Perceptions of an immersive learning experience: what do reviews of an architecture cruise reveal?

Heather Moulaison-Sandy, Danielle Oprean, and Wilson Castaño-Muñoz

Abstract

Introduction. Immersive experiences in cultural heritage environments often involve *leisure learning*. We studied online reviews of an architecture cruise to explore what is communicated about the experience.

Method. Two hundred Tripadvisor cruise reviews were collected. After initial screening, 199 reviews were retained and coded by the research team for mentions about the experience and learning.

Analysis. Using both deductive and inductive coding within a storytelling framework, People (those involved in the experience), Places (including buildings and history), and Perceptions (reviewers' affective responses) in reviews were coded. References to learning or to specific knowledge gained were also coded.

Results. People were the most reported storytelling-related category, with docents praised for their knowledge, communication style, and passion. Perceptions reflected strong emotional connections of participants. Places focused on Chicago's architecture and history, appreciated through the city's visual impact. Although only one-third of reviews mentioned learning, the experiential elements related to storytelling were central to how tourists expressed meaningful connections with leisure learning in cultural heritage settings.

Conclusion. Storytelling emerges as a useful lens for understanding leisure learning in cultural heritage tourism. Analysing online reviews helps identify which aspects of immersive experiences resonate with visitors and where enhancements may support more meaningful reflections.

Introduction

Immersive experiences are not confined to online environments, and they can be powerful tools for promoting engagement that enables learning. For example, museums propose immersive experiences as visitors move through curated spaces (e.g., Dudzinska-Przesmitzki & Grenier, 2008). Participants can also be guided in immersive experiences with architecture ranging from visits of historic houses (e.g., the Anne Frank House in the Netherlands) to commercial structures (e.g., the Empire State Building in the U.S.) or neighbourhoods (e.g., District Six in South Africa). Engaging physically through immersive, in-person interactions with architectural cultural heritage can be a powerful kind of *leisure learning*.

How these embodied encounters are interpreted and shared via online platforms like Tripadvisor raises questions about what is considered meaningful for audiences engaging in leisure learning. Recognising aspects of these experiences that are communicated as meaningful can help those in the cultural heritage sector better engage future visitors.

Architecture cruise as guided experience

One popular immersive experience with architecture is the architecture cruise. Chicago, U.S., is a city known for its architecture. Architecture cruises along the Chicago River sponsored by the Chicago Architecture Center (CAC), a non-profit, were rated the #3 Top Experience in the U.S. by Tripadvisor in 2025 (*Best of the Best Travel Experiences in the US*, 2025). The CAC uses volunteer docents as guides to lead its 90-minute tours. Docents are trained in architecture, but also in history and storytelling (see Vickroy, 2025). In the U.S., a *docent* is *'a person who leads guided tours especially through a museum or art gallery'* ('Docent,' 2025); in this case, the city of Chicago and its architecture are the curated cultural experience through which participants are guided.

Impassioned by architecture and the desire to share information about their city with visitors, CAC docents present information about buildings in the order they see fit, and supplement that content with additional information to round out the experience. Each docent creates a unique theme for their tour, and each communicates the required stories in the way that best aligns with their theme (see Vickroy, 2025).

As volunteers with a non-profit association, docents do not receive payment for their work and are not allowed to accept tips. Instead, they ask guests to express their appreciation by providing a favourable Tripadvisor review. As Tao and Kim (2019) note, *'Tourism is an information-intense industry'* (p. 524, as cited in Sheldon, 1997; see also Werthner & Klein, 1999) and docents leverage the good will of their audiences in the service of positive reviews. These online reviews bolster tour rankings while also providing rich and compelling insight into the immersive experience of the architecture cruise through the eyes of the participants.

Immersive experiences and leisure learning

Immersion is powerful. Immersive museum experiences, shaped by embodied and interactive elements, can enhance visitor satisfaction (Abuhassan & Malhis, 2025). Such experiences engage people through spatial design, narrative framing, and affective cues (Anton Clavé et al., 2023). These qualities align with leisure learning—an informal, lifelong process emphasising personally and socially meaningful engagement, often driven by intrinsic motivation and enriched by cultural, social, and experiential contexts (Hibbler & Scott, 2015; Dudzinska Przesmitzki & Grenier, 2008; Falk et al., 2012).

The cruise experience physically immerses visitors into the architectural history of Chicago through a combination of docent explanations and the real-time viewing of buildings and structures. As docents talk, the buildings demonstrate and exemplify the ideas they are communicating. Educators already use immersive experiences for teaching architecture to university students, with architecture lending itself well to immersive experiences ('Experiential

Learning in Architecture and Design,' 2024; Lombardozzi, 2015; Pagano, 2013); in this way, architecture cruises are similar, albeit *informal* learning experiences that promote *leisure learning.*

Rationale for this short paper's study

The current study is the first, to our knowledge, to identify the information problem explored in online reviews that recount an immersive leisure learning experience in the cultural heritage sector. This work investigates a novel information space and probes the utility of online reviews for better understanding how tourists communicate their immersive leisure learning experiences. We use the novel approach of applying a storytelling framework to understanding the experience.

Research question

In light of the gap in the literature, this research project seeks to understand the following:

> RQ1: What do the texts of reviews of an architecture cruise communicate 1) about the cruise experience and 2) about the learning?

Using both deductive and inductive coding within a storytelling framework, we code a set of reviews for People (those involved in the experience), Places (including buildings and history), and Perceptions (reviewers' affective responses). Mentions of learning or specific knowledge gained were also coded.

Review of the literature

Online reviews

When participants write reviews on Tripadvisor, they have the opportunity to convey information about their experience. Accordingly, online reviews can be a vital source of feedback for cultural heritage institutions such as museums, archives, and others. Reviews provide richer insights than traditional surveys by generating large volumes of personalised data about experiences in museums (e.g., Agostino et al., 2021; Huang et al., 2023; Huo et al., 2024). In archives, both social media mentions and online reviews of collections and exhibits can help drive foot traffic and donations; if initiatives are seen to be successful in online venues for sharing, outreach might be increased as a result (Kelly, 2017).

Additionally, online reviews have emerged as one of the most prevalent tools in tourism, not only for offering valuable feedback from tourists, but also for providing a dynamic platform through which tourists can share their experiences (e.g., Buzova et al., 2019; Díaz & Rodríguez, 2018; Filieri & McLeay, 2014; Okazaki et al., 2017; Rita et al., 2022; Tao & Kim, 2019). Scholars have addressed online reviews from different fields such as User-Generated Content (UGC) recognising online reviews as a crucial form of electronic Word-of-Mouth (eWOM) that can offer valuable insights (Buzova et al., 2019). Online reviews have also been studied as a source of consumer information that supports decision making (Filieri & McLeay, 2014; Lee et al., 2011; O'Connor, 2008). In this regard, trustworthiness and credibility have been top concerns for platforms such as Tripadvisor and Yelp, which are constantly questioned for dubious reviews (Filieri et al., 2018).

Informal leisure learning

Informal learning, often embedded in tourism, differs from formal education in its flexible structure and learner-driven nature (Dudzinska-Przesmitzki & Grenier, 2008; Falk et al., 2012). In tourism contexts, meaning-making is shaped by individual identity needs and co-constructed through personal and social interactions (Falk et al., 2012). Cultural heritage tourism has emerged as a particularly rich setting for such learning, offering opportunities for free-choice engagement that is both memorable and meaningful (Dierking, 2005; Falk & Dierking, 2013). Key characteristics include voluntariness, authentic environments, social exchange with locals, and the interplay of

affective and cognitive responses (Andrade-Cunha et al., 2025; Crowley et al., 2014; Pitman et al., 2010).

Leisure learning in cultural heritage tourism often involves direct engagement with historical and cultural spaces, where visitors encounter artifacts, artworks, and architecture *in situ*. Such experiences are shaped by the physical and narrative qualities of place, with meaning emerging from what visitors notice, attend to, and emotionally connect with during their visit (Neathery, 1998; Zhang & Liu, 2021). In these contexts, learning is voluntary, self-directed, and enriched by sensory immersion, social interaction, and authentic settings that invite personal interpretation and reflection (Dudzinska-Przesmitzki & Grenier, 2008; Pitman et al., 2010). The interpretive and affective dimensions of leisure learning provide a conceptual foundation for a storytelling framework, which can mediate how visitors construct meaning from cultural heritage experiences.

Storytelling framework

Storytelling has been acknowledged as an aspect of information diffusion of interest in information science. Reid and colleagues (2024) investigated storytelling's integration into communications with tourists about whisky in Scotland, a cultural heritage-based experience. Reid and colleagues put forth a model of intangible storytelling in this context linked to three Ps (Places involved in the story, People instrumental to the history, and Perception or the visceral aspects) that intersect to form a core narrative. For the current study, we use the novel approach of adapting this framework to the experience of an architecture cruise as leisure learning: the Place was the boat and the city, the People were the docent and the staff and passengers, and the Perception was affective comments about the enjoyment or lack of enjoyment on the tour. The core experience is, in this case, the tour itself. Deductive codes were used to capture these storytelling elements related to the experience. Because of the interest in informal, experiential leisure learning, additional codes were used to capture information about the learning that was described.

Methodology

From the Tripadvisor site associated with the CAC architecture cruise abroad the First Lady (https://www.tripadvisor.com/AttractionProductReview-g35805-d17475801-Chicago_Architecture_Center_River_Cruise_aboard_First_Lady-Chicago_Illinois.html), 200 reviews were captured in August 2024 covering cruises in July and August of the year. One walking tour review was excluded, leaving 199 reviews which is consistent with dataset size for other research that adhered to Tripadvisor terms of use. Analysis was conducted in Google Sheets (July–August 2025) by all three researchers, with the data available online through 10.6084/m9.figshare.30920969. We adopted the collaborative qualitative analysis approach (Richards & Hemphill, 2018) using consensus coding over six weekly meetings. Two initial rounds combined inductive and deductive coding to develop and test the codebook (Fereday & Muir-Cochrane, 2006). A final deductive round applied the intangible heritage storytelling model (Reid et al., 2024), adapted for an immersive architecture cruise. Inductive coding captured nuanced experiential elements and how information appeared in reviews. Codebook validity was tested with Fleiss' Kappa (Fleiss, 1971) using the online calculator ReCal3 (https://dfreelon.org/utils/recalfront/recal3/) with an averaged Kappa of 0.811 across all codes showing very strong agreement. To visualise the text of the reviews in the dataset, a word cloud was created using https://www.freewordcloudgenerator.com/ and user-supplied scores (ranging from 1 to 5) were averaged.

Results

Reviews were overwhelmingly positive, with the average score 4.96/5. A word cloud with the top 100 words in reviews demonstrates the range of information conveyed, including about People with names of docents (e.g., Terry, Russell, John, and Mark) and mentions of crew and staff; Place (e.g., Chicago, river, buildings, architectural, and history) as well as the boat itself (e.g., boat,

smooth); and Perceptions such as affective elements (e.g. amazing, enjoyed, beautiful, wonderful, and fantastic). The whole of the tour experience yielded the terms *'recommend'* and *'recommended.'* Related to learning that took place, *'learned'* also appears among the top 100 words. See Figure 1.

The experience

Of the three Ps relating to the experience, this analysis begins with People, the most frequently occurring of the Ps in the reviews. Docents were the most mentioned People, with the majority (88%; n=175) of the reviews mentioning the docent or, in very few cases, a *'guide'* or a *'narrator,'* or providing the individual's name directly. Of reviews mentioning a guide of some kind, only 15 (8%) gave no other information other than to state one was present. The rest indicated something about the docent, including the name of the docent (62%; n=124), their knowledge (44%; n=87), their communication style (39%; n=77), and/or their passion (8%; n=16). See Figure 2.

Figure 2. Percentage of reviews mentioning docents.

Other People relating to the experience such as the crew (13%; n=26) and the other passengers (including companions) (9%; n=18), were also mentioned. In two cases, the captain was named (#15.05 (Captain Diamond) and #15.10 (Captain Jorge)), implying that the captain can, for some, play an important role in the experience.

Reviews consistently mentioned Place as we defined it in relation to this experience: the city of Chicago (42%; n=84), its architecture (41%; n=82), and its history (29%; n=57). The physical experience of being on a boat (13%; n=25) and amenities such as drinks (8%; n=15) and restrooms (2%; n=4), were also important to reviewers.

In terms of the Perception of the experience, many of the reviewers (61%; n=122) mentioned affective elements including enjoying the experience, for example, finding it to be 'an incredible boat tour' (#5.07), 'a great tour' (#8.03), or 'wonderful' (#7.05).

Learning
Many reviewers mentioned learning (32%; n=63), though far fewer mentioned what they had learned specifically (2%; n=4). When describing knowledge, the level of knowledge of the docent was generally shared in lieu of conveying what was learned. From the reviews addressing learning (32%; n=63), many (11%; n=22) commented as well on the communicative skills of the docents, who were 'entertaining' (#2.08; #4.03; #4.08), 'enthusiastic' (#2.01; #12.05), and 'passionate' (#8.07; #16.02; #16.05), which we infer to be skills that support participant learning.

Discussion
Immersive cultural heritage experiences aimed at leisure learning increasingly rely on feedback to attract and retain audiences (Crespi-Vallbona, 2021). Such feedback is essential to recognising what tourists indicate as central to their experience. Applying a storytelling framework to online reviews allows us to examine how visitors narrate these experiences for others, offering insight into perceived value and potential areas for improvement.

Our findings confirm that online reviews are an informative channel for sharing experiences about the cruise, consistent with prior research positioning online reviews as a primary form of user-generated content and electronic word-of-mouth in tourism (e.g., Buzova et al., 2019; Díaz & Rodríguez, 2018; Filieri & McLeay, 2014; Okazaki et al., 2017; Rita et al., 2022; Tao & Kim, 2019). Additionally, in the text of their reviews, over one-third of tourists (n=75) recommended the CAC architecture cruise, underscoring their perceptions of the influence of such narratives on future visitors' decision-making (Filieri et al., 2018).

In the context of leisure learning, the reviews portray the cruise as an immersive experience shaped by the docent, the setting, and the social atmosphere. While ratings and general praise signal overall satisfaction, relatively few reviews detail specific learning outcomes or knowledge gained. Instead, reviewers often highlight the docent's expertise, communication style, and enthusiasm—serving as a proxy for the perceived quality of the learning experience. This aligns with the storytelling framework's emphasis on foregrounding memorable characters and affective cues, even when explicit descriptions of knowledge gained are limited in the reviews.

Evidence of immersion
Immersion supports engagement and the quality of a leisure learning experience. Given that relatively few visitors choose to write reviews, those who do can be considered highly engaged. In our analysis, 87.9% of these reviewers mentioned the docent, indicating that People—particularly guides—play a pivotal role in shaping the experience. This aligns with literature showing that tour guide attitudes and characteristics are strong predictors of visitor satisfaction (Crespi-Vallbona, 2020), a finding reflected in the overwhelmingly positive ratings (196 scores of 5/5, two scores of 4/5, and one score of 1/5). This finding supports the notion that other leisure learning experiences

using docents will want to ensure the knowledge, skill, and passion of their volunteers when seeking positive online reviews.

Within the context of leisure learning, docent contributions represent *social mediation* (Andrade-Cunha et al., 2025), highlighting the interpersonal dimension of immersion. In the storytelling framework, the docent functions as the storyteller, shaping how the experience is narrated and remembered.

The physical setting of the cruise itself also contributed to immersion; the authenticity of viewing architectural landmarks *in situ*, combined with the sensory qualities of being on the water, anchored the narrative in place and reinforced meaning-making through direct, embodied experience (Falk & Dierking, 2010; Zhang & Liu, 2021). The importance of Place was evident in the reviews that mentioned the city (including its architecture and history), as well as the boat and its comforts.

Notably, some reviewers praised the experience without explicitly referencing learning, suggesting that for certain visitors, the connection between storytelling and learning is implicit rather than consciously recognised (Campos et al., 2025). This nuance challenges the CAC's docent training ethos, which positions the docent as a central conduit for learning, and points to the need for future research to more directly examine the relationship between storytelling and perceived learning outcomes.

Future study
Further research will 1) assess engagement as a function of informal leisure learning, and 2) engage directly with tour participants after their tour to ascertain in greater detail their perceptions of the experience, including the learning and the storytelling. Participants will be recruited directly after disembarking for follow-ups that are either immediate or after a period of time to assess the short- and long-term learning.

Limitations
All of the limitations associated with qualitative coding of online reviews apply here. In addition, Tripadvisor does not allow screen-scraping but does allow data to be read, manually, on a page-by-page basis. For this project, we captured data manually from 20 consecutive pages. This lent itself to manual coding due to the size of the final dataset (199 reviews); a larger dataset (i.e., top-down versus bottom-up approaches) would have yielded different insights (Agostino et al., 2021).

Conclusion
This analysis reveals that storytelling is central to leisure learning, with authors of online reviews identifying strongly with the People, including the docents, as well as with the Place, the city, and its architecture, but also the physical comfort of being on a boat. Perceptions reveal satisfaction with the overall experience, often highlight the enthusiasm of the reviewer for the experience and their willingness to experience it again. Explicit evidence of learning is limited, however; instead, learning is often implied through references to the docents' knowledge, skill, and passion, which act as surrogates for perceived educational value. Although many reviewers mention the storyteller (i.e., the docent), not all do. Ultimately, applying a storytelling lens to online reviews can illuminate the interplay of People, Place, and Perception in leisure learning, offering a replicable approach for evaluating and enhancing cultural heritage experiences and providing insight into what is valued by participants who take the time to share their experiences via the Tripadvisor platform.

About the authors

Heather Moulaison-Sandy is Associate Professor in the iSchool, University of Missouri, USA. She received her PhD from Rutgers University, and her research interests focus on the organisation of information, scholarly communication, and technology. She can be contacted at moulaisonhe@missouri.edu

Danielle Oprean is an Associate Professor in the iSchool, University of Missouri, USA. She received her PhD from University of Missouri in human environmental sciences, and her research focuses on the learning space across different learning intervention technologies and the impact on the experience. She can be contacted at opreand@missouri.edu

Wilson Castaño-Muñoz is Associate Professor at the School of Library and Information Science, University Antioquia, Colombia. He is a PhD candidate at the University of Missouri. His research interests are in digital reading and information conveyed through aural technologies. He can be contacted at wilson.castano@mail.missouri.edu

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