

The Importance of Design and Digital Media for the Promotion and Sustainability of Cultural and Religious Tourism

Nuno Martins¹, Sergio Dominique-Ferreira², Rita Perdiz³,
Susana Barreto⁴, Cláudia Lima⁵, and Eliana Penedos-Santiago⁶

¹Research Institute for Design, Media and Culture, School of Design, Polytechnic Institute of Cavado and Ave, Barcelos, Portugal

²Applied Management Research Unit (UNIAG), School of Hospitality and Tourism, Polytechnic Institute of Cavado and Ave, Barcelos, Portugal

³School of Design, Polytechnic Institute of Cavado and Ave, Barcelos, Portugal

⁴ID+, University of Porto, Porto, Portugal

⁵ID+, Universidade Lusófona, Porto, Portugal

⁶ESAD.CR IPL, ID+, University of Porto, Leiria, Portugal

ABSTRACT

Information and Communication Technologies (ICT) and applications (apps) for tourists are key tools for sustainability of World Cultural Heritage Sites (WCHS). Their integration into tourism marketing strategies poses challenges regarding the satisfaction of the expectations of the target stakeholders. This paper adopts an exploratory approach, to understand the relation between cultural tourism and ICT and how digital technologies must be considered in the context of creating more sustainable, accessible destinations with innovative experiences that promote cultural heritage. The results reveal that ICT are essential tools for tourists and positively influence tourists' final perception of the travel experience. The development of mobile applications must consider the expectations of senior tourists, who constitute a relevant generation for cultural tourism and are of special interest for the sustainability of WCHS.

Keywords: Digital media for tourism, Digital design, Marketing, Sustainability, Cultural and religious tourism, Communication design

THEORETICAL BACKGROUND

The Importance of Information and Communication Technologies in Cultural Tourism

Cultural tourism is a growing sector in which technologies play an important role. Location-based technology, or augmented, virtual and mixed reality, amongst many others, open up new possibilities for managers and at the same time enhance cultural tourism experience in all its stages. In this context, cities, and destinations in particular need to innovate in order to assure a sustainable and competitive offer that benefits both tourists and residents by facilitating their daily life through smart initiatives.

The development of Information and Communication Technologies (ICT) over the past decades has conditioned the evolution of destination marketing and cultural tourism communication. Smartphones have become necessary tools in tourists' interaction between the physical and digital world (Gomez-Oliva et al. 2017). The growth of this expanding sector has triggered the mobile applications (apps) expansion, including tourism apps, a category that stands out for its large number of downloads (Del Chiappa et al., 2015). This circumstance has generated growing interest in this research area (Martín-Sánchez et al. 2012; Vieira Soares et al., 2017). Tourism apps should provide value to users beyond the mere transformation of tourism services (Saura et al., 2017). In this sense, their design and development require a marketing-based approach that grants all the protagonism to the needs and expectations of stakeholders (Saura et al. 2017; Del Pino Romero et al., 2013) fundamentally with regards to the management of relationships (Martínez-Sala et al. 2017) which are essential tools in destination promotion and marketing as they allow the tourist user to adopt the role of adprosumer (Caro et al. 2015), which is based on positive experiences that are the origin and driving force of relationships (Galmés Cerezo et al. 2015). The concept of adprosumer (advertising, producer, and consumer) refers to a person who not only consumes products and services, but also determines how products and services are produced and advertised. This new figure has gained special prominence with the development of ICT, which not only enables these functions, but also multiplies their potential and scope. Tourist adprosumers use ICT to plan their trips, to share on-travel experiences, and generate post-travel options that influence the brand image and reputation of the destination (Caro et al. 2015; Martínez-Sala et al., 2018). Thus ICT contributes to sustainable tourism through their communicational, relational, and experiential capacity (Saura et al. 2017; Liang et al. 2017; Kuska et al., 2017). The value of experience is a key element in the configuration and development of all cultural destinations. The intangible and eminently experiential nature of tourism products and services (Vieira Soares et al., 2017) and the fact that they cannot be tested before they are bought give great importance to the user's experience. In the tourist sector, the key is the experience resulting from all the travel stages: pre-travel (search of information, planning, decision-making), on-travel (experiences resulting from the use and consumption of the product or service, and the relationships established with the host community) and post-travel (Martínez-Sala et al. 2017; Martínez-Sala et al. 2018; Campillo Alhama et al. 2019; Parra-Meronó et al., 2016). In addition, the value of experience has acquired more importance with the arrival of the model 2.0 (Parra-Meronó et al., 2016; Lerario et al., 2017) and its potential to multiply the reach of the traditional word of mouth (Martínez-Sala et al. 2018; Luo et al., 2015) and the electronic word of mouth (eWOM), when focused in the digital field (Cheung et al. 2008; Chu et al., 2011).

The Uses of ICT Among Different Types of Tourists

Having highlighted the importance of ICTs in the tourism sector, including the cultural one, there are questions about the uses of ICTs among different

types of tourists, both real and potential, and, consequently, about the differences between digital immigrants and digital natives (Prensky, 2001). Both segments of the population constitute interesting groups for cultural destination marketing organizations (Soro et al., 2017; Moreira et al. 2015) with different expectations and use of ICTs (Sherman et al. 2015). To be precise, one of the fundamental questions posed by the literature review is whether the reorientation of the marketing strategies and tourist communication based on the web 2.0 model (Liang et al. 2017; Martínez-Sala et al., 2018; Del Vecchio et al. 2017; Li et al., 2017) should pay special attention to the Boomers (50–64 year-olds) and the Silent Generation (65 years and over) (Nielsen, 2015) or whether, based on the digital gap that characterizes them (Nielsen, 2015; González et al., 2018), they must be excluded from any approach adopted in the digital environment. In addition to this trait shared by both generations in relation to ICTs, the desires and aspirations of both generations are defined by a greater concern for health over wealth. In fact, in order of importance, their interests focus on health, family, wealth, and professional career (Nielsen, 2015).

In general terms, the members of the Boomers and the Silent Generation (Nielsen, 2015) do not seem to identify themselves as tourists 2.0 according to their use of and relationship with ICTs (González et al. 2018). However, as noted in the study “Truth About Age” (McCann WorldGroup, 2017), age is losing validity as segmentation criterion for older people, so it is important to adopt a new approach that classifies the groups that belong to the same socio demographic segment according to their behaviors, lifestyles, and media consumption habits (Ramos-Soler, 2007).

In view of the advantages of the tourism sector as a driving force for economic and social development (Mártinez-Sala et al., 2018; Benítez et al. 2018; Alhama et al., 2012), it becomes necessary for destinations to market quality products and services that do not negatively affect their natural, historical, and cultural assets (Alhama et al., 2012). The preservation of these assets poses an extremely significant and permanent challenge for DMO. In the field of cultural tourism, this view of the risk that entails the marketing of heritage sites has been addressed by several authors (Lanuza et al., 2015). In this sense, the sustainability of tourist destinations appears as a controversial issue on which opposing positions have been expressed. The three-dimensional approach to the sustainability of tourism destinations adds the economic perspective, related to the necessary marketing of destinations, to the traditional social and environmental perspectives (Fernández et al., 2013). Sustainability allows destinations to develop a differentiating and singular positioning in an extremely competitive context (Liang et al., 2017; Martínez-Sala et al., 2018). In this context, ICTs are particularly relevant due to their great potential to improve the experiences of tourists in a sustainable way (Strielkowski et al. 2012; UNESCO, 2012) for the development of smart tourism (Lerario et al., 2015). This point highlights the importance and relevance of this study of the use of ICT, specifically tourism apps, by one of the main segments of cultural tourists: Boomers and the Silent Generation.

Apps in Destination Marketing and Promotion Strategies

Apps have burst into the tourism industry, as proved by the growth of tourist apps, including those developed for: tourism destinations, products and/or services (museums, monuments, etc.), tourist companies (travel agencies), specialized tourism websites (Last Minute, Booking, Rumbo, etc.), and tourist in general (maps, route calculator, etc.). Their online presence is articulated around the interactive potential of mobile devices (Martín-Sánchez et al., 2012), since they offer tourists new experiences designed, managed, and controlled by DMO (Gretzel et al., 2015). For these organizations, apps have become key communication channels for the success of their marketing and communication strategies, that improves the tourist experience and enables users' loyalty (Liang et al., 2017). Content generation through tourism apps conditions the selection of the destination, the planning of the experience, the decision to purchase tourism products and services, and the dissemination of the experience lived.

In the field of cultural tourism, tourism destination apps often provide a full description of the destination and can become an essential channel for promotion and branding of cultural heritage, and also contribute to the generation of a positive image of the destination that informs the decision making process of all potential tourists (Lerario et al., 2017).

From the point of view of tourists, tourism apps not only facilitate their decision-making process when selecting a destination but also determine, to a large extent, their behavior as adprosumers by allowing the establishment of two-way or multi-directional communication (Saura et al., 2017; Fang et al., 2017; Kuska et al., 2017; Fernández-Cavia et al., 2013). Tourism apps allow tourists to take virtual tours, and provide complementary information and access to rebuilt or missing spaces, among other services, anytime and according to their interests (Saura et al., 2017; Vieira Soares et al., 2017; Lerario et al., 2017; Corallo et al., 2018). Thus, tourism apps provide advantages to the tourist user as well as to DMO, since they provide destination managers with necessary accurate and rigorous feedback and information to develop strategies for sustainable territorial tourism (Corallo et al., 2018).

From a sustainability perspective, mobile technology in general is expected to contribute to the development of sustainable tourism that enhances its economic dimension (Gretzel et al., 2015; Li et al., 2017; Corallo et al., 2018) while resolving the challenges it poses in relation to its social and environmental dimensions (Kim et al., 2017). These challenges include constant monitoring and evaluation of the interaction that occurs between the destination and tourists, to control their impact and identify their needs and expectations, which allows DMO to continue promoting tourism in a controlled manner, optimizing strengths and resources (Corallo et al., 2018; Moscardo et al., 2015).

Therefore, tourism apps are presented as key tools in the development of sustainable and smart tourism that adds value to users (Saura et al., 2017; Fang et al., 2017; Kuska et al., 2017; Strielkowski et al., 2012), based on the common goal of improving the experience of real and potential tourists

(Collan et al., 2014) before, during, and after the trip (Corallo et al., 2018; Collan et al., 2014).

The paradigm shift that the digital society represents has transformed the marketing and communication strategies that aim to reinforce destination brands as well as the destination–tourist relationship (Martínez-Sala et al., 2017). Tourism apps enable two-way communication and relational management between users of the tourist product and DMO, which is key to consolidate, in the medium and long term, the territorial reputation of the tourist brand.

CONCLUSION

ICT are essential tools in the preparation and planning phases of the trip, as well as during the trip itself. The W generation uses ICT on the pre-travel phase to book accommodation and transportation and for the localization and search of products and services. In this sense, of the ICT available, tourism apps are a key tool with enormous relational and experiential communication potential that DMO should exploit. These advantages seem to have been accepted by the main tourist destinations, although we cannot confirm this in the specific case of the tourist apps that are the object of this research, which continue playing the informative role typical of the Web 1.0 and of the premises of transactional marketing and one-way communication. Likewise, the importance of senior citizens (Pereira et al., 2021) in the cultural tourist industry has been confirmed, as well as their necessary consideration in digital marketing and communication of DMO (Silva et al., 2021; Martins et al., 2022), given their relationship with RICT, which has led us to develop a new definition that surpasses the traditional approach of the digital gap: the W generation.

The DMO of the SWHC faces the challenge of adapting the integration of tourist apps in their marketing and communication strategies under the premises of relational and experiential marketing and the consideration of the W generation. The design and development of tourist apps from this marketing perspective should avoid focusing exclusively on tourists and ensure the sustainability of the destinations. These apps have the ability to improve the tourist experience and generate positive eWOM, but can also promote a relationship between tourists and between tourists and residents and serve as a tool for the continuous monitoring and evaluation of the interaction that occurs between tourists and destinations, their products, services, residents, and other tourists, to control their impact but also to identify their needs and expectations in order to continue enhancing tourism in a controlled manner and optimizing forces and resources.

In this current and changing scenario it becomes relevant to study the development of digital supplementary tools for cultural tourism. Combining various forms, such as text, sound, video, graphics, or georeferenced improves users' perception of their surroundings (Economou, 2015) and to locals' identity awareness.

ACKNOWLEDGMENT

This work is financed by national funds through the FCT – Fundação para a Ciência e a Tecnologia, I.P., under the scope of the project UIDB/04057/2020. The authors are grateful to the Foundation for Science and Technology (FCT, Portugal) for financial support by national funds FCT/MCTES to UNIAG (UIDB/04752/2020).

REFERENCES

- Altamirano Benítez, V.; Marín-Gutiérrez, I.; Ordóñez González, K. (2018) Comunicación turística 2.0 en Ecuador. Análisis de las empresas públicas y privadas. *Revista Latina de Comunicación Social*, No. 73, pp. 633–647. <https://doi.org/10.4185/RLCS-2018-1273>.
- Campillo Alhama, C. (2012) El desarrollo de políticas estratégicas turísticas a través de la marca acontecimiento en el municipio de Elche (2000-2010). *Pasos. Revista de Turismo y Patrimonio Cultural*. Vol. 10, No. 1, pp. 119–129.
- Caro, J.L.; Luque, A.; Zayas, B. (2015) Nuevas tecnologías para la interpretación y promoción de los recursos turísticos culturales. *Pasos. Revista de Turismo y Patrimonio Cultural*. Vol. 13, No. 4, pp. 931–945.
- Cheung, C.M.K., Lee, M.K.O. and Rabjohn, N. (2008). The impact of electronic word-of-mouth: The adoption of online opinions in online customer communities. *Internet Research*, Vol. 18 No. 3, pp. 229–247. <https://doi.org/10.1108/10662240810883290>
- Chu, S.; Kim, (2011) Determinants of consumer engagement in electronic word-of-mouth (eWOM) in social networking sites, *International Journal of Advertising*, Vol. 30, No. 1, pp. 47–75, <https://doi.org/10.2501/IJA-30-1-047-075>
- Collan, M.; Sell, A.; Anckar, B.; Harkke, V. (2005). *Approaches to Using e- and m-Business Components in Companies*; Turku Centre for Computer Science: Turku, Finland, ISBN 978-95-21215-0-87.
- Corallo, A.; Trono, A.; Fortunato, L.; Pettinato, F.; Schina, L. (2018). Cultural Event Management and Urban e-Planning Through Bottom-Up User Participation. *International Journal of E-Planning Research*, IGI Global, 7, 1, pp. 15–33.
- Del Chiappa, G.; Baggio, R. (2015). Knowledge transfer in smart tourism destinations: Analyzing the effects of a network structure. *Journal of Destination Marketing & Management*. Vol. 4, No. 34, pp. 145–150. <https://doi.org/10.1016/j.jdmm.2015.02.001>
- Del Pino Romero, C.; Castelló Martínez, A.; Ramos-Soler, I. (2013). La comunicación en Cambio Constante. *Branded Content, Community Management, Comunicación 2.0 y Estrategia en Medios Sociales*; Fragua: Spain.
- Del Vecchio, P.; Passiante, G. (2017). Is tourism a driver for smart specialization? Evidence from Apulia, an Italian region with a tourism vocation. *Journal of Destination Marketing & Management*, Vol.6, No.3, pp. 163–165. <https://doi.org/10.1016/j.jdmm.2016.09.005>
- Fernández-Cavia, J.; López, M. (2013). Communication, destination brands and mobile applications. *Communication & Society*, Vol. 26, N0. 2, pp. 95–113.
- Galmés Cerezo, M. (2015) Comunicación y marketing experiencial: Aproximación al estado de la cuestión. *Opción*, Vol. 31, pp. 974–999.
- Gómez Oliva, A.; Server Gómez, M.; Jara, A.J.; Parra-Meroño, M.C. (2017) Turismo inteligente y patrimonio cultural: un sector a explorar en el desarrollo de las Smart Cities. *Int. Journal of scient. Manag. and Tourism*. Vol. 3, pp. 389–411.

- González Oñate, C.; Fanjul Peyró, C. (2018). Aplicaciones móviles para personas mayores: un estudio sobre su estrategia actual. *Aula Abierta*, Vol. 47, No. 1, pp. 107–112.
- Gretzel, U.; Koo, C.; Sigala, M.; Xiang, Z. (2015) Special issue on smart tourism: convergence of information technologies, experiences, and theories. *Electron Markets*. Vol. 25, pp. 175–177. <https://doi.org/10.1007/s12525-015-0194-x>
- Kuska, M.; Augustynska, B.; Mikolajewska, E.; Mikolajewski, D. (2017) M-tourism as increasing trend within current tourism and recreation - Polish and international experience. *AIP Conference Proceedings*, Vol. 1906.
- Lerario, A.; Varasano, A.; Di Turi, S.; Nicola Maiellaro, N. (2017). *Smart Tirana Sustainability*, Vol. 9, No. 12. <https://doi.org/10.3390/su9122338>
- Liang, S.; Chuckert, M.; Law, R.; Masiero, L. (2017). The relevance of mobile tourism and information technology: an analysis of recent trends and future research directions. *J. Travel & Tour. Mark.*, Vol. 34, No. 6, pp. 732–748. <https://doi.org/10.1080/10548408.2016.1218403>
- Luo, Q.; Zhong, D. (2015). Using social network analysis to explain communication characteristics of travel-related electronic word-of-mouth on social networking sites. *Tourism Management*, Vol. 46, pp. 274–282. <https://doi.org/10.1016/j.tourman.2014.07.007>
- Martínez-Sala, A.M.; Cifuentes Albeza, R.; Martínez-Cano, F.J. (2018). Las redes sociales de las organizaciones de marketing de destinos turísticos como posible fuente de eWOM. *OBS**, 3, pp. 246–271.
- Martínez-Sala, A.M.; Monserrat-Gauchi, J.; Campillo Alhama, C. (2017). The relational paradigm in the strategies used by destination marketing organizations. *Rev. Lat. Comun. Soc.* 2017, 72, 374–396. <https://doi.org/10.4185/RLCS-2017-1170>
- Martín-Sánchez, M.; Miguel-Dávila, J.A.; López-Berzosa, D. Turitec. (2012) IX Congreso nacional turismo y tecnologías de la información y las comunicaciones. In *M-tourism: las apps en el sector turístico*; Universidad de Málaga (UMA), Escuela Universitaria de Turismo: Málaga, Spain, pp. 407–424.
- Martins, N., Martins, S., Brandão, D. (2022) Design principles in the development of dashboards for business management. *Perspectives on Design II: Research, Education and Practice*. Vol. 16, pp. 353–365. Cham, Switzerland: Springer. https://doi.org/10.1007/978-3-030-79879-6_26
- Moreira, P.; Galindo, N. (2015) Perfil del turista cultural en ciudades patrimoniales. Los casos de San Cristóbal de la Laguna y Córdoba (España). *Int. J. Sci. Manag. Tour.* 1, pp. 217–229.
- Nielsen. *Estilos de Vida Generacionales*. 2015. Available online: https://www.nielsen.com/content/dam/nielsen-global/latam/docs/reports/2016/Estilo_sdeVidaGeneracionales.pdf (accessed on 7 February 2022).
- Parra-Meroño, M.C.; Beltrán-Bueno, M.A. (2016). *Estrategias de Marketing para Destinos Turísticos*; Eumed Universidad de Málaga: Málaga, Spain.
- Pereira, L., Brandão, D., Martins, N. (2021) Ageing related Human factors to be addressed in the design of visual interfaces of digital applications developed for seniors: a literature review. *Perspectives on Design and Digital Communication II: Research, Innovations and Best Practices*. Vol. 14, pp. 65–80. Cham, Switzerland: Springer. https://doi.org/10.1007/978-3-030-75867-7_5
- Ramos-Soler, I. (2007). *El estilo de Vida de los Mayores y la Publicidad*; Obra Social, Fundación “La Caixa”: Barcelona, Spain.
- Silva, J., Raposo, D., Neves, J., Almendra, R., Brandão, D., Martins, N. (2021) Narrative Benchmarking in Scenario Assessments for Digital Design. *Advances in Ergonomics in Design: Proceedings of the AHFE 2021, July 25-29, 2021, New York, USA*. Springer, pp. 3–9. https://doi.org/10.1007/978-3-030-79760-7_1