

Digital Tourism

Subjects: Anthropology

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"Digital travel" refers to how we use digital tools to organize, manage and even enjoy travel experiences. So "digital tourism" harnesses all the tools of digital transformation to change the way we travel and how the industry itself operates. Nowadays tourism experience integrates augmented reality, virtual reality and even mixed realities, enabling in real time different kinds of interaction - online and off line - thus creating immersive unique experiences that combine digital and real heritage.

Keywords: intangible cultural heritage ; tourism ; culture

1. Introduction

Intangible cultural heritage (ICH) is the aggregation of all immaterial manifestations of culture, the representation of the living culture of human communities, as well as the vehicle of cultural diversity ^[1]. The iHERITAGE: ICT Mediterranean platform for UNESCO cultural heritage (B_A.2.1_0056), follows, from a general point of view, the perception of adequate safeguarding for immaterial cultural heritage and the intensification of intercultural contacts. Portugal is being represented by the University of Algarve (UAlg), Escola Superior de Gestão, Hotelaria e Turismo (ESGHT), with a team of researchers, specialized in the fields of history, anthropology, tourism and tech, who aspire to give international notoriety, through a range of technological innovations for user/consumer experience, to one of the key elements of the Mediterranean Basin—the ancient Mediterranean diet. Considered by many as a lifestyle of healthy dietary patterns ^{[2][3][4][5]}, the origin of the concept “Mediterranean diet” (MD) is based on the study of sustenance traditions and health benefits of the populations of Greece and Southern Italy, in the fifties and sixties of the 20th century ^{[6][7]}. However, these cultures of the southern landscapes were dictated much earlier by the cycles of nature—what the land gave you, was what you ate! A relationship with the environment was deepened in order to ensure livelihoods when the climate did not help and throughout Southern Europe, Western Asia, North Africa and Australia, variations of this dietary pattern began to appear ^{[8][9][10][11]}. The broad circle that encompasses the profound depth of the Mediterranean Basin follows the themes related to sustainability, culture and heritage, ensuring the possibility of underlining emotion as the basis for recognizing unique stories and expressing them through tools that were once considered not to be exclusive to certain classical subjects. Here, the motivation of the iHERITAGE-UAlg team lies in the virtual storytelling and educational data of a particular geographical place, offering a glimpse into local history and oral traditions, accessible to a broader international community.

2. Interactive Technologies, Tourism and Intangible Cultural Heritage

The usage of interactive technologies, such as virtual reality (VR) or augmented reality (AR), delivers a significant novelty ^{[12][13]}. The development of extended reality technologies ^[14] and mobile applications can be used as a monitor for the improvement of a socio-cultural experience—moreover, it is a path towards an interdisciplinary application framework, in which, advances in mobile technology have enabled a wide range of applications, morphed with the concept of augmented reality ^[15]. Although similar to virtual reality (VR), augmented reality (AR) is a digital technology that creates changes to an individual's perception of their physical surroundings. In other words, when viewed through a particular device, AR does not replace the real-world environment, but augments it by overlaying specific digital components. Nowadays, concerning AR applications, learning and tutoring seem to be the most explored fields of research ^{[16][17][18][19]}—following the positive effects of this technology in education, such as learning motivation, memory preservation and increased-on content ^{[20][21]}, the technology also expands to the world of marketing and alternative tourism ^{[22][23][24]}, typically working hand-in-hand with other mobile technologies, including cameras and GPS tracking, adding to the value of traveling, whilst also providing an innovative method for people to explore new places and cultures. Now, more than ever, particularly due to the COVID-19 pandemic, the prompt advancement in immersive technology is heightening the presence of extended reality in tourism ^[25]. Following the high contagion effect and consequential travel restrictions, social distancing, as well as regional and national lockdowns ^[26], the pandemic exposed the susceptibility of the tourism industry ^[27], which is conventionally highly dependent on individual mobility, location connectivity and destination accessibility ^[28].

Within the magnitude of this long and tragic period for tourism, people were forced to restructure companies, reinvent businesses and adapt an already existing “smart” meaning for tourism—in this regard, the iHERITAGE promptly follows the growth of extended reality technologies as a leading concept in the project's thematic objective, highlighting the current implementations of AR in mixed environments and the importance of digital tourism for the industry practitioners.

3. Augmented Reality Applications

Leading towards a smarter and more sustainable model (environmental, territorial and socioeconomic) is the future of tourism. Digital content is already a steady supplement to everyday life and augmented reality applications (AR apps) are an innovative platform, coincidentally essential through consumption, utility and marketing ^[29]. The possibilities are endless and there are already several organizations that are offering their services around this technology to carry out virtual tours around restaurants, museums, galleries and even houses while visiting a city. The most collective examples of this engaging format of enhancing the users' surrounding real world with virtual information include (1) Pokémon Go—where users can interact with Pokémon in real time and real locations, capture them and even battle other users, all through their smartphone camera—or even more commonly used, (2) Instagram and (3) Snapchat—in which users can enhance their photographs with filters or boost their videos with virtual items or entities. With tourism, a number of applications have been developed based on the available frameworks and toolkits, all designed specifically for tourism purposes—for example, Tuscany+, a guided excursion for the Tuscany region by Fondazione Sistema Toscana ^[30] in Italy; Mcrumbs, the AR guide for Basel in Switzerland ^[31]; or perhaps, Wallkz for the Singapore Heritage Walking AR tours ^[32]. These enhanced, interactive and highly dynamic experiences can provide personalized information and services tailored to tourists and citizens' particular needs, inspiring the foundation for the methodological approach of the UAlg's iHERITAGE team in the structural proposal of regional cultural heritage in free augmented reality functionality.

4. MED DIET Digital Route

From a general perspective, data collection and the creation of a digital route allows the iHERITAGE team to understand the breadth of cultural tourism in Tavira, to better recognize the factors that determine the extension of the intangible heritage and the policies and structures that contribute to the “territorialization” of the places researched. As the iHERITAGE project is a strategic reference on the international and academic agenda, UAlg is creating the necessary synergies for the conservation of research in the field of the Med diet, its relationship with the chosen geographic location and the analysis of the virtual route that collects the points of interest of the olive industry and the fruits' journey from the mountains to the sea. Research has proven that the virtual experience in the landscape of cultural information and cultural routes has a potentially new and important role to play ^[33]—the Med diet route and the virtual nature of the project associates a unique and authentic feature to the creative aspect, with the possibility of covering this idea with motifs that reinforce the ties of a shared heritage. Furthermore, authenticity in smart tourism is a truthful and genuine experience rather than a forged practice in the context of physical objects ^[34]. Individuals are the heart of tourism success and without experiences, services and products that offer a modern quest for authenticity, tourists cannot seek escape and allow a fully entertained immersion. Moreover, in this digital era, the possibility to engage actively in culture through a more memorable experience has users converted into dynamic actors rather than passive consumers ^{[35][36]}. The virtual route will offer a controlled digital system employed to implement the project's components, thus providing a maintainable and manageable structure. The route will approach sites and objects, integrating projection technologies into everyday activities of tourists and visitors, naturally depending on location, weather and time, all of which integrate aspects of research and fieldwork to be developed and achieved in the best possible way. The architecture and the application of the AR component in the Med diet route will have an unobtrusive interface to interact with one's surroundings and, in particular, with smart devices, thus broadening the potential market, always respecting the art of storytelling and what related challenges and issues may appear.

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