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# The Ways that Digital Technologies Inform Visitor's Engagement with Cultural Heritage Sites: Informal Learning in the Digital Era

**Wenrui Wang**

[1]University of Sheffield, Western Bank, S10 2TN, Sheffield, The U.K.

## ABSTRACT

**Objective -** Heritage sites are typical informal learning spaces that play significant roles in promoting cultural and historical knowledge among visitors. Visitors' engagement with heritage sites is a traditional view of exploring the informal learning spaces in the cultural sector.

**Methodology/Technique –** Informal learning within heritage sites, however, has been informed and changed by digitization and virtualization in the cultural sector. But this generates new research interests in establishing links between traditional and digital cultural studies using a case study methodology.

**Finding –** This paper discussed several cases to show how digital technologies inform visitors' engagement with heritage sites.

**Novelty –** In this way, this paper also explores informal learning in the digital era. This paper also offers suggestions for future researchers in this area.

**Type of Paper:** Empirical

**JEL Classification:** Z10

***Keywords***: Engagement, informal learning, digital heritage sites, digital technologies, cultural sector, digital era.

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## 1. Introduction

The last decades have seen a rising number of digital heritage projects (King et al., 2016). With marketing purposes at the beginning, digital technologies were used to attract heritage site visitors in the real-world (Kim and Ko, 2012). However, the increasing number of museum visitors also generates the digital existence of heritage sites in digital space (Zollo et al., 2021). When engaging with digital resources of heritage sites, people are not only users of digital technologies but also informal learners in digital space (Dornan, 2018). When policymakers increasingly consider digital technologies in the cultural sector (Budge & Burness, 2018), increasing numbers of researchers have realized the significance of engagement and informal learning in heritage sites.

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*Corresponding author: Wenrui Wang
E-mail: wwang111@sheffield.ac.uk
Affiliation: Management School, University of Sheffield, United Kingdom

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Many existing studies locate themselves in a theoretical exploration of engagement and informal learning in virtual heritage sites. These studies are important as they push cultural heritage studies into the digital era. More and more theories and frameworks have been published to analyze and discuss the engagement and informal learning relating to cultural heritage sites in the virtual space. Nevertheless, when discussing engagement and informal learning in the virtual space, only some studies focused on the visitors of the digital cultural heritage sites. This is because visitors become invisible to the cultural heritage site managers in the digital space. Meanwhile, digital technologies are rapidly evolving. This forces the theories about engagement and informal learning associated with the cultural heritage sites in digital space to be refined. Consequently, it is natural that visitors are ignorant when everyone is occupied with modifying the theories in this area. But this research gap should be filled up. The reason is that the development and popularization of digital technologies have changed the relationship between cultural heritage sites and their visitors. Nowadays, visitors can lead the management, development, and even policymaking in the cultural sector. Thus, although the theoretical exploration of cultural heritage sites in the digital space has been a trend nowadays, there should be some studies discussing the engagement and informal learning form based on the visitors in the digital spaces.

In this condition, this paper will answer two questions. The first is how digital technologies inform visitors' engagement with heritage sites. The second question, since engagement is the core of informal learning in the heritage site (Budge & Burness, 2018), will focus on how informal learning is in the digital era when digital technologies have deeply influenced heritage sites and visitors nowadays. To answer these questions, this paper will be divided into four parts. Considering that there are various arguments about engagement and informal learning (Cokley et al., 2016) (M. Callanan et al., 2011), the literature review will critically go through some main discussions about engagement and informal learning. It will give definitions to these two terminologies, respectively. Also, the literature review will critically discuss the digitization of cultural heritage sites nowadays. Based on the theories and arguments in the literature review, then, this paper will show three results in visitors' engagement with cultural heritage sites after the digitization of the cultural sector. These results include the various ways visitors interact with the cultural heritage sites, the new role of visitors in the cultural production of the cultural heritage sites, and visitors' reinforced engagement with the cultural heritage sites. Next, the findings about visitors' engagement with the cultural heritage sites lead this paper to some new informal learning in the digital era. For example, digital technologies make informal learning related to heritage more didactic than usual. Furthermore, the meaning of informal learning has been expanded when digital technologies inform the visitor's engagement with heritage sites. Moreover, some results of informal learning are easier to be assessed than others. In conclusion, finally, this paper emphasizes the changes in the visitor's engagement and informal learning. Also, the conclusion reflects this research, pointing out the limitations caused by the worldwide COVID epidemic. At the end of the conclusion, this paper offers suggestions for future research in this area.

## 2. Literature Review

### 2.1 Informal Learning

Since (Vygotsky, 2012), whose book Thought and Language was first published in 1934, arranged a distinction between every day and scientific concepts, researchers started to discuss and compare formal and informal learning. Vygotsky critically argued that scientific concepts are more systematic and are explicitly taught through formal education, but everyday concepts are learned spontaneously through everyday activity. Following and responding to Vygotsky (Scribner & Cole, 1973) summarized that informal learning included focusing on the person, tied learning to particular real-life activities and was irrelevant to generalizing the information learned. By contrast, formal learning was more about abstracting the current activities away from daily life to develop more regular rules within a kind of expression of a certain academic discipline.

Although modern research about informal learning is deeply rooted in these historical arguments (Callanan, M., Cervantes, C., & Loomis, M., 2011), some misunderstandings are evolved. In applied research, one misunderstanding which is highly mentioned is that informal learning should be defined as learning outside the school (Rogoff et al., 2016). According to Rogoff et al., this misunderstanding of informal learning is due to schools needing to organize informal learning as well. For example, after-school programs are typical informal learning activities (Cole & Consortium, 2006). When discussing informal learning, therefore, it is more important to consider how the informal learning activities are organized and supported rather than where the activities happen. In other words, paying attention to who is and how they are engaging in informal learning activities is the point (Goodwin, 1990) (Schugurensky, 2000) (Opie & Opie, 2000). This is the reason why some researchers (Fitts & McClure, 2015) (Majors, 2015) (Bonilla, 2014) critically think that children and adults of all backgrounds can be the centre of informal learning studies.

Once the focus of informal learning studies turns to people, there needs to be a new theory to explicit this concept. That is what Callanan, Cervantes, & Loomis (2011) have done. Callanan, Cervantes, & Loomis summarized 5 dimensions of informal learning: (1) non-didactic, (2) highly socially collaborative, (3) embedded in meaningful activity, (4) initiated by learner's interest or choice, and (5) removed from external assessment. This paper will corporate these dimensions into the arguments since Callanan, Cervantes, & Loomis aligned with (Nasir et al., 2006), whose article considered informal learning as a kind of cultural activity. According to Nasir et al., although there are critical arguments on whether informal learning can be treated as a kind of cultural activity, there are no doubts that informal learning can be more obvious in cultural heritage sites than in schools. For example, compared with schools, visitors' engagement with museums can reveal their inner motivations for informal learning and the social structure behind their informal learning (Scribner & Cole, 1973). Moreover, museums can offer an atmosphere where visitors are willing to participate in cooperation, family engagement, and partner interaction (M. A. Callanan & Oakes, 1992). These activities are significant for observing informal learning from the view of visitors. But in the schools, only part of these three activities can be observed. Actually, Callanan, Cervantes, & Loomis (2001) have successfully analyzed the informal learning in the museum from the view of children visitors. This provides this paper a reason to apply these 5 dimensions as a considerate framework to discuss informal learning in digital cultural heritage sites.

### 2.2 Engagement

Engagement is the core of informal learning (Budge & Burness, 2018). Being considered informal learning settings, heritage sites are combined with the communities of practice (Wenger, 1999) and professional learning theory (Billett, 2009). Communities of practice regularly include a process of collective learning in a shared domain of human endeavor' (Wenger-Trayner, E., Wenger-Trayner, B., 2015) with learning through social participation (Wenger, 1999). Due to the social elements that motivate the heritage site visitors to establish links with the topic or context of learning and to deepen the process of constructing knowledge, communities of practice can promote the visitor's engagement with the heritage sites. During visiting heritage sites, the experience visitors obtain from the informal learning and the behavior to propel the informal learning is crucial for understanding how visitors' engagement with heritage sites is triggered (Budge & Burness, 2018). Because of the nature of informal learning, according to it can invite visitors' engagement with heritage sites, especially when elements such as play, experiment, enjoyment, and effect are activated.

In the context of digitization, the discussion of visitors' engagement with heritage sites has varied. In the digital era, researchers have started to realize that engagement is not only the time visitors spend on heritage sites (Taheri et al., 2014) but also involved with the cultural consumption experience gained from digital

heritage resources (Brodie et al., 2011). Such experience includes finding challenges, getting positive affect and feedback, desiring to re-visit the digital heritage resources, aesthetic, and sensory appeal, being attracted to attention, and perceiving variety/novelty/interactivity (O'Brien & Toms, 2008). Although this expression of the visitor's experience may not be suitable to apply to the digital realm when discussing engagement, this can be a critical beginning point for the concept of engagement within the cultural sector (Budge & Burness, 2018). Many previous studies have established their arguments upon O'Brien and Toms's summary of visitors' experience during their engagement with digital heritage (Budge, 2017) (Budge & Burness, 2018) (Pallud & Straub, 2014) (Pallud, 2017). But in these studies, a quick review of the digitization of heritage sites is necessary before developing further discussion.

### 2.3 The Digitization of Cultural Heritage Sites

The last decade has seen a rising number of digital heritage projects, from 3D visual displays to large-scale digitization projects (King et al., 2016). Many museums set up their own official website to expand visitor engagement. For example, the websites of Fine Arts Museums of San Francisco and the Museum of Applied Arts & Sciences not only offer information about their collections and exhibitions but also provide visitors the information on tickets and directions, which can be helpful before visitors start their museum traveling. The Museum of Applied Arts & Sciences even invites website visitors to complete the heritage interpretation together online.

Social media platforms have also become the popular digital technology among heritage sites to enhance visitors' engagement with them in the virtual space. In 2007, for example, Tate Britain used Flickr (Tate, 2007) to crowd-source the public's photographs as a part of their first major photography exhibition (Britain, 2007). This is one of the earliest attempts to invite ordinary museum visitors to curate exhibitions online.

Some other digital technologies make intangible heritage more accessible and portable. i-Treasures (European Commission, 2015) was a digital repository platform of intangible cultural heritage on the purposes of research and experiment. Visitors cloud learn to dance, sing, make a pottery object or compose music using the intangible musical instrument themselves with the help of a virtual tutor. No matter when it is and where they are, once they want to learn about the intangible heritage, the only thing they need to do is open the i-Treasures.

Based on these examples, the definition of the digitization of cultural heritage sites has been concluded by other scholars broadly (Taylor & Gibson, 2017). The digitization of cultural heritage sites is a process that physical, cultural heritage sites obtain new communication characteristics in the digital space. This process will also produce a kind of digital culture. Such culture is the result of the representation of the original cultural symbols in the real world. With suitable digital technologies, digital cultural heritage site managers can control the contents and formats of cultural symbols presented to visitors in the digital space. These technologies usually include novel communication technologies and unique interface designs. From the view of visitors in the digital space, they have also been beneficial from the digitization of cultural heritage sites. Digital technologies offer visitors in the digital space interactive embodied experience and immersive spatial perception and restore the cultural value of the site from multiple dimensions. In the rest of this paper, with a certain methodology, how visitors in the digital space react to such emerging digital technologies will be discussed critically.

## 3. Research Methodology

As suggested by Budge and Burness (2018), one of the most effective methodologies to discuss visitors' engagement with heritage sites in the context of digitization is the case study. The case study methodology allows a holistic investigation into one specific area (Yin, 2009). Case study, moreover, is often carried out in close encounters with practitioners enabling an injection of knowledge from practice (Gibbert et al., 2008). This renders it "a powerful method" that closely attaches the contents of a study to its research question and objectives all the time (Budge & Burness, 2018).

Consequently, this paper discusses several heritage sites as case studies, including the Fine Arts Museums of San Francisco, the Museum of Applied Arts & Sciences, Tate, and the intangible heritage platform i-Treasure. The bridge connecting those cases to informal learning is terminology engagement. The secondary data and past studies of engagement will be incorporated into this paper. The first digitization attempt of these chosen cultural heritage sites was Tate's How We Are Now at Tate Britain Museum online exhibition; the data will be mainly collected from 2007 till the current time from these sites (Proctor, 2010).

But the cases are supposed to be analyzed qualitatively due to the engagement is related to the visitor's experience (O'Brien & Toms, 2008). Data will be analyzed by descriptive statistics method. This method is suggested to be used when the data relates to visitors' engagement with cultural heritage sites and their informal learning behaviors in digital space (Marty, 2008). Although some scholars may critically argue that descriptive statistics is less powerful than other qualitative data analysis methods, it can be a considerate and feasible method for case studies (Baffoe-Djan and Smith, 2019). This is because descriptive statistics is good at summarising data from a massive information source (Cooksey, 2020).

## 4. How can Digital Technologies Inform the Traditional visitor's Engagement

### 4.1 Digital Technologies Expand the Way Visitors Interacting with Heritage Sites

Using digital technologies, Visitors are now interacting with heritage sites with more complicated expectations in and needs for heritage. Limited access to museum resources cannot satisfy visitors any longer (Cameron, 2003), which has generated a more devoted and sophisticated visitor's expectations of and needs for heritage resources (Marty, 2008) (Müller, 2013). In the recent decade, Fine Arts Museums of San Francisco has built a series of digital and virtual surrogates (information representations of museum collections such as digital images, database records, etc.) of physical heritages. These surrogates have offered visitors new ways to intact with museum resources (Henchman, 2000) (Gillard, 2002). Thus, Fine Arts Museums of San Francisco has turned visitors' traditional interaction with heritage sites into a kind of digital interaction with expanded expectations and needs.

The need for digital interaction can be found in visitors to Fine Arts Museums of San Francisco (Marty, 2008). visitor's needs, when using the website of Fine Arts Museums of San Francisco, reveal their expectations of this museum in depth. Basically, visitors are focused on the images and research materials, which can multi-dimensionally display the collections with digital technologies. When they are away from Fine Arts Museums of San Francisco, moreover, they will rely on the museum website to gather information about the events before visiting and answer questions about Fine Arts Museums of San Francisco after visiting. A clear preference for virtual activities is also mentioned by (Marty, 2008). When visitors use the website Fine Arts Museums of San Francisco, they mainly engage with online educational activities, search the current or future exhibits, access research materials and archives and learn the detail about the hours of operation, location, directions, and admission fees. But these preferences of activities do not mean that the traditional museums are out of necessity. The traditional museum is still the fundamental section in the

visiting activities. Visitors will mainly consider enjoying two activities, viewing collections and touring galleries and exhibitions, by visiting Fine Arts Museums of San Francisco in the real world instead of its website. What they are looking forwards to is 24-hour data resources, no matter where the data is located and how the data are arranged (Hamma, 2004). Although the role of physical museums are still fundamental in the engagement process, therefore, there is a new trend for visitors to interact with Fine Arts Museums of San Francisco in a virtual environment rather than a physical environment.

Since the museum websites mainly offer standard information, however, some researchers may argue the absence of visitors in the process of such digital interaction. (Tan & Rahaman, 2009), for instance, claim that present digital heritage projects are mostly focused either on process or product but do not necessarily consider the visitor's perception of the content. Consequently, such interaction has usually been understood as a linear interpretation process and a single and universal viewpoint about the past, supposing everyone should learn and understand similarly. As a result, these projects offer visitors similar information. The similarity of information will lead to the ignorance of visitors and eventually makes them absent in the interaction process.

To respond to the concerns about the absence of visitors, many researchers show their attitudes. (Song et al., 2004) use non-linear digital technologies to incorporate a Virtual Tour Guide that can be customized based on the changing expectations and needs of visitors. With the customization function, the linear interaction process can be transformed into a visitor-centered interaction process. (Taheri et al., 2014) discuss the importance of prior knowledge in visitors' heritage consumption experiences. The prior knowledge will influence the choice, activities, and rewards they seek. Using digital online resources, such as Facebook, YouTube, and museum website, can enhance visitors' prior knowledge, leading them to a more profound consumption experience. Therefore, suitable digital interaction will improve the visitor's experience and consequently complement visitors' engagement with the heritage.

### 4.2 Digital Technologies Change the visitor's Roles in Cultural Production of Cultural Heritage sites

As an extreme response to the concerns about the absence of visitors in the digital era, the visitors are centralized in the cultural production of heritage sites and devoted to a deeper engagement with heritage. The changes in the relationship between the visitors and curators can reveal this. Digital technologies offer visitors a forum for engagement, debate, and various encounters with heritage sites (Proctor, 2010). On the one hand, professional curators need to consider using new technologies to inform the visitor's engagement with heritage sites. On the other hand, the popularization of digital technologies and cultural democratization provides visitors with chances to understand, and interact with, heritage in ways aligned with curators. As a result, some visitors may join in the procedure of cultural production, performing like professional curators. Therefore, visitors get a chance to experience the heritage in a view more than pure tourism, and the centralized role in cultural production consequently informs their engagement.

The evidence of visitors' centralization in cultural production could be offered by the emergence of the word "citizen curators" (Shepard, 2018). Citizen curators are becoming one of the most important parts of the crowd-sourced exhibition. In 2007, for example, Tate Britain used Flickr (Tate, 2007) (Exhibit 1) to crowdsource the public's photographs as a part of their first major photography exhibition (Britain, 2007). This exhibition made the visitors become the curators at the same time in a kind of uniform designation (Moqtaderi, 2019), such as 'citizen curators. The uniform designation democratized participation and suggested that all participants were equally valued regardless of their experience with art. It constructed a dynamic balance between the audience and Tate British. The dynamic balance built a quality of investment where audience members feel responsible for the outcome and, therefore, more engaged with the resulting exhibition and related programming.

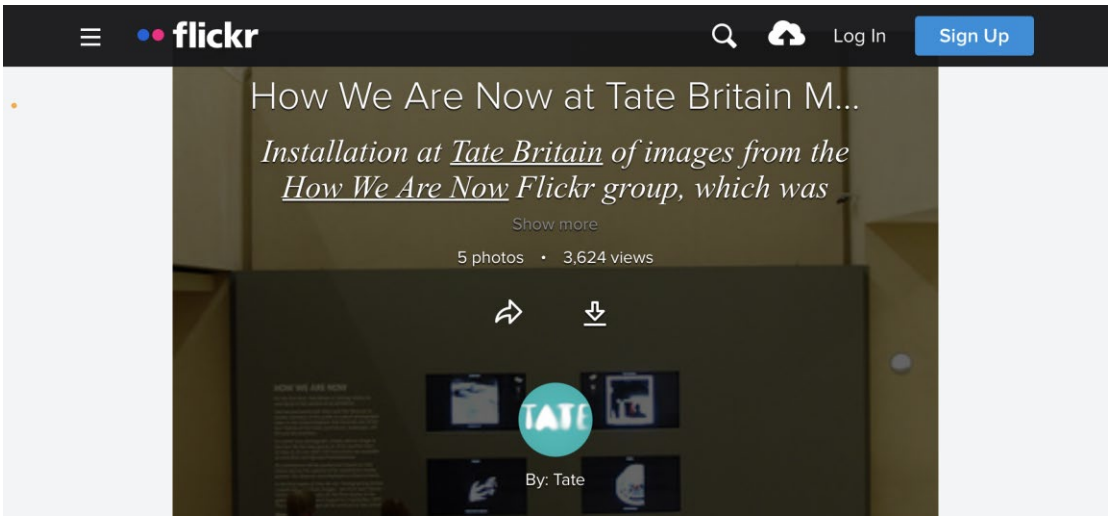



Figure 1, How We Are Now at Tate Britain Museum; Source: Tate, 2007

The crowd-soured exhibition in Tate Britain, nevertheless, has conducted some worries about the quality of the engagement in the context of cultural production in the digital era. (Proctor, 2010) has argued that the boundaries between professional curators and other creative classes are blurred in the era of social media since the easy access to abundant information. However, this doesn't mean that the differences, such as the professional knowledge, between the curators and ordinary visitors or citizen curators have been eliminated (O'Neill, 2017). Without enough professional background knowledge, it may be difficult for citizen curators to reach the specific qualifications of curators in the digital era, like story-telling ability (Gade, 2009). Thus, the participation of citizen curators in cultural production may reduce the quality of visitors' engagement with heritage sites.

To decrease these worries, professional curators develop their strategy of reacting with the citizen curators. Curators consider the citizen curators as the "wisdom of crowds" (Proctor, 2010), which enriches their jobs rather than completely substitutes for their jobs. In the case of Tate Britain, to be detailed, the professional curators would verify the information from citizens to choose the qualified photos. The curators, moreover, invited professional photographers to join in the exhibition, which built the basic ground of professionalism and quality for the exhibition. In other cases, the public enhanced the information and understanding of the museum's collection. Powerhouse Museum in Australia, for instance, uses crowdsourcing to complete the recording of and rediscover the collection. There was a collection described as "H7507 Inclinometer" without any images. Sharon Rutledge contacted Nick Lomb, the museum's curator of astronomy, and offered the complete and qualified recording, including a high-resolution photo (Exhibit 2) and a hundred-word description of this collection (Lomb, 2009). Therefore, the centralization of visitors and the emergence of citizen curators do not mean the silence of professional curators in cultural production. Oppositely, the importance of professional curators is increasing, and they currently work as not only a storyteller but also a doorkeeper of user-generated content. Consequently, the centralization of visitors will not reduce the quality of visitors' engagement with heritages, sometimes even reinforced.




Figure 2, Dip circle used to study the earth's magnetic field at Parramatta Observatory.
Source: Lomb, 2009

### 4.3 Digital Technologies Reinforce Traditional Engagement with the Intangible Heritage

In some digital platforms, with precise technologies, the platforms themselves may play the role of storytellers and doorkeepers to inform the visitor's engagement with intangible heritage. Intangible heritage traditions or living expressions are inherited from ancestors and passed on to descendants, such as oral traditions, performing arts, social practices, etc. (UNESCO, 2011). Due to the intangible characteristic, the existence of this type of heritage will only be possible with some other external elements, such as the place and the media. These external elements, meanwhile, limit the visitor's engagement with traditional intangible heritage to a degree. The limitation of external elements, however, can be reduced by digital technologies. According to (Howell & Chilcott, 2013), digital technologies generate not only new cultural products but also new heritage consumption places. These new consumption places can raise the visitor's awareness of interpreting intangible heritage with each experience. In this way, visitors' engagement with intangible heritages can be informed by digital technologies.

The evidence of reinforced engagement with intangible heritages with digital technologies can be found in many contemporary projects, such as i-Treasure. i-Treasures (European Commission, 2015) (Exhibit 3) was a digital repository platform for intangible cultural heritage for research and experiment, which was introduced to many European communities with more than €7,226,000 investment (Francesca, 2017). Visitors cloud learn to dance, sing, make a pottery object or compose music using the intangible musical instrument themselves with the help of a virtual tutor. According to European Commission, the significance of i-Treasures is its contribution to digital engagement technologies. Various technologies were applied to offer the users the description of the intangible heritage they learned as precisely as possible. For example, earlier i-Treasures research that took place in Corsica involved the use of ultrasound technologies and the custom-made hyper-helmet for the documentation of the movement of the larynx during the polyphonic performance (Herrgott, 2016). The platform gave not only linguists but also teachers and students the opportunity to participate with new technologies in making their own recordings and videos. During such activity, i-Treasure users can obtain many quantitative attributes of their learning. The understanding and interpretation of the chosen heritage can be reinforced. The users' engagement, consequently, can be reinforced.

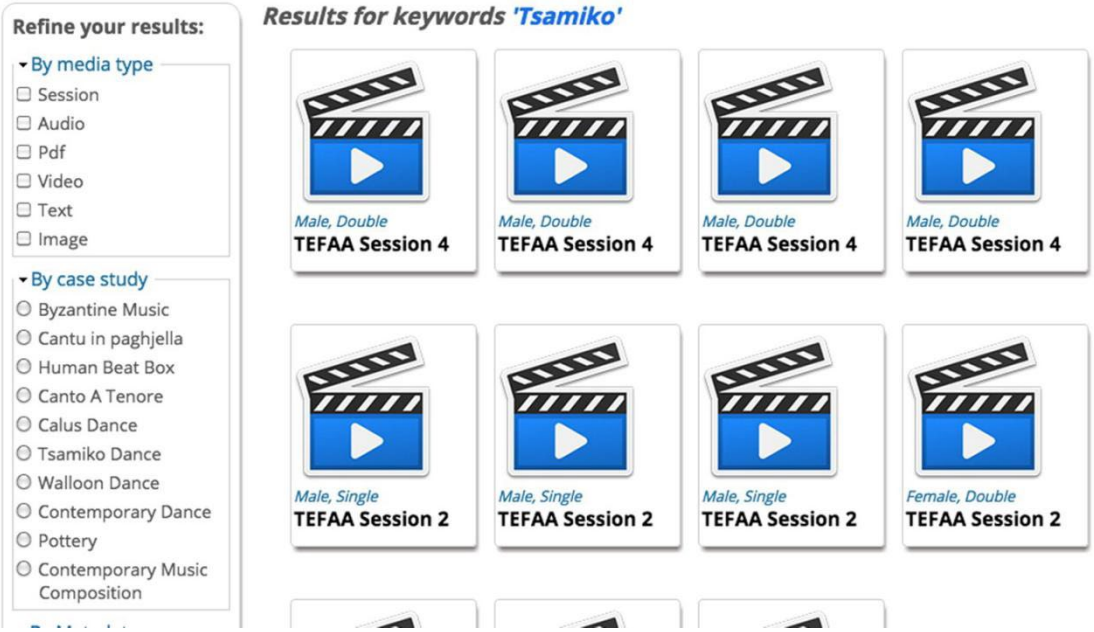



Figure 3, Search Functions of the Digital Repository; Source: Alivizatou, 2019

Some researchers may think critically about the digital technologies applied to intangible heritages. Digital platforms like i-Treasure often seem to provide a basic engagement with cultural traditions, not allowing for deep knowledge and experience of cultural expressions (Alivizatou, 2019). Yet, feedback from the platform's evaluation suggests that such platforms rekindled the interest of local and virtual groups in cultural preservation activities and had a positive influence on the activities of local institutions and associations (Pozzi, 2017).

## 5. Informal Learning in the digital era

Digital technologies have changed visitors' engagement with heritage sites. Consequently, informal learning nowadays also has changed. Through the above-mentioned cases, the changes in the dimensions of informal learning in the digital era can be found.

Traditionally, informal learning is the result of non-didactic teaching. But, in the digital era, informal learning related to heritage can be more didactic than usual. This is because digital technologies have selected and re-programmed the perspectives of the heritage with which visitors engage in virtual space. As i-Treasure shows, visitors' engagement with digital heritage sites is based upon well-designed courses. In every course, visitors can only learn some knowledge of the intangible heritage contained in this platform rather than explore the intangible heritage without limitation. However, informal learning based on visitors' engagement with the heritage in digital space does not completely equal formal learning. Although the courses on i-Treasure are more didactic than usual, they are not compulsory due to the informal learning on the i-Treasure being initiated by the visitor's interests.

Meanwhile, the meaning of informal learning has been expanded when digital technologies inform the visitor's engagement with heritage sites. In the digital era, informal learning has a more direct impact on individuals. The website of Fine Arts Museums of San Francisco offers visitors the chance to fill up the gap between their personal preference for museum objects and the professional academics behind them. Before the digitization of the cultural sector, when engaging with the heritage sites, the meaning of informal learning

was usually to gather family and community members together, inserting positive effects and communication into this group (Tarlowski, 2006).

Furthermore, when engaging with heritage sites in digital space, some results of informal learning are easier to be assessed than others. Citizen curator programs from Tate and the Museum of Applied Arts & Sciences put the informal learning results from ordinary visitors into the public sights. Nevertheless, the result of informal learning should be removed from the external assessment. However, the external assessments received by such citizen curator programs are not the same as the quantitative assessments in the formal learning process. In Tate's case, the comments on social media are parts of the external assessments as well. But comments are more qualitative. This is the point to distinguish informal learning in the digital era from formal learning.

## 6. Conclusion

Digital technologies have largely informed visitors' engagement with heritage sites. Due to engagement being a crucial element of informal learning within heritage sites, informal learning is changed as well. The findings of this paper have identified these changes. Also, these findings can be applied to develop digital strategies for heritage site management due to digital technologies, nowadays, being related to policymaking in the cultural sector. But more cases should be discussed in further research.

Also, a reflection is necessary for a research paper and is suitable for the end of a research. This paper has some limitations. Although limitations are inevitable for academic research, it should be identified for the latter research. Many cases have been included in this paper, but the discussions are mainly based on secondary data. This is because of the worldwide COVID epidemic. From 2020 to 2021, the COVID epidemic hit the cultural sector severely. Many cultural heritage sites, such as museums, art galleries, and archaeology sites, were forced to be closed and turned to online operations. To a degree, this is one of the most important reasons why scholars have started to establish the links between digital technologies, engagement, and informal learning. But the backside was that only some first data could be collected from visitors as both scholars and cultural heritage sites failed to interact with them directly. Fortunately, all over the world is recovering from the COVID epidemic now. Museums, art galleries, and archaeology sites start to reopen, welcoming visitors back. This also allows scholars to contact visitors face to face, with a more complicated research method, in one typical cultural heritage site, to expand the border of this academic area.

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