

Towards a paradigm for online heritage: cyber communities and digital educommunication

Pilar Rivero, Borja Aso, Silvia García-Ceballos & Iñaki Navarro-Neri

To cite this article: Pilar Rivero, Borja Aso, Silvia García-Ceballos & Iñaki Navarro-Neri (30 Apr 2024): Towards a paradigm for online heritage: cyber communities and digital educommunication, Cultural Trends, DOI: [10.1080/09548963.2024.2345835](https://doi.org/10.1080/09548963.2024.2345835)

To link to this article: <https://doi.org/10.1080/09548963.2024.2345835>



© 2024 The Author(s). Published by Informa UK Limited, trading as Taylor & Francis Group



Published online: 30 Apr 2024.



Submit your article to this journal [↗](#)



Article views: 100



View related articles [↗](#)



View Crossmark data [↗](#)

Towards a paradigm for online heritage: cyber communities and digital educommunication

Pilar Rivero , Borja Aso , Silvia García-Ceballos  and Iñaki Navarro-Neri 

Department Specific Didactics; Faculty of Education, University of Zaragoza, Zaragoza, Spain

ABSTRACT

This article provides a theoretical review of the educommunicative processes related to cultural heritage that occur in the digital sphere. This emerging approach, driven by educational and media transformations, urgently requires a well-grounded framework and adequate channelling of education in the media. After analysing the new forms of educommunication and interaction, the article adopts a dialogical approach that focuses in particular on the creation of heritage cyber-communities. One of the main objectives is to provide an up-to-date review of theories related to online educational communication, covering concepts such as emirec and prosumer or rhizomatic and co-creative communication processes. The main educational paradigms and models that arise on digital social media are also discussed, specifically interactive pedagogy and the pedagogy of uncertainty. The chief contribution of the analysis is a decalogue of good practices that helps to optimise digital educommunicative processes related to cultural heritage, thereby activating committed social participation.

ARTICLE HISTORY

Received 6 November 2022
Accepted 11 April 2024

KEYWORDS

Heritage education; digital educommunication; social media; cultural heritage; museums; cyber community

1. Introduction

In the hyperconnected society of the twenty-first century, knowing how people interact, communicate and learn and, by extension, how the public approaches cultural heritage is of vital importance. Until the 1990s, interpersonal education and communication were conducted through traditional and analogue resources and channels, but the third millennium accelerated the process of transformation of these spaces, adding new ones, with completely different characteristics, to those already in existence. Education and communication were no longer limited to physical spaces and real environments, they also took place on screens and in digital environments.

Access to culture, therefore, has grown through the digital sphere and educommunication in new media has become a cornerstone for the exchange and dissemination of content from a wide range of cultural institutions (Chiappe & Arias, 2016), leading to an ideal context for the development and promotion of culture (Narváez-Montoya, 2019) and heritage education (Ibáñez-Etxeberria et al., 2020). In this sense, we understand

CONTACT Silvia García-Ceballos  sgceballos@unizar.es  Department Specific Didactics; Faculty of Education, University of Zaragoza, Pedro Cerbuna, 12–50.009, Zaragoza, Spain

© 2024 The Author(s). Published by Informa UK Limited, trading as Taylor & Francis Group

This is an Open Access article distributed under the terms of the Creative Commons Attribution-NonCommercial-NoDerivatives License (<http://creativecommons.org/licenses/by-nc-nd/4.0/>), which permits non-commercial re-use, distribution, and reproduction in any medium, provided the original work is properly cited, and is not altered, transformed, or built upon in any way. The terms on which this article has been published allow the posting of the Accepted Manuscript in a repository by the author(s) or with their consent.

educommunication as the theoretical-practical, heterogeneous and plural, inter and trans-disciplinary field of study based on research and the practical implementation of education through the media – whether analogue or digital – and aimed to “collective construction and creation through symbolic exchange and the flow of meanings” (Barbas, 2012, p. 165). The digital sphere openly and flexibly favours the establishment of processes for knowing, understanding, promoting, raising awareness and enjoying heritage, thus turning the Internet into an educational resource in a universal context (Chng & Narayanan, 2017). Studies by Osuna and López-Martínez (2015) and Pierroux et al. (2020) have analysed to what extent the digital environment democratises, educates and popularises heritage. The process of learning in these digital environments is not subject to restrictions and it proposes new rules, communication tools and environments for interaction (Ibáñez-Etxeberria et al., 2020), which can ultimately promote the creation of heritage cyber communities, understood as the linking in the network of users who share the same concerns regarding heritage. Social media emerged as powerful tools for mass communication of museums in their interaction with their audiences (Capriotti & Losada-Díaz, 2018; Claes & Deltell, 2014, 2019; Pescarin et al., 2016) and have even become publishing spaces for these institutions.

Despite all this, there are still certain theoretical gaps with regard to the educommunicative processes of heritage in the network by museum institutions, which has led us to propose this study whose main objective is to provide an updated theoretical perspective on heritage educommunication in the digital sphere. In addition to this, the absence of this theoretical foundation and the consequent analysis of networks may be hindering the design and programming of educational actions in social media by cultural institutions and museums to reach a wider audience.

At this point, what then do we understand by heritage educommunication? What educational paradigms and models are there in the digital sphere? What are heritage-based cyber communities and how are they created?

2. Method

This review article is related to a broader research on the main theories that support the educommunicative processes that occur in the digital sphere concerning heritage and crystallise in the creation of heritage-based cyber communities, under the umbrella of heritage education as an axiomatic discipline and understood as a multidisciplinary space for reflection on the management of heritage from a markedly educational level (Fontal, 2003).

The principal contribution of this work is an up-to-date theoretical view of heritage educommunication in the digital sphere identifying the main educational trends, theories, paradigms and models, as this is a current issue in cultural debates and policies (De Bernard et al., 2022; Mateos-Mora et al., 2022). The review of the literature and previous studies in the field (García-Ceballos et al., 2021; Rivero et al., 2020), including more than 334 articles in the WoS and SCOPUS databases (Aso, 2021), led us to define in our conclusions a decalogue of good practices that helps museum institutions to optimise the educommunicative processes that occur in the digital sphere concerning heritage, this being one of the main contributions to the field of heritage educommunication.

This article is organised around the following research objectives:

O1. To identify the main educational trends, theories, paradigms and models in the field of heritage education in the digital sphere from its origin in the second half of the twentieth century up to its blooming in the third millennium.

O2. To define a decalogue of good practices that helps museum spaces to optimise heritage educommunication processes in social media.

3. Digital educommunication from a dialogical approach at the dawn of the third millennium

When we discuss education and social media, we are inevitably talking about educommunication, a compound word made up of two theoretical/scientific bodies that are different but inevitably interrelated (Parra, 2000). This confluence of fields is rooted in Ibero-America in the second half of the twentieth century (Aparici, 2010), with authors such as Kaplún, Freire, Barbero, Hermosilla, Prieto and Orozco (Gabelas-Barroso & Marta-Lazo, 2020). The decisive push for the establishment of educommunication arrived in the 1970s with UNESCO, although the field took root worldwide with the publication in 1984 of *Media Education* (Morsy, 1984). Since then, two ways of understanding educommunicative processes have been consolidated: from an instrumental approach – linked to the English-speaking world – and from a dialogical approach – linked to the Ibero-American world. Based on its educational value and on its emphasis on people, not on the means, we position ourselves within the dialogical approach, an idea that is close to our beliefs and epistemological foundations and grounded in communication pedagogy and Freire’s critical pedagogy (1973).

The real revolution in educommunicative terms arrived with the second generation of websites – the Web 2.0 – and the resulting gradual introduction of instruments and tools that enabled information exchange between users, thereby promoting communication and interaction and allowing them to freely create online content (Barbas, 2012). The first representative spaces of the Web 2.0 were wikis and blogs and would later be joined by social networks – real cyber spaces for communication and social exchange and the focus of this research. This second generation of websites offered new communication possibilities and encouraged multi-directional and horizontal communication, characterised by the appearance of the concept of *emirec* (Cloutier, 1973). According to this communication model, all communication subjects are, at the same time, senders and receivers, which results in the establishment of relationships between equals on the same communicative level or plane. The emirec theory is directly related to democratic, horizontal and non-hierarchical communication (Aparici & García-Marín, 2018). In this idea of multi-directional and active communication, social networks 2.0 emerge as ideal spaces or channels for the development and empowerment of the emirec.

To these hypermedia practices, authors such as Scolari (2008) and Silva (2005) added the idea of establishing rhizomatic and interactive communication processes, which would complete the emirec theory put forward by Cloutier (1973). Deleuze and Guattari’s 1976 theory of rhizomatic thinking (2010) proposed a new approach – inclusive and rhizomatic – that emerged as an alternative to the single thought (Orsi et al., 2019). In “rhizomatic communication”, particularly in digital fields, where the elements involved do not follow fixed, established, hierarchical structures; instead they constantly interact and “any of them could affect or influence the other” (Barbas, 2012, p. 169), assuming the concepts of difference, interference and chaos (Bermejo, 1998).

However, the benefits of digital educommunication based on dialogical approaches in Web 2.0 environments could be related to something different that, under the same guise, pursues opposing objectives. Above we outlined the emirec theory (Cloutier, 1973) and dialogical educommunication, and now we will discuss the prosumer theory and instrumental educommunication. Underneath the concept of prosumer put forward by Toffler (1980) in his work *The Third Wave* – with a clearly financial slant and market-oriented – there is an underlying reproductive conception of the capitalist economic system based on the establishment of new relationships between producers and consumers, particularly with the blooming of the digital world (Aparici & García-Marín, 2018). It was Tapscott (1995, 2009) who updated the definition of “prosumer” and connected it to the digital sphere and twenty-first-century marketing.

Regarding digital communication, several research studies argue that we are far from the existence of a real emirec, instead we are in prosumption, since, on most occasions, vertical and authoritarian communication relationships persist on the Web 2.0, leading to what Sunstein (2010) calls a “cascade of conformism”, that is, the issuing by cybernauts of short messages that support what has been said by the majority, without arousing or promoting debate, dialogue or the co-creation of knowledge.

4. Educational paradigms and models in the new communication media

Regarding education through the new media – particularly the Web 2.0 – we could connect prosumption and emirec theories with the current existence of two opposing educational models: on one hand, transmissive pedagogy and, on the other, interactive pedagogy (Aparici & Silva, 2012). The first, close to positivist and behaviourist approaches, focuses on mass learning and uses the “logic of distribution” or “one-all” model in digital media – the one-way transmission of uncritical information and a traditional and hierarchical communication model. In contrast, the second seeks an “all-all” model: the active, horizontal participation of “communicators”, regardless of their competencies, skills and abilities, which, in turn, encourages dialogue and the constructive co-authorship of knowledge, ultimately assuming the demonopolisation of expert knowledge (Beck et al., 1997) and the creation of cyber communities based on shared interests. Despite the opportunities provided by the digital sphere, transmissive pedagogy continues to dominate over truly interactive and participative pedagogy in current communication models (Aparici & Silva, 2012).

Online participation and interaction can occur in various ways and forms. Sharing trivialities is not enough to encourage a participative and truly educommunicative culture, there must be a certain quality in the production of content by emirecs. The first type of participation continues to be the most common, although various authors have observed an increase in the second (Lemos & Lévy, 2010). In fact, the term “interactivity” has undergone its own evolution, though since the appearance of the Web 2.0 around 2004 (O’Reilly, 2005), it has been taken to mean the empowerment of users in the new digital communication, in which they can be both senders and receivers and have the freedom to create and invent when they communicate with their equals and/or institutions, both synchronously and asynchronously.

It is also worth mentioning that digital education is based on what theorists define as the pedagogy of uncertainty, a Nietzschean current that opposes the pedagogy of certainty. The pedagogy of uncertainty is based on experience, while the pedagogy of

certainty is based on the truth, a closed concept (Vignale, 2009). For this reason, there are two ways of writing: as experience and as truth. The first does not know where it will end, it is constantly restless and in a state of uncertainty, but the experience will be transformed; the second seeks the transmission and communication of closed knowledge – a truth. The Web 2.0 media, as social spaces of exchange and active participation, emerge as public spaces of freedom used to construct and interpret new meanings influenced by the individual and collective experiences of users. Meaningful learning (Ausubel et al., 1978) is very closely connected to experience, to prior knowledge, to the making and feeling of the “self”, and therefore, social museums have a great chance to reinvent themselves in these spaces for the construction of shared knowledge.

To interactive pedagogy and the pedagogy of uncertainty we could add the co-creative paradigm of educommunication (Sebastian, 2019), which conceives the digital sphere as a horizontal, participative space where rhizomatic processes of knowledge are created, a novel aspect in the connections generated between museums and their audiences – co-creation emerges as an essential aspect for educommunicative processes. This co-creative paradigm makes it possible to redefine the roles of museums in the digital sphere, moving closer to the horizontal role of the true emirec.

5. The appearance of the social museum. Reality or fashion?

The application of the above theoretical principles to the field of culture and museums raises the following questions: Do museum spaces still reproduce the traditional vertical and hierarchical communicative practices on the Web 2.0 or have they evolved towards new communication logics in which the emirec user profile actually exists?

This theoretical journey from the Web 1.0 to the Web 2.0 has witnessed how the proliferation of social networks in the last decade has meant a radical change in how human beings interact and communicate with each other (Alonzo et al., 2021). Museum spaces were not untouched by these new communicative practices, and many of them made the leap to the Web 2.0 space (Capriotti et al., 2016; Claes & Deltell, 2014; Losada-Díaz & Capriotti, 2015; Vassilakis et al., 2017).

In this regard, museums have taken advantage of the appearance of information and communication technologies (ICTs) to add institutional communication to the functions they have traditionally performed – preservation, research and socialisation (Fernández-Hernández et al., 2021). Of all the existing digital communication tools, the Web 2.0 has aroused the most interest in cultural spaces, due to two essential factors: 1) its communicative possibilities, and 2) the presence of a large part of the population in these virtual spaces.

Just like the political (Berrocal et al., 2014) and consumption (Aparici & García-Marín, 2018; Aparici & Silva, 2012) spheres have benefitted from new digital communication channels, heritage managers have used the new communicative ecosystem to remain an important part of society in the twenty-first century. This means that museums and cultural centres in general have ventured to actively participate in the Web 2.0, and it is difficult not to find these institutions on the main social media platforms (Capriotti & Losada-Díaz, 2018; Zeler, 2021).

In 2012, Gómez talked about social museums to refer to those institutions that had opted to become “participative, community centres – open to dialogue and interaction – that represent progress with respect to the idea of the traditional museum” (Gómez,

2012, p. 80). This “new museum” seeks to establish a horizontal dialogue with its audience, accepting the presence of virtual visitors in the co-construction of knowledge through their interaction and participation. The close link between the concepts of social museum and Web 2.0 favoured the appearance of the term “museum 2.0” (Capriotti et al., 2016; Capriotti & Losada-Díaz, 2018), used to define institutions that attempt to expand user experience beyond the physical space of museums by using 2.0 tools, generating a space for participation that aspires to transform their context (Bellido, 2016; Simon, 2010) and enabling their inclusion in the museum’s discourse, and initiating horizontal processes of debate, negotiation and reflection, regardless of the role played. Authors such as Giaccardi (2012) point to social networks as a place for the development of these participatory dynamics to the point that Kidd (2014) sees it as inevitable if the museum wants to be visible. She notes that, in line with the rhetoric of the new museums, social networks emerge as democratic spaces of exchange where citizens can contribute to, critique and influence cultural and political discourses; they are, in short, sites of transparency, participation and accountability, spaces where “audiences are, more than ever before, implicated in the practices and processes of history ‘making’: being engaged, consulted, collaborated with and, crucially perhaps, listened to also” (Kidd, 2014, p. 41). Indeed, with the advent of web 2.0, museums have opted to make the public experience the cornerstone of their communication, establishing two-way relationships to obtain responses or feedback, with the aim of getting to know the tastes and needs of their audience (Walías, 2017).

However, several authors note that the presence of museums on the Web 2.0 has been a response to a trend in digital marketing rather than a real acceptance of the 2.0 philosophy and of the approaches proposed by the new communicative ecosystem (Claes & Deltell, 2014; Valtysson, 2022; Vassilakis et al., 2017); where museum institutions are finding it difficult to adapt to the use of social networks from an interactive pedagogy and under the prism of the new museology, without achieving the complete transition towards the “visitor-centred” museum (Baker, 2016) and participatory culture (Dos-Santos-Abad et al., 2023). In this sense, Sánchez (2015) includes in her study why and in what way different museum institutions, such as the Brooklyn Museum, had disconnected from certain social networks, which supports the idea of the difficulties of museums to consolidate themselves in the digital ecosystem.

Losada-Díaz and Capriotti (2015) reached this conclusion regarding the main Spanish museums in Facebook, stating that “there is still a wide scope for improvement, insofar as the capacity for dialogue of these technological tool is not being sufficiently explored” (Losada-Díaz & Capriotti, 2015, p. 889). Claes and Deltell (2014) concluded that, despite the great interest of museums in social networks, their spaces were still at a very early stage in terms of the new models for managing their audiences. More recent studies, such as the one conducted by Capriotti et al. (2016) on the level of interactivity of museum websites, show that the levels of interaction and dialogue with users are still quite low, with very limited use of the possibilities that social websites offer.

Even so, several authors point to 2020 as a turning point in reflection on the use museums make of the Web 2.0 (Amorim & Teixeira, 2021; Rivero et al., 2020). In that year, the health crisis caused by the spread of Covid-19 forced museums to refocus their activity on social media due to their physical closure, thereby increasing their online activity and creating content with greater educational value than before.

6. Heritage-based cyber communities

The concept of heritage-based cyber communities – a clear evidence of the existence on the Internet of a culture of participation motivated by an interest in heritage – arose in the same research plane and with parallel scientific interest. The existence of these cyber communities allows us to discuss participative and interactive online models, (self)learning communities organised around a common good, since, according to Kaplún (2002), participation, investigation, process and self-management are required for meaningful learning to occur.

The digital space enables us to open up new pathways for learning and approaching society (Gabelas-Barroso & Marta-Lazo, 2020) and provides a mass and accessible channel (Pescarin et al., 2016). It also promotes interaction between users and the creation of cyber communities – in the strictest sense of virtual settlements and communities (Harrison, 2009), although these have now taken multiple directions, such as the digital academic communities of practice enunciated by Watrall (2019) or research cybercommunities in times of pandemic (Alfonso, 2021) – and is even described as a space of synergy with a collaborative focus (Marchetti et al., 2018) and of co-creation as a key element of sustainability (Rubio et al., 2020). It should be noted that our notion of cyber community differs from “consumer” virtual communities based on Electronic Word of Mouth (eWOM) platforms (Fernandez-Lores et al., 2022). Heritage educommunication using social networks as a channel to approach, make known, understand, value and enjoy heritage and, ultimately, raise society awareness about it is essential for these actions to occur. From an educational perspective, heritage-based cyber communities could become “learning cyber communities” – in non-formal and informal contexts – motivated by the idea of interactive pedagogy or emerging pedagogies applied to the field of heritage education.

Cyber communities are closely connected to common interests, loyalty to an institution, demand for activity by users through proposals and promotion of content creation, dialogue and interactions. In this interactive universe, beyond the co-construction of knowledge, Piancatelli et al. (2020) talk about the co-creation of value through interactive and multi-sensory user experiences, and it is true that in social interaction not only is knowledge exchanged and added, but the exchange of images, selfies and other snapshots of heritage represents in itself the transmission and promotion of these heritage assets. Adriaansen (2020) and Gye (2007) already identified the value of online photographs as a multimodal resource that enables users to give significance and meaning to assets by combining image and narration. Gye (2007) addresses the establishment of social relationships (ways of self-expression or presentation), in other words, a society that says “yes” to culture as a first step of raising awareness, as the enjoyment of heritage is an essential process in heritagisation, as Fontal already stated (2003).

This dynamics is particularly noticeable among young people, the most frequent audience of the Web 2.0, and, therefore, the promotion of social media and their educommunicative options needs to be approached as an environment that arouses young people interest and involvement. In this regard, images are essential and, according to some studies (Collin et al., 2011; Hughes & Moscardo, 2017), posting, commenting on and sharing photographs on social networks could favour involvement and commitment or loyalty between users and the institution, as Martínez-Sanz and Berrocal-Gonzalo stated

(2017). Therefore, dialogue and co-creation would be the two essential foundations to achieve this relationship that could make up online communities.

Through social networks, all users can create and share ideas, images or thoughts globally; therefore, the sum of meanings, interpretations and perceptions of works (Villegas et al., 2020) will create the joint value of heritage (Abeza et al., 2018). This idea of “co-construction of value” is in line with the research conducted by Suess (2018) on the social media platform Instagram as the focus of the interactive experience of visitors in a process of exchange of meanings through the act of sharing an aesthetic experience, thoughts or interpretations. Suess (2018) states that this act is a significant part of their experience with museums and their works. Similarly, Carah (2014) supports the idea that images are a way of recording experiences at cultural centres in a shared database, a way of documenting the experience and leaving a footprint of their visit or participation there.

Finally, in addition to this joint construction of knowledge and values, there is the joint construction of interpretations (Hooper-Greenhill, 2000) through the idea of interpretative communities based on the image of collectively constructed meanings in a complex mediation network that is created based on information and experience; in this case, it will be the 2.0 social structures themselves that will enable us to create shared meanings based on individual meanings.

Some studies following a slightly more philosophical approach, such as the one conducted by Hooper-Greenhill (2000), investigate the origin of the word “communication” and find it in the words “community” and “communion”, as if communication were a mutual communicative ritual of exchange, comradeship, participation and association. The author focuses on the work of Giroux (1992), who discusses this kind of communication as an amalgam of a complex, unequal and “realist” culture, also mentioning the different perspectives in the processing of knowledge, largely due to cultural experiences that encompass desires and emotions (Hooper-Greenhill, 2000).

This view does not come from the idea of an online community that will arise from the stability of quality educommunication in Web 2.0 spaces. In line with the interpretative community, the joint construction of meanings is proposed based on a collaborative form; in other words, building, as a community, a more global, complete and enriched vision of works or assets. The author suggests revisiting Gadamer’s hermeneutic circle (1998), which is based on a process of creation of meaning and continuous redefinition between the whole and the object, the present and the past, simultaneously, in the form of a dialogue that can be constantly reviewed and amended. Each person has different levels of knowledge and, therefore, will establish new meanings in different ways. The interaction of everyone, taken to the 2.0 level, will make these meanings overlap and interweave.

This idea of a living meaning is what cyber communities or heritage educommunication could promote through social networks. Far beyond an outdated physical moment in a museum, the Internet is permanent, users meet there and always have the chance to interact and get involved with these constructions that, in addition, are shaped based on identities, history, culture and the experiences that each individual carries with them.

7. Conclusions

The Web 2.0 has thrived with the arrival of social networks, spaces that, as their name suggests, make it possible to establish connections between users from all over the

world, depending on factors such as familiarity, friendship, affinity and working relationships. Fainholc (2015) states that “social networks on the Internet are a contemporary socio-electronic phenomenon that redefine daily life in its basic forms of communication, interaction and production of knowledge, mediated by ICTs”. In this hyperconnected and hypermediated context, public and private institutions – which include museums – have been forced to adapt to the social platforms used by ordinary members of the public, connecting to their interests and motivations in order to present themselves as more attractive, accessible, open and, ultimately, democratic.

The results of research into Web 2.0 heritage educommunication has led us to propose a decalogue of good practices (Table 1) that helps to optimise digital educommunicative processes related to cultural heritage. This decalogue does not aim to be a somewhat technical explanation of how to use social platforms based on their software architecture; instead, it addresses how to tackle media communication through approaches that are close to dialogical educommunication, regardless of the digital environment and the social media in which they occur.

The dialogical educommunication that we propose in digital environments 2.0 for museum institutions and the creation of heritage-based cyber communities through this Decalogue (Table 1) is closely connected to the public empowerment and media education of the civil society (Gabelas-Barroso & Marta-Lazo, 2020; Saggin & Bonin, 2017), a line of action of UNESCO and addressed by Gozávez and Contreras-Pulido (2013, p. 135) when they state that “educating for media citizenship is, mutually and as we

Table 1. Decalogue of good practices for the optimisation of educational-communication processes in social networks by museums

	Keys	Description
1	Having a strategic digital communication plan	The scientific literature reviewed has revealed that most of the museum institutions studied did not have a plan or a roadmap to guide their communication policy in the digital sphere (Badell, 2015). Designing and drafting said strategic communication plan helps museums to reflect on and establish objectives and content to be covered, to plan and prepare long-term initiatives, to analyse their target audiences and to evaluate processes (Padua et al., 2020; Perez, 2021). At the same time, it prevents museums’ digital communication from being transitory and circumstance-driven and makes it possible for several people to be responsible for management under the same communication policy.
2	Continuous promotion of dialogue and active interaction with users	In order to establish a close relationship with the public, maintaining an active presence of content creation and digital exchange. All aspects of social media management by museums should revolve around the principles of dialogical communication (Kim et al., 2014; Losada-Díaz & Capriotti, 2015), a key element in creating and establishing educommunicative initiatives that will generate educational processes related to heritage in the Internet. In this regard, if museums want to involve and gain the loyalty of their audiences in the digital sphere, they should consider four criteria (Carpentier, 2012): a) the provision of quality content; b) the appropriate use of social platforms depending on their possibilities and technical characteristics; c) motivating interaction; and d) encouraging active listening – users should recognise the museum’s will to change and improve through their comments and opinions. Examples: “Museo Arqueológico Nacional” of Spain with its #RetoMAN proposal (Twitter https://twitter.com/MANArqueologico), “National Gallery” in London on Instagram (https://www.instagram.com/nationalgallery/) or “Van Gogh Museum” with #vangoghinspires (Instagram https://www.instagram.com/vangoghmuseum/). Similarly, the proposal launched on Twitter with the hashtag #askamuseum by “Ask a Museum” (https://twitter.com/AskAMuseum).

(Continued)

Table 1. Continued.

	Keys	Description
3	Horizontal and democratic two-way – bidirectional – communication	<p>In accordance with the dialogical educommunication posited by Freire (1973), museum institutions should promote opportunities for dialogue and the exchange of opinions regarding heritage, processes that redefine assets and opportunities to listen and be listened to – active listening. Based on this premise, the roles of sender and receiver disappear, and communication participants, or emirecs, take their place. Social museums could promote these types of dialogue and debates about heritage by posing questions on their platforms about the meaning of their works, their possible origin, their alternative suggestions for their interpretation, etc. This empowers users, making them the focus through what they already know and, ultimately, gaining their loyalty to the cultural institution. Museums should not censure or regulate users' comments unless they overstep the limits of politeness and civility.</p> <p>Examples: "Canadian Museum of History" (Facebook https://www.facebook.com/CanMusHistory), "Museo Diocesano de Jaca" (Twitter https://twitter.com/museojaca) or "Conjunto Monumental de la Alcazaba de Almería" with its proposals #trivialalcazabeño or #AlcazabaOnline (Twitter https://twitter.com/AlcazabaAlmeria).</p>
4	Attractive proposals and posts	<p>In order to generate long-term conversations, users need to get involved with the museum and, therefore, the first step is to attract these cybernauts (Safko & Brake, 2009). To this end, social networks make it possible to create and disseminate attractive, interesting content using a wide range of formats, including texts, emoticons, photographs, pure visuals, images with text, audio, video, GIFs, links, etc. Museums should use the possibilities that social media offer them in terms of formats, getting out of their comfort zone based on their almost exclusive use of one-way resources, such as images and texts.</p> <p>Examples: "Museo del Prado" with daily videos and live feeds on Instagram (https://www.instagram.com/museoprado/) and Facebook (https://www.facebook.com/museonacionaldelprado), "Museo Arqueológico Nacional" of Spain (Twitter) or "Musée du Louvre" (Twitter https://twitter.com/MuseeLouvre).</p>
5	Gratification	<p>The uses and gratifications model proposed by Blumler and Katz (1974) and adapted for social media conceives the media as a way of satisfying and meeting needs regarding social interaction. Using this approach, users should have a positive experience or exchange in their interaction with the community, so that self-management occurs naturally as a result of the interest generated within the community. There is a need, therefore, to create dynamics that arouse a range of motivations through the different channels. The values and relationships or meanings that users create with museums will depend on the immersion and participation experiences that museums provide for them.</p> <p>Examples: "CM Alcazaba de Almería" with its proposal #quedadaAlcazaba, which led to the on-site exhibition inside the complex entitled "Las mil y una alcazabas (The thousand and one citadels)" or "National Gallery" on Instagram where you can choose which paintings to explain in their stories.</p>
6	Friendly communication	<p>Museums' communication attitude and tone should be empathetic to users and their environment, with commemorative or special days marked on calendars. This aspect is not disconnected from gratification, since the need arise in communities for a feeling of closeness, despite geographical distance. "Being close" to others leads users towards a more continuous interaction, thus forming heritage communities; we are talking, therefore, about emotional resonance. The emotion manifested in users lead them towards immersive attitudes to museums, thereby activating their participation – they answer questions posed by the institution, explore works of art, research, etc.</p> <p>Examples: "Museo de Almería" (Twitter https://twitter.com/Museo_Almeria), "Museo de Cádiz" (Twitter https://twitter.com/MuseoCadiz) or "Museo Diocesano de Jaca" (Twitter).</p>
7	Inquisitive attitude	<p>Kaplún (2002) argued that the media educator should not make statements but ask questions to create conditions that favour personal reflection, in a dialogue and not a monologue. Using this premise, museums can use open and direct questioning as a good linguistic mechanism to activate educommunicative processes and arouse the interest of audiences by answering questions asked on social media. This inquisitive attitude, where there is no closed or assumed prior knowledge, is connected to the constructivist paradigm of learning and to the Socratic method.</p> <p>Examples: "MoMA The Museum of Modern Art" (Twitter https://twitter.com/MuseumModernArt), "Museo de Altamira" (Twitter https://twitter.com/museodealtamira) with the interpretation of the cave paintings or "Museo de Prehistoria de Valencia (MUPREVA)" on Twitter (https://twitter.com/muprevalencia).</p>

(Continued)

Table 1. Continued.

	Keys	Description
8	Evaluation of action on platforms	All improvement processes must first begin by knowing what is being done. Evaluation is a fundamental and decisive process in finding out what is being done and to analyse strong and weak points, opportunities and dangers. Museums should implement planned evaluation processes regarding their educommunicative actions on social media (Pagano et al., 2016; Pietroni, 2019), with a wide range of options to evaluate: from quantitative monitoring analysis to qualitative evaluation based on the comments of online visitors, including surveys, sentiment analysis, etc.
9	Meaningful heritage	The raw material that museums work with has an incalculable value; the cultural heritage housed within their walls is the selection and sediment of culture, and, therefore it concerns the whole community and not just museums as legal institutions. This means accepting that heritage, regardless of who manages it, is everyone's and for everyone. Starting from this premise, museums should curate heritage assets based on emotions and memory, generating ties between people and assets (Fontal, 2003). The ultimate aim of these heritagisation processes is the raising of public awareness about heritage. Examples: those local museums that speak from their archival collections, such as the "Museo Diocesano de Jaca" (Facebook https://www.facebook.com/museojaca), "Heard Museum" in Phoenix (Facebook https://www.facebook.com/HeardMuseum) or "Bytown museum" in Ottawa on Instagram (https://www.instagram.com/bytownmuseum/) and Facebook (https://www.facebook.com/bytown).
10	The humanised museum	All the above results in a version that is close to the humanised museum that helps to better understand cultural meanings and enables active dialogue that questions audiences and talks directly to them. The aim is to achieve a transformation of museums themselves, which are turned into participants in their own educommunicative proposals to pave the way for a real democratic horizontality that arouses reflections, poses challenges and asks key questions. Examples: "MARQ Museo Arqueológico Provincial de Alicante" and its videos during the pandemic with museum staff giving guided tours or the Canadian Museum of Immigration for its theme and Facebook posts (https://www.facebook.com/CanadianMuseumofImmigration).

have argued, a way of empowering the public in hyper-communicated pluralistic and democratic societies".

Disclosure statement

The authors declare no conflict of interest. The funders had no role in study design, data collection, analysis and interpretation, decision to publish the results, or preparation of the manuscript.

Funding

This work is supported by the project "Competencias digitales, procesos de aprendizaje y toma de conciencia sobre el patrimonio cultural: Educación de calidad para ciudades y comunidades sostenibles" (code PID2020-115288RB-I00), funded by the Spanish State Research Agency (AEI/10.13039/501100011033). The authors are members of the ARGOS research group (S50_23R, Government of Aragon 2023–2025) and of the University Institute for Research in Environmental Sciences of Aragon (IUCA) of the University of Zaragoza.

ORCID

Pilar Rivero  <http://orcid.org/0000-0002-6757-7598>

Borja Aso  <http://orcid.org/0000-0002-3023-4516>

Silvia García-Ceballos  <http://orcid.org/0000-0002-7661-3001>

Iñaki Navarro-Neri  <http://orcid.org/0000-0001-8589-6659>

References

- Abeza, G., O'Reilly, N., Finch, D., Séguin, B., & Nadeau, J. (2018). The role of social media in the co-creation of value in relationship marketing: A multi-domain study. *Journal of Strategic Marketing*, 28(6), 472–493. <https://doi.org/10.1080/0965254X.2018.1540496>
- Adriaansen, R. J. (2020). Picturing Auschwitz. Multimodality and the attribution of historical significance on Instagram. *Journal for the Study of Education and Development*, 43(3), 652–681. <https://doi.org/10.1080/02103702.2020.1771963>
- Alfonso, N. Y. (2021). Las cibercomunidades de investigación. Una alternativa en tiempos de pandemia. *REEA Revista Electrónica Entrevista Académica*, 7(2), 100–112. <http://www.eumed.net/rev/reea>.
- Alonzo, R., Hussain, J., Stranges, S., & Anderson, K. K. (2021). Interplay between social media use, sleep quality, and mental health in youth: A systematic review. *Sleep Medicine Reviews*, 56, 101414. <https://doi.org/10.1016/j.smr.2020.101414>
- Amorim, J. P., & Teixeira, L. (2021). Art in the digital during and after COVID: Aura and apparatus of online exhibitions. *Rupkatha Journal on Interdisciplinary Studies in Humanities*, 12(5), 1–8. <https://doi.org/10.21659/rupkatha.v12n5.rioc1s1n2>
- Aparici, R. (Coord.) (2010). *Educomunicación: más allá del 2.0*. Gedisa.
- Aparici, R., & García-Marín, D. (2018). Prosumidores y emirecs: Análisis de dos teorías enfrentadas. *Comunicar*, 55(26), 71–79. <https://doi.org/10.3916/C55-2018-07>
- Aparici, R., & Silva, M. (2012). Pedagogía de la interactividad. *Comunicar*, 38(19), 51–58. <https://doi.org/10.3916/C38-2012-02-05>
- Aso, B. (2021). *Educación Patrimonial en tiempos digitales. Estudio de la educomunicación en redes sociales del Museo Diocesano de Jaca* [PhD thesis]. University of Zaragoza. <https://dialnet.unirioja.es/servlet/tesis?codigo=302601>.
- Ausubel, D. R., Novak, J. D., & Hanesian, H. (1978). *Educational Psychology: A Cognitive View* (2a ed.). Holt, Rinehart and Winston.
- Badell, J. (2015). Los museos de Cataluña en las redes sociales: resultados de un estudio de investigación. *Revista Interamericana de Bibliotecología*, 38(2), 159–164. <https://doi.org/10.17533/udea.rib.v38n2a07>
- Baker, S. (2016). Identifying behaviors that generate positive interactions between science museums and people on Twitter. *Museum Management and Curatorship*, 32(2), 144–159. <https://doi.org/10.1080/09647775.2016.1264882>
- Barbas, A. (2012). Educomunicación: desarrollo, enfoques y desafíos en un mundo interconectado. *Foro de Educación*, 10(14), 157–175. <https://www.redalyc.org/articulo.oa?id=4475/447544618012>.
- Beck, U., Giddens, A., & Lash, S. (1997). *Modernización reflexiva*. Alianza Editorial.
- Bellido, M. L. (2016). El Museo 2.0 y las nuevas narrativas museológicas. *Illapa Mana Tukukuq*, 10(10), 84–95. <https://doi.org/10.31381/illapa.v0i10.513>
- Bermejo, D. (1998). Deleuze y el pensamiento transversal. Crítica del pensamiento de la identidad, pensamiento de la pluralidad y del rizoma. *Cuadernos salmantinos de filosofía*, 25, 273–302. <https://doi.org/10.36576/summa.1080>
- Berrocal, S., Campos-Domínguez, E., & Redondo, M. (2014). Prosumidores mediáticos en la comunicación política: El «politainment» en YouTube. *Comunicar*, 43(22), 65–72. <http://doi.org/10.3916/C43-2014-06>
- Blumler, J., & Katz, E. (1974). *The Uses of Mass Communications: Current Perspectives on Gratifications*. Sage.
- Capriotti, P., Carretón, C., & Castillo, A. (2016). Testing the level of interactivity of institutional websites: From museums 1.0 to museums 2.0. *International Journal of Information Management*, 36(1), 97–104. <http://doi.org/10.1016/j.ijinfomgt.2015.10.003>
- Capriotti, P., & Losada-Díaz, J. C. (2018). Facebook as a dialogic communication tool at the most visited museums of the world. *El profesional de la información*, 27(3), 642–650. <https://doi.org/10.3145/epi.2018.may.17>

- Carah, N. (2014). Curators of databases: Circulating images, managing attention and making value on social media. *Media International Australia*, 150(1), 137–142. <https://doi.org/10.1177/1329878X1415000125>
- Carpentier, N. (2012). The concept of participation. If they have access and interact, do they really participate? *Revista Fronteiras. Estudos midiáticos*, 14(2), 164–177.
- Chiappe, A., & Arias, V. (2016). La educomunicación en entornos digitales: un análisis desde los intercambios de información. *Opción*, 32(7), 461–479. <https://dialnet.unirioja.es/descarga/articulo/5916882.pdf>.
- Chng, K. S., & Narayanan, S. (2017). Culture and social identity in preserving cultural heritage: An experimental study. *International Journal of Social Economics*, 44(8), 1078–1091. <https://doi.org/10.1108/IJSE-10-2015-0271>
- Claes, F., & Deltell, L. (2014). Museos sociales. Perfiles museísticos en Twitter y Facebook 2012–2013. *El profesional de la información*, 23(6), 594–602. <http://www.elprofesionaldelainformacion.com/contenidos/2014/nov/06.pdf>
- Claes, F., & Deltell, L. (2019). Museo social en España: redes sociales y webs de los museos estatales. *El profesional de la información*, 28(3), e280304. <https://doi.org/10.3145/epi.2019.may.04>
- Cloutier, J. (1973). *La communication audio-scripto-visuelle à l'heure des self média*. Les Presses de l'Université de Montreal.
- Collin, P., Rahilly, K., Richardson, I., & Third, A. (2011). The benefits of social networking services: A literature review. *Cooperative Research Centre for Young People, Technology and Wellbeing*. https://www.uws.edu.au/_data/assets/pdf_file/0003/476337/The-Benefits-of-Social-Networking-Services.pdf.
- De Bernard, M., Comunian, R., & Gross, J. (2022). Cultural and creative ecosystems: A review of theories and methods, towards a new research agenda. *Cultural Trends*, 31(4), 332–353. <https://doi.org/10.1080/09548963.2021.2004073>
- Deleuze, G., & Guattari, F. (2010). *Rizoma (Introducción)*. Ed. Pre-textos.
- Dos-Santos-Abad, J., Piñero-Naval, V., & Somoza-Sabatés, I. (2023). La comunicación digital de los museos: Análisis comparativo. *Anuario Electrónico de Estudios en Comunicación Social "Disertaciones"*, 16(1), 1–25. <https://doi.org/10.12804/revistas.urosario.edu.co/disertaciones/a.12316>
- Fainholc, B. (2015). Un análisis contemporáneo del twitter. *Revista De Educación a Distancia (RED)*, 26), <https://revistas.um.es/red/article/view/231971>.
- Fernández-Hernández, R., Vacas, T., & García-Muiña, F. E. (2021). La comunicación digital en los museos. Estudio comparado de las herramientas de la web 2.0. *Revista Internacional de Investigación en Comunicación ad Research ESIC*, 24(24), 102–121. <https://doi.org/10.7263/adresic-024-06>
- Fernandez-Lores, S., Crespo-Tejero, N., & Fernández-Hernández, R. (2022). Driving traffic to the museum: The role of the digital communication tools. *Technological Forecasting & Social Change*, 174, 121273. <https://doi.org/10.1016/j.techfore.2021.121273>
- Fontal, O. (2003). *La educación patrimonial. Teoría y práctica en el aula, el museo e internet*. Trea.
- Freire, P. (1973). *¿Extensión o comunicación? La concientización en el medio rural*. Siglo XXI.
- Gabelas-Barroso, J. A., & Marta-Lazo, C. (2020). *La era TRIC: Factor R-relacional y Educomunicación*. Ediciones Egregius.
- Gadamer, H. G. (1998). The hermeneutic circle. In A. Linda (Ed.), *Epistemology: The Big Questions* (pp. 232–248). Blackwell.
- García-Ceballos, S., Rivero, P., Molina-Puche, S., & Navarro-Neri, I. (2021). Educommunication and archaeological heritage in Italy and Spain: An analysis of institutions' use of Twitter, sustainability, and citizen participation. *Sustainability*, 13(4), 1602. <https://doi.org/10.3390/su13041602>
- Giaccardi, E. (2012). *Heritage and Social Media. Understanding Heritage in a Participatory Culture*. Routledge.
- Giroux, H. (1992). *Border Crossings: Cultural Workers and the Politics of Education*. Routledge.
- Gómez, S. (2012). Evaluación de preferencia y participación. Museos españoles y redes sociales. *Telos. Cuadernos de Comunicación e Innovación*, 90, 79–86. <https://dialnet.unirioja.es/ejemplar/298241>.

- Gozálvez, V., & Contreras-Pulido, P. (2014). Empoderar a la ciudadanía mediática desde la educación. *Comunicar*, 42(21), 129–136. <https://doi.org/10.3916/C42-2014-12>
- Gye, L. (2007). Picture this: The impact of mobile camera phones on personal photographic practices. *Continuum: Journal of Media & Cultural Studies*, 21(2), 279–288. <https://doi.org/10.1080/10304310701269107>
- Harrison, R. (2009). Excavating second life: Cyber-archaeologies, heritage and virtual communities. *Journal of Material Culture*, 14(1), 75–106. <https://doi.org/10.1177/1359183508100009>
- Hooper-Greenhill, E. (2000). Changing values in the art museum: Rethinking communication and learning. *International Journal of Heritage Studies*, 6(1), 9–31. <https://doi.org/10.1080/135272500363715>
- Hughes, K., & Moscardo, G. (2017). Connecting with new audiences: Exploring the impact of mobile communication devices on the experiences of young adults in museums. *Visitor Studies*, 20(1), 33–55. <https://doi.org/10.1080/10645578.2017.1297128>
- Ibáñez-Etxebarria, A., Gómez-Carrasco, C. J., Fontal, O., & García-Ceballos, S. (2020). Virtual environments and augmented reality applied to heritage education. An evaluative study. *Applied Sciences*, 10(7), 2352. <https://doi.org/10.3390/app10072352>
- Kaplún, M. (2002). *Una pedagogía de la comunicación (el comunicador popular)*. Editorial Caminos.
- Kidd, J. (2014). *Museums in the New Mediascape. Transmedia, Participation, Ethics*. Routledge.
- Kim, S., Kim, S.-Y., & Hoon, K. (2014). Fortune 100 companies' Facebook strategies: Corporate ability versus social responsibility. *Journal of Communication Management*, 18(4), 343–362. <https://doi.org/10.1108/JCOM-01-2012-0006>
- Lemos, A., & Lévy, P. (2010). *O futuro da Internet*. Paulus.
- Losada-Díaz, J. C., & Capriotti, P. (2015). La comunicación de los museos de arte en Facebook. Comparación entre las principales instituciones internacionales y españolas. *Palabra Clave*, 18(3), 889–904. <http://doi.org/10.5294/pacla.2015.18.3.11>
- Marchetti, N., Angelini, I., Artioli, G., Benati, G., Bitelli, G., Curci, A., Marfia, G., & Rocchetti, M. (2018). NEARCHOS. Networked archaeological open science: Advances in archaeology through field analytics and scientific community sharing. *Journal of Archaeological Research*, 26(4), 447–469. <https://doi.org/10.1007/s10814-017-9112-4>
- Martínez-Sanz, R., & Berrocal-Gonzalo, S. (2017). Museos y Engagement. La Calidad de los Espacios web Como Soporte del Compromiso. *Revista Española de Documentación Científica*, 40(1), 166. <http://doi.org/10.3989/redc.2017.1.1383>
- Mateos-Mora, C., Navarro-Yañez, C. J., & Rodríguez-García, M. J. (2022). A guide for the analysis of cultural scenes: A measurement proposal and its validation for the Spanish case. *Cultural Trends*, 31(4), 354–371. <https://doi.org/10.1080/09548963.2021.1978816>
- Morsy, Z. (ed.). (1984). *Media Education*. UNESCO. <https://unesdoc.unesco.org/ark:/48223/pf0000062522?posInSet=5&queryId=b8751a0a-2d46-4a11-a393-f4a7efef96cf>.
- Narváez-Montoya, A. (2019). Educational communication, educommunication, and media education: A research and educational proposal from a culturalist approach. *Palabra Clave*, 22(3), art. e22311. <https://doi.org/10.5294/pacla.2019.22.3.11>
- O'Reilly, T. (2005). *What is Web 2.0. Design Patterns and Business Models for the Next Generation of Software*. <http://www.oreillynet.com/pub/a/oreilly/tim/news/2005/09/30/what-is-web-20.html>.
- Orsi, Z., Salazar, J. L., & Piñero, Y. (2019). El planteo de rizoma de Deleuze aplicado a las prácticas interdisciplinarias educativas. *Revista Temas de Profesionalización Docente*, 2(3), 21–29.
- Osuna, S., & López-Martínez, J. (2015). Educommunicative evaluation model in virtual education. *Opción: Revista de ciencias humanas y sociales*, 31(2), 832–853. <https://dialnet.unirioja.es/descarga/articulo/5834784.pdf>.
- Padua, M. C., Nakano, N., & Vicentini, M. J. (2020). Explorando projetos de inovação em comunicação museológica. *Revista Interamericana de Bibliotecología*, 44(1), eRf1/1–eRf1/12. <https://doi.org/10.17533/udea.rib.v44n1eRf1>
- Pagano, A., Pietroni, E., & Poli, C. (2016). Un enfoque metodológico integrado para evaluar museos virtuales en contextos museísticos reales. In *Actas de la 9.ª Conferencia Internacional anual sobre*

- Educación, Investigación e Innovación*, Sevilla, España, 14–16 de noviembre de 2016; IATED: Valencia, España, 2016; págs. 310–321.
- Parra, G. (2000). *Bases epistemológicas de la educomunicación. Definiciones y perspectivas de su desarrollo*. Ediciones ABYA-YALA.
- Perez, S. (2021). Spanish house museums on the web and with the web: A galaxy of technologies. *Museum Management and Curatorship*, 1–22. <https://doi.org/10.1080/09647775.2021.1954978>
- Pescarin, S., Cerato, I., & Romi, P. (2016). Virtual museums and social networks. In *2016 IEEE 2nd International Forum on Research and Technologies for Society and Industry Leveraging a Better Tomorrow, RTSI 2016*. IEEE. <https://doi.org/10.1109/RTSI.2016.7740551>.
- Piancatelli, C., Massi, M., & Vocino, A. (2020). #Artoninstagram: Engaging with art in the era of the selfie. *International Journal of Market Research*, 63(2), 134–160. <https://doi.org/10.1177/1470785320963526>
- Pierroux, P., Bäckström, M., Brenna, B., Gowlland, G., & Ween, G. B. (2020). Museums as sites of participatory democracy and design. In P. Hetland, P. Pierroux y L. Esborg (Eds.), *A History of Participation in Museums and Archives. Traversing Citizen Science and Citizen Humanities* (pp. 27–45). Routledge. ISBN: 9780367186715.
- Pietroni, E. (2019). Experience design, virtual reality and media hybridization for the digital communication inside museums. *Applied System Innovation*, 2(4), 35. <https://doi.org/10.3390/asi2040035>
- Rivero, P., Navarro, I. y Aso, B. (2020). Educommunication web 2.0 for heritage: A view from spanish museums. In E. J. Delgado-Algarra y J. M. Cuenca-López (Eds.), *Handbook of Research on Citizenship and Heritage Education* (pp. 449–470). <https://doi.org/10.4018/978-1-7998-1978-3.ch021>.
- Rubio, N., Villaseñor, N., & Yagüe, M. (2020). Sustainable co-creation behavior in a virtual community: Antecedents and moderating effect of participant's perception of own expertise. *Sustainability*, 12(19), 8151. <https://doi.org/10.3390/su12198151>
- Safko, L., & Brake, D. (2009). *The Social Media Bible: Tactics, Tools, and Strategies for Business Success*. John Wiley & Sons.
- Saggin, L., & Bonin, J. A. (2017). Perspectivas para pensar as inter-relações entre sujeitos comunicantes e mídias digitais na constituição de cidadania comunicativa. *Conexão – Comunicação e Cultura*, 16(32), 97–113. <https://doi.org/10.18226/21782687.v16.n32.04>
- Sánchez, A. L. (2015). *Museum Websites and Social Media. Issues of Participation, Sustainability, Trust and Diversity*. Berghahn Books.
- Scolari, C. (2008). *Hipermediaciones. Elementos para una teoría de la comunicación digital interactiva*. Gedisa.
- Sebastian, C. (2019). *La historia de vida como herramienta para la evaluación de los espacios 2.0 de los museos* [PhD Thesis, University of Lérida]. <https://www.tesisenred.net/handle/10803/668360>.
- Silva, M. (2005). *Educación interactiva. Enseñanza y aprendizaje presencial y online*. Gedisa.
- Simon, N. (2010). *The Participatory Museum*. Museum 2.0.
- Suess, A. (2018). Instagram and art gallery visitors: Aesthetic experience, space, sharing and implications for educators. *Australian Art Education*, 39(1), 107–122.
- Sunstein, C. (2010). *Rumorología. Cómo se difunden las falsedades, por qué nos las creemos y qué se puede hacer*. Debate.
- Tapscott, D. (1995). *The Digital Economy: Promise and Peril in the Age of Networked Intelligence*. McGraw-Hill.
- Tapscott, D. (2009). *Grown up Digital. How the Net Generation is Changing your World*. McGraw-Hill.
- Toffler, A. (1980). *The Third Wave*. Bantam Books.
- Valtysson, B. (2022). Museums in the age of platform giants: Disconnected policies and practices. *International Journal of Cultural Studies*, 25(5), 536–553. <https://doi.org/10.1177/13678779221079649>
- Vassilakis, C., Antoniou, A., Lepouras, G., Pouloupoulos, V., Wallace, M., Bampatzia, S., & Bourlakos, I. (2017). Stimulation of reflection and discussion in museum visits through the use of social media. *Social Network Analysis and Mining*, 7(1), 40. <https://doi.org/10.1007/s13278-017-0460-3>

- Vignale, S. P. (2009). Pedagogía de la incertidumbre. *Revista Iberoamericana de Educación*, 48(2), 1–7. <https://doi.org/10.35362/rie4822236>
- Villegas, C., Alfonso, N., & Conopoima, Y. (2020). Transpedagogía y las cibercomunidades de aprendizaje como alternativa práctica. *Revista Electrónica Entrevista Académica*, 5(2), 56–68. <http://www.eumed.net/rev/reea>.
- Walías, L. (2017). La complicada implantación del marketing estratégico en los museos arqueológicos. In A. Carretero Pérez y C. Papí Rodas (Eds.), *V Congreso Internacional de Historia de la Arqueología/IV Jornadas de Historiografía SEHA-MAN. Arqueología de los museos: 150 años de la creación del Museo Arqueológico Nacional* (pp. 1355–1366). Ministerio de Educación, Cultura y Deporte.
- Watrall, E. (2019). Building scholars and communities of practice in digital heritage and archaeology. *Advances in Archaeological Practice*, 7(2), 140–151. <https://doi.org/10.1017/aap.2019.1>
- Zeler, I. (2021). Comunicación interactiva de las empresas chilenas en Facebook. *Obra Digital*, 2021 (20), <https://doi.org/10.25029/od.2021.281.20>