

Heritage Tourism AR Experiential Value

Subjects: Hospitality, Leisure, Sport & Tourism | Behavioral Sciences

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Augmented reality (AR) provides a multidimensional environment that overlays digital contents on a real environment, allowing visitors to see and receive information while preserving the original state of the site. Experiential value refers to interactions that involved the direct usage or distant appreciation of products and services. A true relationship exists between a tourism destination and AR if the integration of AR into a site exerts a holistic effect on travelers. In this regard, the experiential value of AR is considered important because it relies on the value obtained from the interaction between an individual using AR technology and a dynamic experience element. Therefore, the experiential value of AR in heritage tourism can be a salient antecedent to visitors' perception of new technologies and destinations and their future intentions and behavior.

Keywords: augmented reality (AR) ; experiential value ; AR satisfaction ; experiential authenticity ; heritage tourism ; willingness to support the conservation of heritage destinations

1. Background

Recently, information and communication technology has been extensively introduced into the cultural heritage tourism industry to provide in-depth knowledge and immersive experience to visitors of heritage sites ^{[1][2]}. Heritage sites have historical, cultural, and architectural components that attract visitors; however, their incomplete physical structure or the absence of indigenous people frequently requires considerable information and knowledge to appreciate cultural heritage fully ^{[3][4]}. Moreover, in the case of tourist attractions linked to cultural heritage or religious relics, regulations on the maintenance of these sites frequently restrict the use of information boards and signs; this practice can negatively affect heritage sites ^[5]. Under the aforementioned conditions, augmented reality (AR) has been proposed as an ideal solution for limiting the negative effects of tourism on cultural heritage ^[4]. AR provides a multidimensional environment that overlays digital contents on a real environment ^[6], allowing visitors to see and receive information while preserving the original state of the site. For example, in the initial stage of visualization development of AR, people used a method in which additional information layer into the physical landscape displayed on portable devices such as smartphones and tablets ^[7]. More recently, the latest visualization technology that combines AR with VR headsets or smart glasses has been introduced ^[7]. This technology tracks the movement of the user's head and displays permanent holographic objects without space constraints; thus, users can more feely recognize geospatial and identify objects. In this regard, AR helps increase the intellectual awareness of historical events or architecture ^{[8][9]}. Therefore, cultural heritage practitioners are currently investing in AR to overcome the physical environmental limitations of heritage sites and enhance visitors' experience ^{[10][11]}.

2. Experiential Value

Empirical researchers have conventionally recognized customer value as a trade-off between quality and price ^{[12][13][14]}, disregarding its hedonistic and experiential functions ^[15]. Holbrook and Hirschman ^[16] emphasized the experiential aspects of consumption, arguing that consumption should be regarded in a broader sense that encompasses customer experiences of fantasies, feelings, and fun. This experiential view has increased the interest of researchers in various customer-related fields and driven them to adopt similar approaches because customer values are not only based on rational choices but are also multidimensional ^[17].

Experiential value is defined as customer's perception of a product or service through direct use or indirect observation ^[18]. Experiential value is focused on the value that customers retained from experience; thus, experiential value perception is based on direct/indirect interactions with products and services in contrast with customer value. Therefore, these interactions provide the foundation for the relativistic preferences of the involved individuals ^[19].

Customers can gain experiential value from different types of experiences [20]; this experiential value can be classified into extrinsic and intrinsic values [18][21]. Extrinsic value is closely related to the utility of an exchange and task completion, while intrinsic value is derived from the fun and playfulness of completing a process or task [22]. This initial concept is the so-called “extrinsic–intrinsic” experiential value. In accordance with Holbrook [23], the extrinsic–intrinsic value of an experience can be broadened by including an activity (active–reactive) dimension. An active value represents the close collaboration of a customer with product or service providers; while a reactive value is the perception, appreciation, understanding, or reaction of a customer to a consumed item or experience [23].

On the basis of Holbrook [23], Mathwick et al. [18] further proposed a typology of experiential values that encompasses the values of playfulness (intrinsic/active), aesthetics (intrinsic/reactive), service excellence (extrinsic/reactive), and customer ROI (CROI) (extrinsic/active). In addition, researchers have argued that the three experiential values, except for service excellence, have subdimensions. First, aesthetics has two subdimensions: (1) visual appeal and (2) entertainment. Visual appeal is perceived through the basic senses, such as sight, hearing, taste, and touch; it provides satisfaction to a customer; meanwhile, entertainment reflects customers' appreciation for the dramatic or spectacular aspects of service performance [18][24]. Second, playfulness has two subdimensions: (1) enjoyment and (2) escapism. The playfulness value reflects the emotional worth and potential enjoyment of an experience. That is, a playful exchange behavior is reproduced in the intrinsic enjoyment generated from engaging in activities that are absorbing to the point of using them as an escape from the demands of real life [25][26]. Lastly, CROI consists of two subdimensions: (1) efficiency and (2) economic value. In general, CROI describes what a consumer receives in return in the exchange process [24]. Therefore, consumers may experience this return in terms of economic benefits, namely, the recognition of appropriate quality and utility derived from the efficiency of an exchange encounter [23][27][28].

In the context of heritage tourism, the core composition that determines the success or failure of the entire tourism experience is perceived experiential value [29][30]. McCole [31] noted the importance of using appropriate distribution channels to enable retailers to build relationships with customers and provide experiential value. In this regard, AR in heritage tourism sites may also be an effective channel for cultural heritage marketers to provide experiential value to visitors. Pallud and Monod [32] explained that cultural heritage sites are gradually depending on the integration of innovative technologies, such as AR, to guarantee a reenergized and valuable visitor experience. However, AR research in the field of tourism has only begun [29]. Although some researchers have investigated AR in the area of heritage tourism [29][33][34][35], the evaluation of visitors' experiential value with technologies has received minimal attention. Chung et al. [29] applied an experience economy strategy to the heritage tourism context and determined that the aesthetic experience of AR influences visitors' AR satisfaction. Pine et al. [36] suggested the underpinning concept of the experience economy, which can be perceived as experiential value; thus, heritage tourism experience with AR may be strongly associated with the use of an experience [37]. Additionally, with regard to the virtual experience, Verhagen et al. [38] found that the experiential value of users' entertainment and escapism has a strong and direct positive effect on satisfaction. Yuan and Wu [20] examined the links among experiential marketing, experiential value, and customer satisfaction in the F&B context. They identified enjoyment as a key component of emotional experiential value, which turned out to be a positive factor influencing customer satisfaction. Therefore, similar to the subdimensions of experiential value (i.e., aesthetics, entertainment, and escapism), the dimensions of the experience economy may enhance visitors' AR experiential value and improve their AR satisfaction. In addition, visitors' experiential authenticity is perceived as the driving force of experiential value [39][40]; thus, visitors' AR experiential value can be expected to be related to the experiential authenticity of a heritage destination. However, to the best of the authors' knowledge, limited research has explored the effects of visitors' AR experiential value on satisfaction with AR and the experiential authenticity of a destination. For example, Jiménez-Barreto et al. [41] suggested that destination brand experience, which combines various experiential value elements in a virtual environment, conveys sufficient authenticity of destination to users. In a similar fashion, Mura et al. [42] indirectly argued that, from a qualitative research perspective, experiential authenticity in tourism setting within virtual environment should be accompanied by physical, sensory, and emotional value of experience.

Hence, to improve the understanding of the effects of AR experiential value in the field of heritage tourism, the present research proposed the following hypotheses:

Hypothesis 1 (H1).

AR experiential value exerts a positive effect on the experiential authenticity of a heritage tourism destination.

Hypothesis 1a (H1a).

Visual appeal exerts a positive effect on the experiential authenticity of a heritage tourism destination.

Hypothesis 1b (H1b).

Entertainment exerts a positive effect on the experiential authenticity of a heritage tourism destination.

Hypothesis 1c (H1c).

Enjoyment exerts a positive effect on the experiential authenticity of a heritage tourism destination.

Hypothesis 1d (H1d).

Escapism exerts a positive effect on the experiential authenticity of a heritage tourism destination.

Hypothesis 2 (H2).

AR experiential value exerts a positive effect on satisfaction with AR.

Hypothesis 2a (H2a).

Visual appeal exerts a positive effect on satisfaction with AR.

Hypothesis 2b (H2b).

Entertainment exerts a positive effect on satisfaction with AR.

Hypothesis 2c (H2c).

Enjoyment exerts a positive effect on satisfaction with AR.

Hypothesis 2d (H2d).

Escapism exerts a positive effect on satisfaction with AR.

3. Experiential Authenticity, AR Satisfaction, and Willingness to Support

The concept of authenticity is complex and ambiguous due to its diverse adoption in various contexts within a wide range of disciplines ^{[43][44]}. Authenticity was originally used in museum-related research to emphasize the nature of objective existence ^[45]; thereafter, it has been applied more broadly by tourism scholars as a more relatively interpreted and socially constructed concept ^{[46][47][48]}. In the tourism literature, a common understanding of authenticity is that it can be generated from toured objects or tourist experience ^{[49][50]}. Therefore, for rapidly disappearing destinations, such as heritage tourism sites, authenticity is relevant to understanding a destination's goals and tourist experiences, which work collectively to create experiential authenticity ^[39]. Consequently, in the last chance tourism industry, tourists perform activities that are rapidly disappearing from the constraints of their daily lives in travel destinations. These tourists subjectively and genuinely evaluate their experiences on the basis of the degree to which they engage in activities other than their usual undertakings.

Experiential authenticity refers to the totality of tourist experience ^[51]. In particular, it is concerned with how tourist experiences or specific activities in cultural heritage destinations can activate the emotions of tourists ^[39]. Accordingly, in the heritage tourism industry, tourists who perform activities in heritage tourist sites subjectively evaluate their authentic experiences on the basis of the degree to which they are not subjected to the constraints of their daily routines and are engaged in activities other than their usual practices ^{[39][44]}. Cohen ^[46] and Zerva ^[40] suggested that experiential authenticity is primarily perceived as an individual's experiential value and it influences a person's decision-making process. See and Goh ^[52] further examined the effect of perceived authenticity on intention to visit a heritage tourism site, and they found that authenticity is a positive antecedent of behavioral intention. Similarly, Lee et al. ^[53] found that visitors' perceived authenticity of a heritage tourism destination plays a significant role in predicting their future behavior.

AR satisfaction refers to the overall evaluation of using AR technology during travel activities (Chung et al., 2018). Previous research on the tourism literature has found that AR satisfaction is related to destination attitude ^[29] and behavioral intention ^{[54][29]}. In their study on AR use in Korean heritage tourism destinations, Chung et al. ^[29] determined that visitors' satisfaction with using AR significantly affects behavioral intention toward a focal heritage site. With regard to behavioral intention, several studies have been conducted on visitors' intention to preserve heritage sites by evaluating economic factors, such as willingness to pay ^{[55][56]}. Similarly, visitors who have obtained valuable experiences through AR can exhibit emotional responses, such as positive attitudes or satisfaction with a destination ^{[57][58]}, which can be assumed to elicit their willingness to support the conservation of heritage sites ^[59].

In accordance with the preceding considerations, the following hypotheses are suggested:

Hypothesis 3 (H3).

The experiential authenticity of heritage tourism destinations exerts a positive effect on willingness to support the conservation of such destinations.

Hypothesis 3 (H4).

Satisfaction with AR exerts a positive effect on willingness to support the conservation of heritage tourism destinations.

Overall, to investigate the role of experiential value and the outcomes, we propose the research model shown in [Figure 1](#).

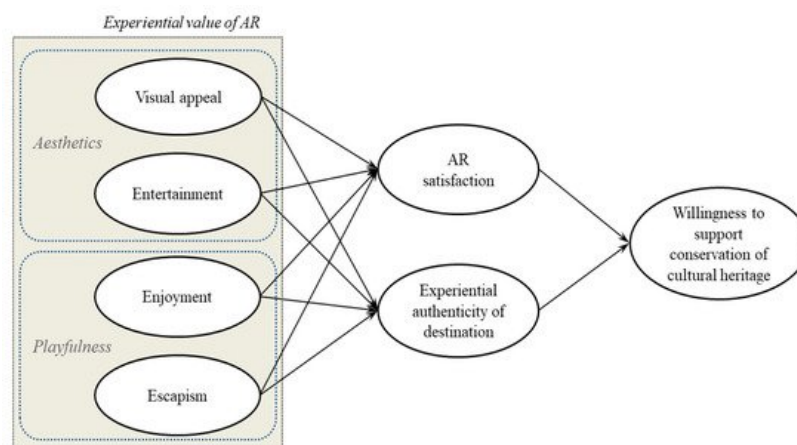


Figure 1. Research model.

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