their creators rather than their material qualities or current uses. According to Bloom (1996), the classification of artifacts is based on the creator's intended purpose, highlighting that the original intent is more critical than attributes such as shape or color. This idea aligns with Trimble's (2008) analysis, which uses artifacts to date geomorphological changes. It demonstrates how they offer essential insights into the alterations of landscapes caused by human and natural activities over time. The understanding of artifacts is further broadened by Nordgren and Johansson (2015), who argue for merging historical consciousness with intercultural competence, enhancing the interpretation of diverse historical narratives. Herva and Nurmi (2009) also contribute to this discourse by suggesting that artifacts should be viewed as dynamic processes with biographies that highlight their functionality and roles throughout human history. This perspective is supported by Fuhler et al. (2006), who underscore the educational benefits of artifacts, pointing out their potential to engage students and make historical learning tangible and relatable. Together, these insights create a comprehensive analytical framework that underscores the dynamic roles of artifacts in history, shaped by their intended functions, cultural contexts, and educational impacts. Within this framework, artifacts from the Resistance War era in Vietnam are regarded not just as historical remnants but as carriers of the cultural values of the Vietnamese people during that period.

Preservation vs. Conservation: Cultural heritage management incorporates essential concepts, notably preservation and conservation. While frequently used synonymously, these terms reflect fundamentally different strategies for safeguarding cultural assets. Grasping these distinctions is vital for implementing effective management practices. Preservation focuses on maintaining and protecting cultural heritage in its existing condition. This approach safeguards artifacts, structures, and sites from further decay or damage without requiring extensive physical interventions. It seeks to minimize change and interaction that could alter the current state of the heritage material. A representative study highlights that preservation often involves removing cultural items from active use to protect their heritage value, which can limit public interaction with the heritage (Carter & Grimwade, 1997).

Conservation, in contrast, involves more active intervention. This process may include stabilization, restoration, or sometimes enhancement of the cultural material to ensure its longevity and usability for future generations. Conservation is not just about maintaining the artifact in its current state but might also involve enhancing its quality or utility through scientific or artistic methods. Conservation practices are often participatory, involving community members as active agents in restoring and maintaining cultural heritage, fostering a broader engagement and more profound connection with the heritage (Spiridon & Sandu, 2015). Economically and historically, the approaches diverge regarding their impact and management implications. While preservation can be seen as a form of cultural “freezing,” conservation may involve more dynamic interaction with the cultural artifact. Economic analyses suggest that by allowing for careful use and interaction, conservation might provide a more sustainable approach to managing non-renewable cultural resources (Vecco, 2018).

Preservation and conservation represent two distinct but complementary strategies in cultural heritage management. Preservation aims to protect and maintain heritage in its current state, whereas conservation engages more directly with the material to restore and possibly enhance it for future appreciation. Understanding these distinctions helps adopt the most appropriate management strategies for different types of cultural heritage. This study utilizes the distinctions outlined by Vecco (2018), Carter and Grimwade (1997), and Spiridon and Sandu (2015) to explore the specific strategies employed in preserving and conserving Vietnam’s war relics. It also examines the technological and methodological challenges associated with these strategies, highlighting the practical implications of each approach in real-world cultural heritage management scenarios.

Implications of Not Preserving Historical Artifacts: The failure to preserve historical artifacts can lead to a profound loss of cultural heritage, impacting historical

understanding, societal identity, and continuity. Historical artifacts are valuable socio-economic resources, and their loss can reduce cultural richness and deprive communities of the economic benefits associated with cultural tourism and educational opportunities, as Baglioni et al. (2021) noted. Artifacts also serve as tangible links to the past, and their absence creates gaps in the historical narrative, thus affecting education and identity, according to Stathopoulou et al. (2015). They are essential for transferring knowledge across generations and providing insights into past innovations, traditions, and lifestyles. The deterioration or loss of these artifacts can significantly hinder historical and scientific research, as Belhi et al. (2017) emphasize.

Furthermore, as artifacts degrade, the need for restoration arises. However, improper or delayed preservation efforts can result in the loss of original material and authenticity, which distorts historical accuracy and value (Newey, 2000). Cultural heritage faces threats from natural disasters and human activities, making effective preservation strategies crucial to mitigate these risks and ensure the survival of significant cultural and historical resources. This study underlines the importance of robust conservation measures, particularly for Vietnam's Resistance War relics, to preserve historical integrity and cultural values. Effective conservation strategies are essential to protect these resources from degradation and loss, ensuring they remain integral to our collective memory and identity.

In synthesizing these theoretical perspectives, this study explores the preservation and promotion of historical relics from Vietnam's Resistance War, emphasizing the importance of these activities in sustaining cultural values, educating future generations, and contributing to socio-economic development.

Literature Review

In recent years, the Vietnamese government has paid much attention to preserving, restoring, and reconstructing cultural and historical relics (Tran, 2023) and the historical relics of the Indochina War and Vietnam War. Vietnamese politicians, experts, and scholars have done extensive research in many aspects to address this issue. In terms of conservation policy, the Vietnamese state and the Vietnamese government have introduced many laws to guide the preservation of monuments, such as the Cultural Heritage Law (2001), Decree No. 92/2002/ND-CP (2002) (Ha, 2015; Hoang, 2021). Even the person with the highest power, the general secretary- Nguyen Phu Trong, also expressed his view of attaching importance to protecting culture and heritage rights at the 13th Congress of the Communist Party of Vietnam (Communist Party of Vietnam, 2021, p. 143). Local governmental bodies have supported these

initiatives by issuing resolutions and guidelines for specific provinces (capital Hanoi, Quang Tri province).

Do and Ngo (2023) articulate a profound connection between patriotism and preserving historical relics in Vietnam. Their research underscores patriotism as a feeling and a philosophy that has shaped the Vietnamese spirit of independence, solidarity, and humanism throughout history. This perspective aligns with Tran's (2023) analysis of the Nguyen Dynasty's contributions to Vietnamese art and architecture, illustrating how cultural heritage preservation is intertwined with national identity and pride.

The integration of Heritage Building Information Modeling (HBIM) and 3D laser digitization in Vietnam, as discussed by T. A. Nguyen, S. T. Do, L. Le-Hoai, et al. (2023), marks a significant advance in digital heritage practices. Their work highlights the potential for enhancing heritage sites' tangible and intangible values. However, their limitations, including the need for investment in expertise, technology, and competitive openness, point to broader challenges in adopting these technologies across the heritage sector.

The case studies of digitalization efforts in Ho Chi Minh City (T. A. Nguyen, S. T. Do, T.-A. Pham, et al., 2023) and Hanoi (Doan Minh et al., 2021; Masciotta et al., 2023) further illustrate the practical applications of HBIM and digital documentation. These initiatives demonstrate the feasibility of digital tools for heritage management and public engagement. Nonetheless, the research reveals a need for more comprehensive strategies that encompass preserving physical integrity alongside digital representation and a call for broader public participation in heritage conservation processes.

Research by Xiao et al. (2018) and Caciora et al. (2021) explores the intersection of sustainable tourism and cultural heritage promotion through the lens of geoinformatics and virtual reality. These studies emphasize digital technologies' role in making cultural heritage sites accessible, thereby supporting sustainable tourism practices that contribute to the UN Sustainable Development Goals. The innovative use of virtual reality in promoting Romanian wooden churches demonstrates the potential for technology to enhance visitor engagement and accessibility to heritage sites, presenting a model for other countries, including Vietnam.

Local Perspectives on Digital Transformation: The integration of digital technology in preserving Vietnamese heritage sites is explored in various reports and articles (Ha Thu, 2022, and M. Nguyen, 2023). These contributions highlight the challenges and opportunities digital transformation presents in heritage conservation. They emphasize the importance of local initiatives and integrating cultural heritage

into the digital economy, suggesting a need for inclusive strategies that balance technological advancement with cultural integrity preservation.

The socio-economic benefits of preserving historical relics, highlighted by Avrami (2016) and Phung et al. (2024), emphasize the potential for heritage conservation to contribute to sustainable development. However, the intersection of preservation activities with local economic realities, including tourism, urban development, and community needs, requires further investigation to ensure that conservation efforts do not inadvertently contribute to social displacement or economic inequality.

The preservation and promotion of war relics, such as the Cu Chi tunnels and Vinh Moc tunnels, have been the focus of studies by Olson and Morton (2017) and Olson (2023a, 2023b). Their research provides a deep dive into the physical preservation and the educational and touristic potential of sites associated with Vietnam's conflict history. These studies address the need for physical preservation and explore the role of such sites in education, tourism, and shaping collective memory, highlighting the multifaceted approach required in conserving and promoting war relics.

Lastly, the exploration of the cultural significance of war relics in Vietnam, as captured in the diverse experiences of tourists at sites like the Cu Chi Tunnels (Madigan & West, 2023; Quang et al., 2023), underscores the complex narratives and memories associated with these sites. This body of work invites a deeper inquiry into how war relics are presented, interpreted, and experienced, pointing to the need for a nuanced approach that respects all stakeholders' multifaceted histories and perspectives.

In summary, while significant strides have been made in preserving and promoting historical relics, mainly using digital technologies, critical gaps remain in understanding the socio-economic impacts, community engagement, and narrative complexities associated with these efforts. Future research should aim to bridge these gaps, fostering a holistic approach to heritage conservation that is inclusive, sustainable, and reflective of the diverse values and histories of the communities it serves.

Research Methodology

This research utilized a mixed-method approach incorporating document analysis, case studies, and direct observations to gather comprehensive insights into preserving and promoting historical relics from the Resistance War in Vietnam. The methodology is designed to ensure replicability and validity, which is essential for

scientific rigor. Below, each data collection technique is detailed to clarify the process and enable future researchers to replicate the study.

In the process of document analysis, a systematic review was carried out targeting documents centered around government policies, legal frameworks, and existing academic research relevant to the preservation practices within Vietnam. The focus was primarily on materials that shed light on the relevance of historic preservation, the incorporation of advanced technologies in heritage conservation, such as Historic Building Information Modelling (HBIM), Virtual Reality (VR), and Augmented Reality (AR), and the socio-economic repercussions associated with the conservation of historical relics. The selection criteria for these documents were stringent, only including publications from authoritative sources like the Vietnamese government, reputable academic journals, and international heritage organizations from 2000 to 2023. These documents were explicitly chosen for their direct discussion on the strategies for preserving and promoting historical relics from the Resistance War era. From these sources, pivotal data were extracted, including detailed descriptions of preservation policies and guidelines, elucidations on the technological interventions and their respective outcomes, and narratives on the socio-economic effects stemming from the conservation of these historical relics.

The Cu Chi Tunnels were chosen for the case studies due to their significant historical value and the variety of preservation challenges each location presents. A range of collection techniques was employed to gather comprehensive data, including interviews with site managers and local authorities to delve into the nuances of preservation efforts, challenges encountered, and their impacts on local communities and economies. Additionally, visitor data and feedback were analyzed to assess the effectiveness of promotional activities and their educational benefits for tourists. Examining on-site preservation technologies and methodologies further enriched the data collection process. To facilitate this, visits were organized from January to March 2023, where research teams undertook structured interviews, meticulously recorded their observations, and collected data from visitors. This data gathering was accomplished through detailed note-taking, obtaining audio recordings with the necessary permissions, employing photography to capture the current state of preservation, and implementing promotional activities at these sites.

Direct observations were conducted at the Cu Chi Tunnels, encompassing their everyday operations and events to promote these historical sites. The research team meticulously observed interactions between the visitors and the exhibits, paying close attention to the application of advanced technologies such as Historic Building Information Modelling (HBIM), Virtual Reality (VR), and Augmented Reality (AR).

They also systematically documented the state of the relics' maintenance and preservation, alongside observing public engagement initiatives like educational tours and exhibitions to evaluate their success in highlighting the sites' historical significance. To ensure comprehensive documentation, standardized forms were utilized to record observations related to preservation efforts, technology use, and visitor interactions. Additionally, photographs and video recordings were employed to visually capture the condition of the relics and the execution of various promotional activities, thereby providing a multi-dimensional perspective on the effectiveness of the sites' preservation and engagement strategies.

The analysis of data collected through the three methods encompassed quantitative approaches, including evaluating visitor statistics and survey outcomes, and qualitative measures, such as the content analysis of interview transcripts and thematic analysis of observation records. This mixed-method approach facilitated a comprehensive understanding of the prevailing situation regarding preserving and promoting historical relics in Vietnam. It illuminated practices that effectively contribute to the preservation efforts and pinpointed areas where improvements are necessary, thereby offering a balanced view of the successes and challenges in the field.

This detailed methodology ensures the research findings are grounded in systematically gathered and analyzed data, providing a robust basis for the study's conclusions and recommendations. This approach enhances the study's transparency and replicability by outlining the processes and criteria for data collection and analysis, contributing to the broader cultural heritage preservation research field.

Findings

The Role of Preserving and Promoting the Value of Historical Relics in The Resistance War for Sustainable Socio-Economic Development in Vietnam Today

Vietnam, geographically narrow and historically vulnerable, has endured invasions across millennia. The nation's history is marked by prolonged conflicts with Chinese dynasties, starting from the Hai Ba Trung uprising in 40-43 AD and culminating in a decisive victory against the Qing in 1789 AD, led by Emperor Nguyen Hue. More recently, Vietnam faced colonial and imperialist aggression from Western powers, specifically during the French Indochina War (1946-1954) and the Vietnam War (1954-1975), a period also referred to as the resistance war era (Spector, 2023). While these conflicts have left behind numerous historical sites, they serve not merely as reminders of past strife but also as beacons of resilience and inspiration for the Vietnamese people. The resistance against French colonialism and American imperialism from 1946 to 1975 left a profound legacy of historical relics in various

locations, including Ho Chi Minh City and Quang Tri Province. These sites underscore the challenging yet resilient spirit of the nation during those turbulent decades.

Preserving and promoting the value of resistance to historical relics is an urgent task and a long-term foundation for sustainable socio-economic development. General Secretary Nguyen Phu Trong set out the viewpoint of closely combining economic and social policies, emphasizing the consensus between economic growth and social justice (Nguyen, 2022, p. 27). The role of preserving and promoting the value of historical relics of resistance for sustainable socio-economic development is expressed in many aspects, such as patriotism, solidarity, and socio-economic factors.

First, preserving and promoting the value of historical relics of resistance contributes to educating Vietnamese people about patriotism and social responsibility. The document of the 13th Party Congress clearly emphasized the importance of *“protecting and promoting good and sustainable values in Vietnamese cultural traditions”* (Communist Party of Vietnam, 2021, p. 143), implying the idea includes resistance-based relics. By preserving war remnants, the younger Vietnamese generation has a deeper understanding of the nation’s history. Have historical knowledge and understand the sacrifices of ancestors while defending the country. From there, it naturally creates in them a love for their homeland. Promoting the Vietnamese people’s thousands of years of patriotic tradition is a vital philosophy. For the author of this article, only the solid patriotic tradition is the main reason to explain why the Vietnamese people have not been assimilated after many thousands of years of being colonized by Chinese feudal dynasties and was heavily influenced by Confucianism in Vietnam history (Q. T. Nguyen et al., 2023; T. Q. Nguyen, 2023; T. Q. Nguyen et al., 2023; Pham et al., 2023).

Second, preserving and promoting the value of resistant historical relics enhances the spirit of solidarity of the entire nation. Solidarity is considered a precious tradition of the Vietnamese people, a source of extraordinary strength, creating a solid and fortified wall that is difficult to breach by the enemy’s military power. President Ho Chi Minh emphasized that solidarity is the key to achieving independence and freedom. He encouraged everyone to remember *“to be of one mind, to be an ally”* (Ho, 2011, p. 206) to protect the nation from invasion. Preserving and promoting the value of resistant historical relics is significant in raising awareness and the social responsibility of both communities and businesses. It helps prevent actions that violate ethics and laws and encourages the spirit of solidarity and mutual support in production and business activities. The goal is to direct all efforts toward preserving and enriching the nation’s traditional culture in all aspects of life.

Third, preserving and promoting the value of resistance historical relics contributes to promoting sustainable socio-economic development. Historical relics, a vital part of the Vietnamese people's historical and cultural heritage, are a source of inspiration and a significant driving force for economic development, especially in the tourism sector (an unpolluted industry). Every year, the resistance historical relics welcome millions of domestic and international tourists, learning about the unique history and culture of the Vietnamese people. People and businesses promote typical products and develop businesses around historical resistance relics in these places. At the same time, many international organizations and researchers always want to cooperate and invest in the cultural field to honor the historical value of resistance wars. These relics have become favorable destinations to attract domestic and international resources, combining national strength and the strength of the times, contributing to the country's sustainable development.

In short, resistance historical relics symbolize indomitable heroism and a place for people to connect with the roots of national history. Preserving and promoting the value of historical relics enhances patriotism and national solidarity and contributes to Vietnam's sustainable socio-economic development.

Current Status of Preserving and Promoting the Values of Historical Relics in The Resistance War over The Past 25 Years in Vietnam

Twenty-five years ago, the 5th Central Resolution (Section VIII) in 1998 set out to preserve and promote cultural heritage. Cultural heritage is an invaluable asset that binds the national community, is the core of national identity, and is the basis for creating new values and cultural exchange. Consider preserving, inheriting, and promoting traditional and revolutionary cultural values, including tangible and intangible cultures (Ha, 2015). Next, the state promulgated the Cultural Heritage Law in 2001, and the government issued Decree No. 92/2002/ND-CP detailing the implementation of some articles of the Cultural Heritage Law in 2002. Relics are classified as historical-cultural, architectural and artistic, archaeological, scenic, and revolutionary historical relics (including historical relics of the resistance war). By 2006, the Documents of the 10th Congress of the Communist Party of Vietnam continued to emphasize investment in preserving and embellishing historical relics of the resistance war while harmoniously combining the protection and promotion of heritage value with economic and tourism development activities (Hoang, 2021). Along with that spirit, at the 11th (2011), 12th (2016), and 13th (2021) Party Congresses, the issue of preserving, inheriting, and promoting traditional cultural values was emphasized. The revolution continues to be emphasized, deployed, and concretized

in implementing conservation and promoting the value of historical resistance relics (Hoang, 2021).

The provinces have done an excellent propaganda job to raise awareness of people's responsibilities about preserving and promoting the value of resistance war historical relics for socio-economic development. The People's Committees of the provinces issue documents guiding localities to organize the preservation and promotion of the value of resistance historical relics for socio-economic development, consistent with the specific characteristics of each province. The province's Department of Culture, Sports and Tourism regularly organizes promotional activities and introduces historical resistance relics to domestic and foreign delegations. At the same time, it coordinates with research institutes and scientists to research modern, practical solutions in conservation and promote value for sustainable economic development. In this article, the author examines the situation of preserving and promoting resistance war relics in some provinces/cities, such as Ho Chi Minh City and Quang Tri Province.

Ho Chi Minh City

Ho Chi Minh City has many famous resistance relics that have gone down in history, becoming legends and shining symbols of revolutionary patriotism in the Ho Chi Minh era, expressing the will and burning desire for national independence, such as Cu Chi Tunnels (Fig. 1), Nha Rong Wharf.



Fig. 1: Cu Chi Tunnels gate
Source: Author, 2023



Fig. 2: Sightseeing
diagram of Ben Duoc in
Cu Chi Tunnels
Source: Author, 2023

The tunnels of Cu Chi are an immense network (Fig. 3) of connecting tunnels located in the Cu Chi District northwest of Ho Chi Minh City (Saigon), Vietnam

(Madigan & West, 2023; Mangold & Penycate, 2005; Olson, 2023b; Olson & Morton, 2017).

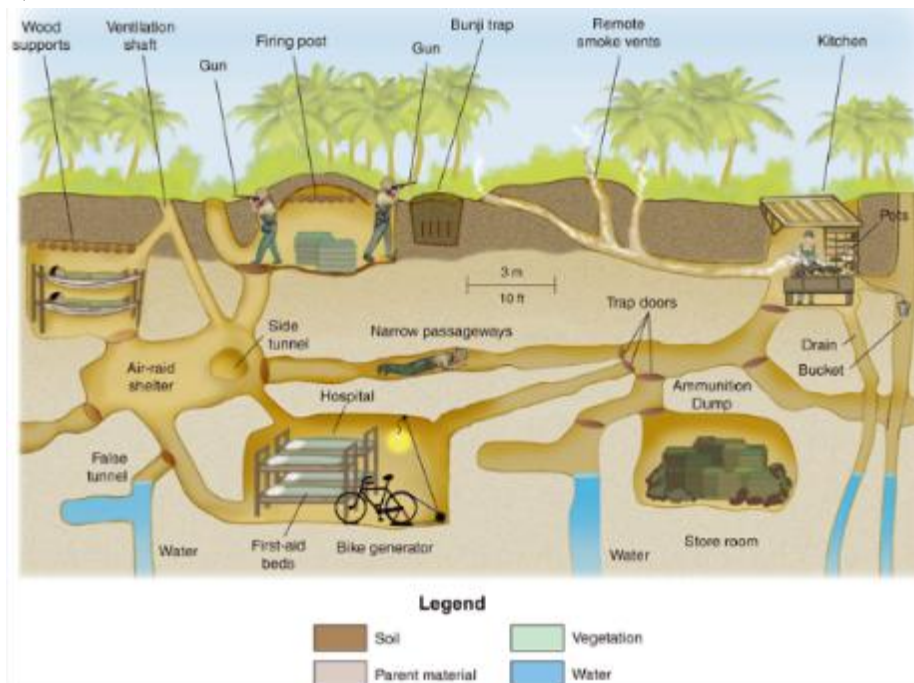


Fig. 3: Cu Chi soil tunnel complex

Source: Olson & Morton, 2017

The 121 km-long tunnel complexes at Cu Chi have been preserved by the government of Vietnam and turned into a war memorial park with two different tunnel display sites, Ben Dinh tunnels and Ben Duoc tunnels (Fig. 2). The tunnels are narrow and often cramped, designed to accommodate only one person at a time. The Cu Chi tunnels were the location of several military campaigns during the Vietnam War and were the Viet Cong's base of operations for the Tet Offensive in 1968 (Olson, 2023a). Some Western scholars state that the Cu Chi Tunnels were excavated in laterite clay with high iron content and, in general, have relatively high adhesion and internal friction angle, so they have high resilience and can withstand bombs during the Vietnam War (Elmo & Mitelman, 2023; Olson & Morton, 2017). Viet Cong soldiers used the tunnels as hiding spots during combat, as well as serving as communication and supply routes, hospitals, food and weapon caches, and living quarters for numerous North Vietnamese fighters. The tunnel systems were of great importance to the Viet Cong in their resistance to American forces and helped to counter the growing American military presence in South Vietnam.

Over the years, Ho Chi Minh City's Committee and the Department of Culture, Sports and Tourism have preserved and enhanced the value of resistance war relics, such as the Cu Chi tunnels. Notable efforts include constructing memorial and

traditional houses, restoring damaged structures, and broadening pathways to improve tourist access.

To boost tourism and educational outreach, the city has digitized documents related to these relics and developed websites to showcase their cultural significance globally. This initiative aligns with global trends in heritage preservation, where technologies like HBIM (Historic Building Information Modeling) are utilized to maintain historical sites worldwide, such as Romanian churches and UNESCO projects (Caciora et al., 2021; López et al., 2018; Masciotta et al., 2023; Xiao et al., 2018).



Fig. 4: A bunker at Cu Chi tunnels base

Source: Author, 2023



Fig. 5: The vent cover is camouflaged by termite mounds in the Cu Chi tunnels

Source: Author, 2023



Fig. 6: A tunnel section in Cu Chi tunnels

Source: Author, 2023



Fig. 7: Inside the Cu Chi tunnels

Source: Author, 2023

In terms of educational initiatives, Ho Chi Minh City mandates university students to visit the Cu Chi Tunnels, fostering a deep understanding of national history from an early stage in their academic careers (Fig. 8). This practice has been in place for over two decades, underscoring the city's commitment to instilling patriotism among the youth.



Fig. 8: The Vietnamese young generation learns about the history of the Cu Chi tunnels
Source: Author, 2023

The city also incorporates cultural enrichment activities by hosting art performances, historical film screenings, and promoting local products. Travel agencies offer tours with interactive experiences like shooting ranges, which have attracted tourists. According to the Ho Chi Minh City Department of Tourism, the city welcomed 350,000 international visitors in August 2023 alone and saw a 92.3% increase in tourist visits over the first eight months of the year, reaching 54.3% of the annual tourism target (Gia, 2023).

Despite these advances, integrating more cutting-edge technologies such as VR (Virtual Reality) and AR (Augmented Reality) in preserving and presenting resistance war relics is still in its infancy. Limited applications of these technologies have been noted, primarily in initial studies aiming to enhance cultural heritage conservation and tourism (T. A. Nguyen, S. T. Do, L. Le-Hoai, et al., 2023; T. A. Nguyen, S. T. Do, T.-A. Pham, et al., 2023).

Preservation and management at the Cu Chi tunnels, designated a national monument in 2015, have seen significant improvement. Interviews with site management highlight the collaborative efforts of both central and city-level governments in maintaining conservation standards. These include reinforcing surface-level tunnels with concrete to protect against weather-induced erosion and subsidence near the Saigon River. However, further comprehensive solutions are needed to safeguard deeper tunnel structures.

Technological Integration and Visitor Services at the site are evolving. Investments in 3D projection models and automated tour guides are underway, with plans to incorporate VR and AR to enhance visitor engagement. Technological use during tours is minimal (Fig. 8), but the commitment to these technologies suggests a strong potential for improving visits' educational and experiential aspects. Visitor surveys have given an average satisfaction score of 8.5/10, indicating the effective use of the site's architecture and historical narratives in enriching visitor experiences.

The Economic and Community Impact of the site extends beyond historical preservation. Management initiatives have effectively engaged the local community and leveraged media partnerships, enhancing local quality of life and promoting the site. This dynamic has created a robust framework for preserving and valorizing the Cu Chi tunnels, reflecting strong community pride and engagement.

However, challenges persist due to the need for advanced technological implementations and infrastructure development to support them. High costs and complex requirements for these technologies suggest a cautious yet forward-thinking approach to modernization. Visitor feedback calls for improvements in guide quality, interactive activities, and amenities, presenting opportunities to enhance the overall visitor experience.

The comprehensive management of the Cu Chi tunnels has proven effective in maintaining the site's integrity and leveraging community involvement. Despite the successes in navigating the challenges of conservation, technological advancement, and economic impact, there remains a constant need for innovation and resource allocation to sustain and enhance the site's relevance and appeal for future generations.

Quang Tri province

Quang Tri province is the locality with the most revolutionary resistance relics in the country, with 524 relics, of which 445 provincial-level revolutionary historical relics have been recognized. Among them, the most famous resistance relic is the Vinh Moc Tunnels. The tunnel complex lies in Quang Tri province, north of the Ben Hai River (Fig. 9). It was constructed in three stages (first level 12m deep, second and third with 15m and 23m respectively) beginning in 1966 and used until early 1972. The total length of the tunnels is nearly 2,000 m long, with six entrances to the tops of hills and seven entrances to the South China Sea (Fig. 10). Much of the sub-strata of Vietnam is limestone, which is soft to dig through yet structurally sound. The limestone allows easy hand digging of the tunnels, and no structural support is necessary. The complex grew to include wells, kitchens, rooms for each family, and spaces for healthcare.

Around sixty families lived in the tunnels, and as many as 17 children were born inside the tunnels.



Fig. 9: Vinh Moc tunnels in the north of the Ben Hai River

Source: Olson, 2023

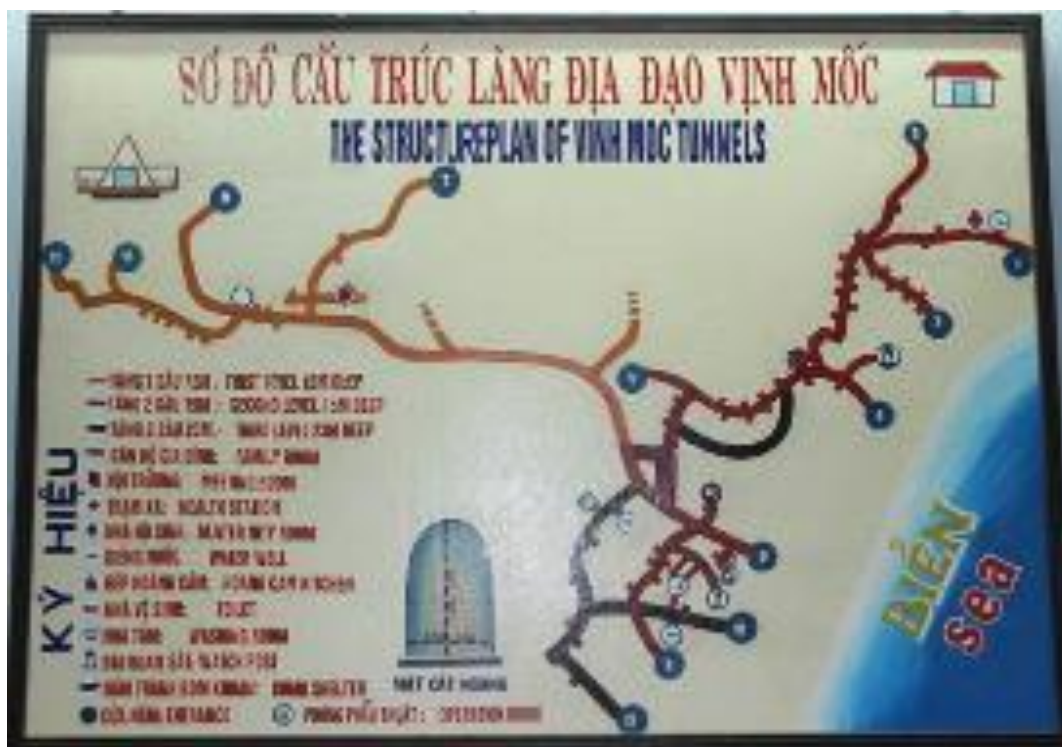


Fig. 10: The structure plan of the Vinh Moc tunnel complex

Source: Justin Ngoc Pham, 2023

The issue of preserving and promoting resistance war relics has received attention from the provincial government. Resolution No. 17/2013/NQ-HDND (2013)

on investment, conservation, restoration, and prevention of system degradation has been issued. System of historical and cultural relics of Quang Tri province, period 2013 - 2020. This document aims to preserve relics and promote the province's socio-economic development. Invite businesses and investors to coordinate with the Department of Culture, Sports and Tourism, and the Department of Culture to form a series of visits and tours for domestic and foreign tourists. Every year, the provincial government evaluates the quality of war relics to make plans for repair and restoration. Conduct surveys and evaluate the number of visitors to have an appropriate and effective promotion plan. According to statistics from the Department of Culture, Sports and Tourism of the province, the average growth rate of tourists in the 2016-2020 period increased by 7%/year, of which international visitors were 3.25%/year, and domestic tourists were 9%/year (Tran, 2021). However, besides the results achieved in Quang Tri province, there are still some limitations in awareness and implementation. Some leaders of the commune and ward authorities have not paid attention to propaganda and promoting the value of resistance war relics for sustainable socio-economic development. The content, form, and promotion measures are not flexible, and digital transformation in conservation work has not even been implemented.

Preserving and promoting the value of resistance war relics in Vietnam has achieved specific results, but at different levels depending on each province and city. From the central government to each provincial government, there are laws and documents to guide the implementation of the conservation of relics. It can also be combined with tourism to promote both spiritual values and economic benefits. Step by step, contribute to the socio-economic development of each province and Vietnam as a whole, realizing President Ho Chi Minh's aspiration for a strong Vietnam to stand shoulder to shoulder with world powers (T. Q. Nguyen et al., 2023).

Some Proposed Solutions for Vietnam Shortly

Cultural heritage conservation activities have succeeded, but many limitations still exist. Many new technologies have not been applied in conservation, still in the testing phase of HBIM, VR, and AR technology (Doan Minh et al., 2021; T. A. Nguyen, S. T. Do, L. Le-Hoai, et al., 2023; T. A. Nguyen, S. T. Do, T.-A. Pham, et al., 2023); even digitizing documents about relics is lacking in some provinces. Awareness of the significance of cultural heritage has increased, but has yet to be clearly expressed in specific measures and plans. Social resources need to be properly focused on urgent priorities. In preserving monuments, new contributions mainly focus on construction, with a shortfall in renovation. Capital management needs to be more flexible, leading

to ineffective renovations. In the preservation of intangible cultural heritage, there is the phenomenon of the misuse and commercialization of heritage. The museum needs help in cooperation and sponsorship, especially from businesses. The legal framework and incentive policies still need to be improved. The team of professional staff needs to be strengthened, especially in remote areas (Dang, 2018). The author proposes the following solutions with the above limitations in preserving and promoting the value of resistance war relics in Vietnam.

First, new technologies, such as Terrestrial Laser Scanning, Light Detection and Ranging, Structure from Motion, UAV, HBIM, virtual reality, and AR, should be applied to preserve and promote the value of monuments. When it comes to applying new technology in conservation, there have been many applications worldwide, typically at Sapienza University in Rome. In the past 13 years, Vietnam has begun to be interested in applying new technology for conservation, such as Hanoi's Old Quarter in 2017 (Dieu Anh, 2020), the French Colonial Villas in Hanoi (Doan Minh et al., 2021), and Hung King's temple in Ho Chi Minh City. The author argues that the following new technologies are necessary to preserve and promote historical relics of the resistance war. The new technologies used are divided into three aspects:

- Detection of monuments and restoration: LASER CLOUD software can reconstruct entire building blocks (3D Orthophoto). 3D Scan technology includes Terrestrial Laser Scanning (TLS) and Light Detection and Ranging (LiDAR). Recently, with the development of satellite positioning technology, drone technology, UAV technology, 3D imaging algorithms, and Structure from Motion (SfM). Many countries have successfully applied 3D Scanning from above using UAVs, helping to collect 3D data comprehensively and at a lower price than LiDAR technology.
- Heritage archiving and management: BIM technology can be used for building information modeling integrated with GIS, collectively known as HBIM.
- Managing display, promotion, and visitor introduction aspects: virtual reality, augmented reality, and 4D film.

Second, propaganda and education should be promoted to raise everyone's awareness and responsibility about preserving and promoting the value of war resistance for sustainable socio-economic development. Propose the development of specific programs and actions for everyone, especially students, to participate in communication activities to promote the monument's value. All organizations and individuals in the political system must enhance their roles and responsibilities in

preserving and promoting cultural values and resistance relics. At the same time, it encourages the participation of the community and businesses, along with local authorities, to invest funds in promotional and communication activities. It is necessary to build a high attitude and sense of responsibility among the people towards preserving and promoting the value of resistance war relics, stimulating them to participate actively and make practical proposals to promote development jointly with the government. Propaganda and education work must be conducted regularly, especially on holidays and weekends, to create camaraderie through all forms and measures of communication.

Third, regularly organize promotional activities and introduce and promote the value of resistance war relics with economic development (tourism). Practical activities preserve cultural values and contribute to economic development, especially tourism. Each locality needs a clear plan and consensus among leaders to promote the value of resistance relics. The Department of Culture, Sports, and Tourism must advise and propose significant events, cultural programs, and movie screenings to attract tourists. Building highlights and typical products at each resistance relic are essential. Promotional activities must be diverse and appropriate to local conditions and socio-economic development. Investing in honoring the cultural value of resistance relics shows gratitude for the sacrifices of previous generations. Activities require community consensus and do not lose the sacredness of resistance relics. Integrating promotional activities with cultural ethics education helps arouse pride and social responsibility in the young generation. In international integration, promoting the value of resistance to war relics becomes increasingly important so that the young generation can understand history, maintain cultural identity, and form civilized and responsible personalities.

Fourth, authorities should strengthen inspections on conservation activities and promote the value of war resistance relics. To ensure effectiveness in preserving and promoting the value of resistance war relics, authorities must strengthen inspection work. The Department of Culture, Sports, and Tourism and local authorities must improve their ability to inspect, examine, and supervise, especially at the commune level. The inspection and supervision plan's objectives, requirements, and tasks must be clearly defined. This activity aims to detect and correct errors in management and implementation and, at the same time, determine the responsibilities of each organization and individual. Authorities need to reward outstanding efforts in preserving and promoting the value of resistance war relics while at the same time correcting and reminding of violations of State regulations. During inspection and supervision, authorities must put national and ethnic interests first and introduce

breakthrough measures to create significant changes at each stage and step. Improving inspection and examination work demonstrates social and political responsibility, contributes best to promoting and introducing the Vietnamese people's image and sound qualities, and affirms deep human values in all activities and specific fields.

Conclusions

This study has explored the preservation and promotion of Vietnam's Resistance War relics, focusing on their socio-economic and educational impacts. The findings underscore that these relics are crucial elements of Vietnam's historical narrative and potent instruments for fostering national identity and solidarity. However, despite robust legislative frameworks and localized efforts to safeguard these cultural assets, challenges persist, particularly in technological integration and community engagement. Advanced technologies such as Historic Building Information Modelling (HBIM), Virtual Reality (VR), and Augmented Reality (AR) have been identified as underutilized in preservation efforts. The study suggests that these technologies hold the potential to enhance the interpretive and educational value of the relics significantly. However, their adoption is hampered by inadequate funding, lack of technical expertise, and the slow pace of digital transformation in the heritage sector.

Community involvement has emerged as another critical area requiring more focused attention. The findings indicate that while there is considerable public and governmental support for preserving these relics, there is a need for more strategic and inclusive engagement strategies that involve local communities in meaningful ways. It would enhance the preservation efforts and boost the socio-economic benefits of tourism associated with these sites. In conclusion, while commendable progress has been made in preserving and promoting Vietnam's Resistance War relics, there is a clear need for enhanced technological integration and greater community involvement. Addressing these gaps will safeguard these valuable cultural assets and ensure their ongoing contribution to Vietnam's socio-economic development and cultural heritage. This study contributes to the broader discourse on cultural heritage preservation and offers insights that can be adapted and applied in other similar contexts globally.

Acknowledgement

This research was funded by the Ministry of Education and Training (Vietnam) under project Grant No. B2024-SPK-06 and hosted by Ho Chi Minh University of

Technology and Education in Ho Chi Minh City, Vietnam. The author deeply appreciates the anonymous reviewers whose invaluable feedback greatly enhanced the manuscript.

References

- [1] Avrami, E. (2016). Making historic preservation sustainable. *Journal of the American Planning Association*, 82, 104–112. <https://doi.org/10.1080/01944363.2015.1126196>
- [2] Baglioni, M., Poggi, G., Chelazzi, D., & Baglioni, P. (2021). Advanced materials in cultural heritage conservation. *Molecules*, 26(13), 3967. <https://doi.org/10.3390/molecules26133967>
- [3] Belhi, A., Foufou, S., Bouras, A., & Sadka, A. H. (2017). Digitization and preservation of cultural heritage products. *Product Lifecycle Management and the Industry of the Future*, Cham.
- [4] Bloom, P. (1996). Intention, history, and artifact concepts. *Cognition*, 60(1), 1–29. [https://doi.org/10.1016/0010-0277\(95\)00699-0](https://doi.org/10.1016/0010-0277(95)00699-0)
- [5] Caciora, T., Herman, G. V., Ilieș, A., Baias, Ș., Ilieș, D. C., Josan, I., & Hodor, N. (2021). The use of virtual reality to promote sustainable tourism: A case study of wooden churches, historical monuments from Romania. *Remote Sensing*, 13(9), 1758. <https://doi.org/10.3390/rs13091758>
- [6] Carter, B., & Grimwade, G. (1997). Balancing use and preservation in cultural heritage management. *International Journal of Heritage Studies*, 3(1), 45–53. <https://doi.org/10.1080/13527259708722186>
- [7] Communist Party of Vietnam. (2021). Document of the 13th National Party Congress. National Political Publishing House.
- [8] Dang, T. B. L. (2018, June 29). Socializing cultural heritage conservation activities in our country today. *Communist Review*. Retrieved December 29, 2023, from <https://www.tapchiconsan.org.vn/web/guest/nghien-cu/-/2018/51362/xa-hoi-hoa-hoat-dong-bao-ton-di-san-van-hoa-o-nuoc-ta-hien-nay.aspx>
- [9] Dieu Anh. (2020, October 15). Applying 4.0 technology to preserve, embellish, and promote the value of Hanoi's Old Quarter. *Construction Review*. Retrieved December 13, 2023, from <https://baoxaydung.com.vn/ung-dung-cong-nghe-40-de-bao-ton-ton-tao-va-phat-huy-gia-tri-khu-pho-co-ha-noi-290798.html>
- [10] Do, T., & Ngo, H. Q. (2023). Patriotism: The philosophical foundation of the Vietnamese people and its manifestations in the rural villages. *ISVS e-journal*, 10(4), 119–133. http://isvshome.com/pdf/ISVS_10-4/ISVSej_10.4.8.pdf

- [11] Doan Minh, K., Bui, N. P., & Doan, T. M. (2021). Towards developing the smart cultural heritage management of the French colonial villas in Hanoi, Vietnam. *International Journal of Sustainable Construction Engineering and Technology*, 12(1), 296–313. <https://publisher.uthm.edu.my/ojs/index.php/IJSCET/article/view/8594>
- [12] Edelheim, J., Joppe, M., Flaherty, J., Armano, L., Höckert, E., Lüthje, M., ... Väyrynen, M. (2022). Cultural values. In J. Edelheim, M. Joppe, & J. Flaherty (Eds.), *Teaching tourism: Innovative, values-based learning experiences for transformative practices* (pp. 50–58). Edward Elgar Publishing. <https://doi.org/10.4337/9781800374560.00013>
- [13] Elmo, D., & Mitelman, A. (2023). A case study of thin concrete wall elements subjected to ground loads. *Buildings*, 13(3), 713. <https://doi.org/10.3390/buildings13030713>
- [14] Fuhler, C. J., Farris, P. J., & Nelson, P. A. (2006). Building literacy skills across the curriculum: Forging connections with the past through artifacts. *The Reading Teacher*, 59(7), 646–659. <https://doi.org/10.1598/RT.59.7.4>
- [15] Gia, C. (2023). Ho Chi Minh City: Upgrading tourism development into a key economic sector. *Finance Review*. Retrieved December 27, 2023, from <https://thoibaotaichinhvietnam.vn/tp-ho-chi-minh-nang-tam-phat-trien-du-lich-tro-thanh-nganh-kinh-te-mui-nhon-136318.html>
- [16] Ha, D. (2015, September 30). Understanding the content of the Party's 10th Congress documents. Ho Chi Minh National Academy of Politics. Retrieved December 28, 2023, from <http://lyluanchinhtri.vn/home/index.php/nguyen-cuu-ly-luan/item/802-ngghi-quyet-trung-uong-5-khoa-viii-su-phat-trien-toan-dien-va-sang-tao-duong-loi-xay-dung-va-phat-trien-nen-van-hoa-viet-nam.html>
- [17] Ha Thu. (2022). Digital transformation to preserve and sustainably promote heritage values. *Nhan Dan Newspaper*. Retrieved December 25, 2023.
- [18] Herva, V.-P., & Nurmi, R. (2009). Beyond consumption: Functionality, artifact biography, and early modernity in a European periphery. *International Journal of Historical Archaeology*, 13(2), 158–182. <https://doi.org/10.1007/s10761-009-0080-3>
- [19] Ho, C. M. (2011). *Ho Chi Minh: Complete works* (Vol. 2). National Politics Publishing House.
- [20] Hoang, T. (2021, April 29). Improving the effectiveness of management, conservation, and promotion of monument values in Vietnam today. *State Management Review*. Retrieved December 28, 2023, from

- <https://www.quanlynhanuoc.vn/2021/04/29/nang-cao-hieu-qua-cong-tac-quan-ly-bao-ton-va-phat-huy-gia-tri-di-tich-o-viet-nam-hien-nay/>
- [21] López, F. J., Lerones, P. M., Llamas, J., Gómez-García-Bermejo, J., & Zalama, E. (2018). A review of heritage building information modeling (H-BIM). *Multimodal Technologies and Interaction*, 2(2), 21. <https://doi.org/10.3390/mti2020021>
- [22] Madigan, T., & West, B. (2023). Western tourism at Cu Chi and the memory of war in Vietnam: Dialogical effects of the carnivalesque. *Thesis Eleven*, 174(1), 118–134. <https://doi.org/10.1177/07255136221147954>
- [23] Mangold, T., & Penycate, J. (2005). *The tunnels of Cu Chi: A harrowing account of America's tunnel rats in the underground battlefields of Vietnam*. Presidio Press.
- [24] Masciotta, M. G., Sanchez-Aparicio, L. J., Oliveira, D. V., & Gonzalez-Aguilera, D. (2023). Integrating laser scanning technologies and 360° photography for the digital documentation and management of cultural heritage buildings. *International Journal of Architectural Heritage*, 17(1), 56–75. <https://doi.org/10.1080/15583058.2022.2069062>
- [25] Newey, H. (2000). conservation and the preservation of scientific and industrial collections. *Studies in conservation*, 45(sup1), 137–139. <https://doi.org/10.1179/sic.2000.45.Supplement-1.137>
- [26] Nguyen, M. (2023, December 3). Applying technology in preserving and promoting heritage values. *Nature and Environment Magazine*. Retrieved December 20, 2023.
- [27] Nguyen, P. T. (2022). *Some theoretical and practical issues about socialism and the path to socialism in Vietnam*. National Political Publishing House.
- [28] Nguyen, Q. T., Pham, L. T., & Lai, N. V. (2023). Confucius's political philosophy of governing the country: Historical and contemporary considerations. *XLinguae*, 13(3), 2–14. <https://doi.org/10.18355/XL.2023.16.03.01>
- [29] Nguyen, T. A., Do, S. T., Le-Hoai, L., Nguyen, V. T., & Pham, T.-A. (2023). Practical workflow for cultural heritage digitalization and management: A case study in Vietnam. *International Journal of Construction Management*, 23(13), 2305–2319. <https://doi.org/10.1080/15623599.2022.2054268>
- [30] Nguyen, T. A., Do, S. T., Pham, T.-A., Nguyen, D. H., & Tamura, H. (2023). Integration of H-BIM, virtual reality, and augmented reality in the digital twin era: A case study in cultural heritage. In J. N. Reddy, C. M. Wang, V. H. Luong, & A. T. Le (Eds.), *ICSCEA 2021* (Vol. 268, pp. 303–312). Springer. https://doi.org/10.1007/978-981-19-3303-5_24

- [31] Nguyen, T. Q. (2023). Confucius' conception of the political being and its significance for building the political being in present-day Vietnam. *IKENGA International Journal of the Institute of African Studies*, 24(2), 1–23. <https://doi.org/10.53836/ijia/2023/24/2/003>
- [32] Nguyen, T. Q., Nguyen, V. T., & Nguyen, T. P. (2023). Ho Chi Minh's thoughts on educating the young Vietnamese generation today. *Perspektivy nauki i obrazovania*, 62(2), 562–577. <https://doi.org/10.32744/pse.2023.2.33>
- [33] Nordgren, K., & Johansson, M. (2015). Intercultural historical learning: A conceptual framework. *Journal of Curriculum Studies*, 47(1), 1–25. <https://doi.org/10.1080/00220272.2014.956795>
- [34] Olson, K. R. (2023a). How did Vinh Moc Village, located near the Vietnam DMZ, protect its villagers from United States Air Force bombardment during the Vietnam War? *Open Journal of Soil Science*, 13(1), 1–27. <https://doi.org/10.4236/ojss.2023.131001>
- [35] Olson, K. R. (2023b). Saigon River Valley: A navigation, trade, mitigation, invasion, liberation, and unification pathway. *Open Journal of Soil Science*, 13, 46–82. <https://doi.org/10.4236/ojss.2023.132003>
- [36] Olson, K. R., & Morton, L. W. (2017). Why were the soil tunnels of Cu Chi and Iron Triangle in Vietnam so resilient? *Open Journal of Soil Science*, 7, 34–51. <https://doi.org/10.4236/ojss.2017.72003>
- [37] Pham, L. T., Nguyen, T. V., Nguyen, H. T., Do, H. T. T., Nguyen, K. N. V., & Nguyen, Q. T. (2023). Between communitarianism and Confucianism: Charles Taylor and the Confucian concept of self in comparative perspective. *Bogoslovni vestnik*, 83(3), 553–566. <https://doi.org/10.34291/BV2023/03/Pham>
- [38] Phung, A. T., Nguyen, Q. T., & Le, C. Q. (2024). Changing trends of the peasantry under the impact of the current rural-urbanization process in Vietnam. *ISVS e-journal*, 11(2), 39–47. <https://doi.org/10.61275/ISVSej-2024-11-02-03>
- [39] Quang, T. D., Dang Vo, N. M., Van Nguyen, H., Thi Nguyen, Q. X., Ting, H., & Vo-Thanh, T. (2023). Understanding tourists' experiences at war heritage sites in Ho Chi Minh City, Vietnam: A netnographic analysis of TripAdvisor reviews. *Leisure Studies*, 42, 1–20. <https://doi.org/10.1080/02614367.2023.2249252>
- [40] Spector, R. H. (2023). Vietnam War (1954–1975). *Britannica*. Retrieved December 29, 2023, from <https://www.britannica.com/event/Vietnam-War>
- [41] Spiridon, P., & Sandu, I. (2015). Conservation of cultural heritage: From participation to collaboration. *European Journal of Cultural Management and Policy*, 5(1), 43–52. <https://doi.org/10.3389/ejcmp.2023.v5iss1-article-4>

- [42] Stathopoulou, E. K., Georgopoulos, A., Panagiotopoulos, G., & Kaliampakos, D. (2015). Crowdsourcing lost cultural heritage. *ISPRS Annals of Photogrammetry, Remote Sensing and Spatial Information Sciences*, Taipei, Taiwan.
- [43] Tran, N. T. (2023). The relationship between decorative sculpture and architecture: The artistic legacy of the Nguyen Dynasty of the Imperial City of Hue, Vietnam. *ISVS e-journal*, 10(5), 1–14. https://isvshome.com/pdf/ISVS_10-5/ISVS_10.5.1.pdf
- [44] Tran, V. T. (2021, April 9). Quảng Trị Province: Promoting the work of preserving and promoting the value of provincial-level revolutionary historical relics. *Propaganda Review*. Retrieved December 29, 2023, from <https://tuyengiao.vn/quang-tri-day-manh-cong-tac-bao-ton-va-phat-huy-gia-tri-cac-di-tich-lich-su-cach-mang-cap-tinh-137727>
- [45] Trimble, S. W. (2008). The use of historical data and artifacts in geomorphology. *Progress in Physical Geography: Earth and Environment*, 32(1), 3–29. <https://doi.org/10.1177/0309133308089495>
- [46] Vecco, M. (2018). Some economics of conservation of cultural heritage: The key questions. In P. Ngulube (Ed.), *Handbook of research on heritage management and preservation* (pp. 299–319). IGI Global. <https://doi.org/10.4018/978-1-5225-3137-1.CH015>
- [47] Xiao, W., Mills, J., Guidi, G., Rodríguez-Gonzálvez, P., Gonizzi Barsanti, S., & González-Aguilera, D. (2018). Geoinformatics for the conservation and promotion of cultural heritage in support of the UN Sustainable Development Goals. *ISPRS Journal of Photogrammetry and Remote Sensing*, 142, 389–406. <https://doi.org/10.1016/j.isprsjprs.2018.01.001>