

# Creative Tourism and Mobile Apps: A Comparative Study of Usability, Functionality and Creativity of Travel Apps

Álvaro Dias\*, Júlia Melo\*\*, Mafalda Patuleia\*\*\*

**Abstract** *The focus of this paper was to create a quantitative study that would compare Usability, Functionalities and Creativity of a few travel apps in the field of Creative Tourism, in order to understand how they affect Use Intention of travel apps. Thus, a questionnaire was applied to tourists who are travel app users. Among 50 respondents visiting Lisbon, 3 apps were classified, TripAdvisor, Air bnb Experiences and Expedia. The findings reveal that tourists perceive that the touristic experiences they are involved in are creative, however it was not possible to ensure a correlation between Creativity of touristic experiences and App Use Intention. Furthermore, results demonstrate a significant correlation between Usability-Use Intention, and App Functionalities-Use Intention.*

**Keywords:** *Creative Experiences, Travel Apps, App Usability, App Functionalities, Use Intention*

## INTRODUCTION

In light of several authors such as Richards and Raymond (2000); Campbell (2009); Virginija (2016); Carson and Pennings (2018); or Wickens (2017), Creative Tourism arises in response to the offer of cultural tourism, proven to be saturated or standardized, mainly in the most touristic cities around the world. It seeks to focus on intangible cultural resources, in order to convert them into meaningful experiences. The focus within this subject is the creative experience in Tourism, which depends on active involvement of the tourists (Richards & Wilson, 2006). In addition to material heritage, tourists absorb the intangible heritage through their involvement in city life and the experiences they acquire (Pawlusiński & Kubal, 2018), (Cetin & Bilgihan, 2016). Creative tourism reaches beyond the traditional connotations of tourism in which the tourist assumes the role of visitor or passive spectator (Pralhad & Ramaswamy, 2004) (Richards & Marques, 2012) (Jelinčić

& Žuvela, 2012). Rather, the tourist is directly involved, and actively acquires knowledge, leading to a truly meaningful and memorable learning (Park & Santos, 2017). In addition to improving the quality of the tourist experience, creative tourism and experiences have the potential to benefit local creative sectors providing opportunities for small tourism entities to create new business ideas in response to the growing demand from tourists (Pawlusiński & Kubal, 2018) (Stipanović et al., 2017) (Jelinčić & Žuvela, 2012). This spectrum of tourism also allows for the comprehensive promotion and preservation of local cultures, reinventing diverse ways of valuing gastronomy, arts and crafts, local traditions, and the creation of differentiated images of the tourist destination (Santos et al., 2018), in a variety of places and contexts (Richards & Wilson, 2006). This translates into added value for both the destination and tourists, contributing to city development with the income of local culture consumers, and at the same time, creative territories contribute to satiate the needs and motivations of tourists (Engeset & Elvekrok, 2015).

\* Universidade Lusófona, Tourism Department, Campo Grande, Lisbon, Portugal and Universidad de Sevilla, Facultad Ciencias Económicas y Empresariales, Sevilla, Spain. Email: alvaro.dias@ulusofona.pt

\*\* Universidade Lusófona, Tourism Department, Portugal. Email: juliacastromello@gmail.com

\*\*\* Universidade Lusófona, Tourism Department, Portugal. Email: mafalda.patuleia@ulusofona.pt

Furthermore, the constant evolution of smart phones, wireless access and mobile technologies in general has aroused the market's interest in investing on mobile applications to improve the tourist experience. Its use has grown significantly in tourism, being incorporated into the sector by various niche markets. Travel apps have become an aid resource for consumers and have transformed their experiences (Filho et al., 2017) (Gupta et al., 2018). The tourism market has been progressively adapting to this reality, in which tourists prefer practical, easy and portable options (Filho et al., 2017), with tourist companies and hotel chains becoming associated with tourism apps. Some may also develop their own apps, in order to offer the customer a more interactive experience or to provide other ways to consume or distribute their services or products. (Gupta et al., 2018); (Filho et al., 2017); (Lu et al., 2015). Several apps which suit different elements of the travel experience can be found, and they are changing the way contemporary society perceives travelling, such as accessing information related to the location, viewing tourist facilities, discovering activities and other resources (Dickinson et al., 2014). Within the context of digital applications and tourism, this study is limited to tourist applications of travel guides.

There is a growing concern with the authenticity of the experiences that tourists are living, namely cultural practices in destinations with strong cultural tourist expression (Tiberghien et al., 2017); (Ram et al., 2016). Due to the increasing creation of touristic spaces, some visitors claim there is a lack of authenticity (Cetin & Bilgihan, 2016) (Jiang et al., 2017) (Zhou et al., 2018). As Wickens (2017) points out, so far the tourist experience has been conceived and directed towards mass consumption, resulting in standardized environments, loss of culture or traditions, subsequent loss of authenticity and other negative consequences to the community itself, that may force the locals to abandon the touristic centers, such as the rising of living costs, or urban infrastructure mostly composed of hotels, shops or restaurants whose target market are not locals, but tourists.

To sum up, on one side of the spectrum, Mass Tourism no longer meets the needs of the new tourist paradigm, as it is considered that it does not provide authentic experiences. It seems that exponentially more visitors want to integrate themselves into the day-to-day lives of the locals, and feel part of that reality, by living the experiences that the city has to offer. There is consequently, an eminent need on the tourist point of view to seek more authentic and unique experiences and more significant interactions with the local residents of the destinations (Richards & Wilson, 2006); (Binkhorst & Den Dekker, 2009); (Condesso, 2011); (Lim & Bouchon, 2017); (Zhou et al., 2018). On the other hand, as mobile technology progresses, new opportunities arise to improve the travel experience (Dickinson et al., 2014), as the use of technology is a way of making the intangible

aspects of culture more interactive and to diversify the offer (Marques & Borba, 2017), in addition to enabling more direct interactions between tourists and locals, by taking advantage of the knowledge and skills of locals to provide the authentic experiences that tourists seek (Richards & Wilson, 2006). This type of initiatives can bring benefits to citizens and tourists alike, addressing the needs of tourists, such as looking for non-generalized experiences, more interaction with residents, and simultaneously, bringing opportunities to these populations, by giving small companies or local businesses the opportunity to distribute products, services or experiences (Marques & Borba, 2017). It is predictable that the evolution of technology, together with the new functionalities of mobile applications may continue to bring innovative experiences for consumers, promote competitive advantages for local commerce and create sustainable solutions for tourism (D. Kim & Kim, 2017). This article seeks to understand whether travel apps are in fact distributing creative experiences, whether they are providing the link between demand and supply, or whether there are still opportunities in the travel app market to be explored.

## THEORY AND HYPOTHESIS DEVELOPMENT

### The Experience Economy

The creation of immaterial experiences became popular as a strategy to respond to the new demands of consumers, due to the potential they have to generate value, (Binkhorst & Den Dekker, 2009); (Pine et al., 1999) and due to the opportunities for business development and the fact that intangible resources are more sustainable than tangible products (Richards & Wilson, 2006).

In this sense, Pine and Gilmore's (1999) experience economy focuses on the commoditization of experience and the impacts it has on the consumer (Pine et al., 1999). According to Pine and Gilmore (1999), "The Experience Economy" was the next step towards the evolution of economic progress. After the commercialization of products and services, the opportunity for the commercialization of experiences arised. In Pine and Gilmore's theory (1999), there are four dimensions in the experience: Education, Escapism, Esthetics and Entertainment, which can be established along two axis, active participation-passive participation, and immersion-absorption. In active participation, the creation of experiences depends directly on consumer involvement, while in passive participation; the consumer does not influence the experience at all, such as a traditional visit to a museum, for example. On the other hand, the immersion-absorption axis relates to the consumer and the environment.

Absorption entails some distance between the consumer and the experience, such as watching a movie, while immersion suggests that the consumer is carried away by the experience, meaning that immersion has a more active component than absorption.

In this field Andersson (2007) researched consumer needs in the experience proposing three categories, basic, social and intellectual, with the intellectual composing the search for novelty, excitement and challenge, which is why the co-creation of experiences and services in the sector is increasingly emphasized.

## Co-Creating Value

Value has traditionally been associated with a product or service and thus the concept of co-creation of value involved using consumer knowledge about a product or service in order to improve and make it more suitable to the consumer's needs (Richards & Raymond, 2000). However, the emerging consumer needs (basic needs), as proposed by Andersson (2007), emphasize value to the existential, intellectual, feelings and sensations dimensions, demanding that this value be generated through experiences (Prahallad & Ramaswamy, 2004).

In Creative Tourism, the perspective for value creation in the sector also changed. It has shifted from creating value through production, or from the tourist industry, to creating value by "consuming experiences", diverting the main focus from the product to the tourists themselves (Richards & Marques, 2012). More precisely, in co-creating an experience in tourism, the value lies in the set of events experienced by tourists, who actively contribute through their physical and mental participation, in interaction with other tourists and locals (Campos et al., 2018).

Experiences have become a key concept for creative tourism, heritage and cultural services (Mossberg, 2007), as they enthrall the consumer more than products or services (Park & Santos, 2017), because they are memorable (Pine & Gilmore, 1999). Park and Santos (2017) reinforced this idea, when they found that the participants' strongest memories were unique personal experiences, reflecting and promoting the notion of existential authenticity as central to the travel experience. More precisely, the most memorable experiences were unexpected events and adversity, dynamic activities and physical and emotional experiences, more so than the attractions themselves. This finding is consistent with existing research, which suggests that the most memorable tourism experiences are those that are considered unexpected, special or that have an element of exclusivity (Mossberg, 2007) (Ek et al., 2008). Therefore, it appears that "creative tourists", as referred by Richards and Marques (2012), are constantly looking for new "creative hotspots"

where their own creativity can inspire and be inspired by all stakeholders. In this way, tourism can be portrayed as a network society where value is created collectively through interactions and other interpersonal forms.

## Creative Tourism

The concept of Creative Tourism has started to be discussed approximately two decades ago. Coined by Richards & Raymond (2000), it is defined as a type of tourism that parts from cultural tourism and gives tourists the opportunity to learn and develop their creative potential, through active participation in workshops and educational experiences. The definition of Richards and Raymond was adopted and reformulated by UNESCO, defining it as a type of tourism that is aimed towards an authentic experience, with active participation in learning the arts, traditions or unique characteristics of a locale, providing a connection with residents, and creating a "living culture" (UNESCO, 2006).

These definitions are widely accepted in the existing literature on this theme and the work of Richards and Raymond (2000) in particular, served as a starting point for the study of creative tourism and creative experiences. According to Campbell (2009), it is a type of tourism that arises with the purpose of promoting other ways of responding to tourist motivations by offering creative alternatives, such as cooking, or the manufacture of the souvenirs themselves, and that promotes interaction between tourists and residents. Its practices and concerns have been the object of study, so the concept has also been refined. Among the various definitions there is a link between Creative Tourism, cultural aspects and experiences.

For Richards (2014) cultural tourism is one where the tourist consumes cultural products from the past and contemporary, as well as the daily life of the community or destination. Nonetheless, according to the author, cultural tourism needed to reinvent itself in order to meet the emerging needs of tourists, to have meaningful and authentic experiences. In this way, Creative Tourism seeks to answer these needs based on cultural aspects, through activities or experiences in which the tourist actively participates (Tan et al., 2016)

According to (Virginija, 2016), Creative Tourism opposes mass tourism, which focuses more on events and visiting monuments or other infrastructure, while Creative Tourism is characterized by the development of creativity and education of the tourist, that works towards the conservation of local traditions and therefore ends up being more suitable for small groups.

However, as referred by Jelinčić and Žuvela (2012), Creative Tourism should not only take into account the perspective of the tourist or consumer, but provide experiences that are valuable both for them and the communities and local

identity, in which the cultural resources are not manipulated or exploited, but rather celebrated and enriched. These interactions should enhance significant experiences for tourists and locals (Blapp & Mitas, 2017).

Initially, creative tourism practices focused more on tangible cultural resources, such as museums, operas, and gastronomy, consolidating them with the co-creation of products or learning new skills, for example, as participation in ethnic cooking workshops, as proposed by Richards and Raymond (2000). However, traditional forms of tourism are moving away from the tangible towards other intangible resources of culture, which could solve, according to Blapp et al. (2018), some of the most common problems raised by the communities of tourist destinations: The lack of financial resources can be secured by switching to intangible resources; The lack of equity between tourists and locals can be mitigated by placing the local inhabitants in the position of tutors, or teachers, instead of merely providing basic services; and finally, the loss of cultural identity by fostering interest in the practices of that culture.

In short, the concept has evolved, but in consensus, the value in Creative Tourism lies in the active participation of tourists in an authentic experience, which allows them to develop skills and their own creative potential, through contact with local communities and their culture (Richards, 2011). Creative tourism can therefore be perceived as a form of tourism “networking”, which depends on the ability of producers and consumers to relate to each other and generate value from their interactions (Richards, 2011). In the process of co-creating the creative experience, the passive consumption of cultural products becomes active through communication, education and participation in the creative process, adding more value to the whole creative process, than to the final product. (Pralhad & Ramaswamy, 2004) (Sørensen & Jensen, 2015).

## Theoretical Models on Co-Creating Creative Experiences

As predicted by Pine et al. (1999) and Prahalad and Ramaswamy (2004) currently the economy of the tourism sector is increasingly centering on the co-creation of personalized experiences. The concept of co-creating value through experiences lies in the basis of Creative Tourism, allowing for the creation of many kinds of new business models, based on production, management, marketing or creative sales (Jelinčić & Žuvela, 2012), as the value in this context depends on the co-creation of experiences between tourists and guides or residents as they relate to each other and generate value from their interactions. (Pralhad & Ramaswamy, 2004) (Richards & Marques, 2012)

Based on Pine (1999) and Andersson (2007), Tan et al. (2013) proposed a first model of all factors that influence tourists in the creative experience, consisting of four themes that make up the creative process for the tourist: Consciousness/Awareness; Needs; “Creativity” in Creative Experience and Learning and Interacting. This study explores the essence of “creativity” in “creative tourism” from the perspective of the tourist, later corroborated by Ali et al. (2016). The first three themes are linked to the Individual’s Internal Reflections while the last, Learning and Interacting related to the External Interactions.

In turn, based on the characteristics of the dimensions in creative experience by Richards and Raymond (2000), S. Tan et al. (2013) and Richards and Wilson (2006), 22 items were elaborated to measure the creative experience, categorized in five areas: Escape and Recognition; Peace of Mind; Unique Involvement; Interactivity and Learning (Ali et al., 2016).

## Travel App Scope

Mobile technology and apps have transformed the tourism sector, namely in the way they help plan, experience, share, or evaluate travel experiences (Magano & Cunha, 2019) (G. W.-H. Tan et al., 2017) (Dickinson et al., 2014).

In 2017 it was estimated that around 42% of travelers, globally, used apps to plan or book their trips (Gupta et al., 2018). Subsequently, in 2018, in a study conducted by Travelport it was found that 69% of tourists use travel apps regularly, and that 90% of the main brands in the sector would invest more in mobile applications. A slight increase was also estimated in investments in new technologies such as chatbots, virtual reality and augmented reality (Travelport, 2018).

The same source confirmed that consumers prefer native apps over websites when it comes to booking and planning trips, and the reasons relate to user experience, such as speed, efficiency and ease of use, as it is highly valued: 85% said they would be more likely to book a trip with a brand that has a good user experience. On the other hand, 69% said that it would be unlikely to re-book with a brand that would provide a bad user experience.

In this study it was concluded that in the perception of travelers, apps provide a fast and quality experience to solve travel needs, such as booking flights and accommodation. On the one hand, in some industries there seem to be signs of “app fatigue”, when it comes to travel apps, on the contrary, the number of users and downloads has grown monthly. 82% of travelers also stated that they intend to continue using them, or even other travel apps in the following year. The various entities in the sector recognize the importance

of developing or associating with an app, as they bring significant advantages to the consumer as an alternative to the web, such as the ability to access the device's hardware, or GPS/NFC features, which add more value to the travel experience.

## Theoretical Models on Technology Acceptance and Use Intention

Venkatesh et al. (2003) have referred to several models which have emerged over the decades in the study of consumer acceptance in Information Technology (IT). Among the most notorious are Davis's Technology Acceptance Model (TAM) (1989) and Venkatesh et al.'s Unified Theory of Acceptance and Use of Technology (UTAUT) (2003), which base off their constructs from other reference models in the field of psychology and sociology, such as Theory of Reasonable Action (TRA), Theory of Planned Behavior (TPB), Vallerand's Motivational Model (MM) (1997) and Diffusion of Innovation Theory (DIT) by Rogers, which were later applied to other areas and adapted to study the acceptance and use of technology in IT (Venkatesh et al., 2003).

The TRA attributed to Ajzen (1975) derives from studies in the area of psychology and sociology and proved to be effective in predicting human behavior. The main constructs are "Attitude Toward Behavior", which refers to an individual's positive or negative feelings regarding adopting a certain behavior and "Subjective Norm", which relates to the individual's perception of the opinion of others regarding adoption certain behavior (Ajzen, 1975). Ajzen's (TPB) TPB (1991) as the same constructs as TRA with the inclusion of "Perceived Control", that is, the perception of ease or difficulty that Theory of Planned Behavior has in relation to the adoption of a certain behavior. This determinant proved to be crucial for studies of behavioral intention and intention to use technology (Venkatesh et al., 2003).

TAM was developed specifically for the acceptance of technology in IT, in the context of acceptance of technology by employees in a professional environment. It analyzes an individual's attitudes based on two constructs: perceived usefulness, and ease of use. The model suggests that these factors influence decision to use technology. Perceived usefulness is defined as the extent to which an individual believes that the use of the system can increase their performance at work, and perceived ease of use is defined as the extent to which they believe that the use of the system does not require effort (Venkatesh & Davis, 2000). Later TAM2 is released, recognizing the need to investigate the impact of social influences, in addition to perceived usefulness and ease of use including the Subjective Norms adapted from TRA and TPB.

Rogers' Theory of Diffusion of Innovation, formally presented in 1995, is based on the field of sociology and like other models mentioned was adapted to study innovation in other fields. It has seven essential constructs: Relative Advantage, Ease of Use, Image, Visibility, Compatibility, Results Demonstrability and Voluntariness (Venkatesh et al., 2003).

Vallerand's Motivational Model (1997), also based on studies in the field of psychology, theorizes that there are two types of motivations that promote human behavior: Extrinsic Motivations, which is the perception that the individual is motivated to adopt a certain behavior because it is beneficial in the extent that it allows to achieve valuable goals or results. In this case, the individual may not exactly enjoy or be satisfied with adopting this behavior, but he gives in to its adoption to obtain something in his favor, or, on the other hand, to avoid undesirable results. On the contrary, Intrinsic Motivations are the perception that the individual adopts the behavior because it is personally gratifying per se, and not because of the desire to have any benefit or reward (Venkatesh et al., 2003).

Given the value that these models brought to behavioral research and acceptance in IT Venkatesh et al. (2003) intended to develop a model that would unify the previous ones, and could cover all the main constructs related to the acceptance of IT, contributing significantly to studies in the area of Information Systems. In this way, The Unified Theory of Acceptance and Use of Technology (UTAUT) adapted and unified the various constructs of the aforementioned models into one. The determinants are: performance expectancy (PE) degree to which the individual believes that the use of the system will bring advantages in his performance (at work); effort expectancy (EE), in which the individual relates the degree of ease associated with the use of technology; the social influence SI (degree of perception of the individual in relation to third parties regarding their belief in the need for a new technology to be used or not); and the facilitating conditions FC (degree to which the individual believes that there is an organizational and technical infrastructure to support the use of the system) (Venkatesh et al., 2003). Subsequently, UTAUT2 was published with the insertion of three new categories, in addition to the original model: Hedonic Motivation, Price Value and Habit. Hedonic motivation related to perceived pleasure, the fun or pleasure that the use of certain technology can provide, playing an important role in the acceptance and use of mobile technologies. Habit is defined as the extent to which people tend to perform behaviors automatically, due to custom. Price relevance, in turn, was added because there is a monetary cost in the use of technology, which must also be considered (Venkatesh et al., 2012). Price relevance was found to have a significant impact on intended use (Venkatesh et al., 2012).

Studies on the acceptance of use in IT such as TAM and UTAUT suggest that what drives consumers to adopt certain technologies are the criteria of utility, (perceived usefulness, performance expectancy, price value, subjective norms, social influence, hedonic motivation), which may refer to the functionalities or functions of the apps (Dickinson et al., 2014), and usability performance criteria (ease of use, effort expectancy, habit, facilitating conditions) that relate to User Experience (UE) (Lee et al., 2018) (Baek & Yoo, 2018).

## Travel App Functionality and Use Intention

In the Literature raised, the term of functionalities in technology is quite objective. It determines the set of functions that a computer or other electronic system has the capacity to perform. Dickinson (2014) refers to features of travel apps such as capabilities or functions that are associated with a utility or purpose related to travel. This designation is also used by Kennedy-Eden and Gretze (2012), Fang et al. (2017), Fang et al. (2017) Jia et al. (2016) Lee et al. (2017).

From a value chain perspective, Kennedy-Eden and Gretzel (2012) proposed seven categories based on services provided by the travel apps analyzed: Navigation, Social, Mobile Marketing, Security/Emergency, Transactional, Entertainment and Information, composed of several subcategories. These subcategories correspond to the features that support the services provided by the app, such as GPS, augmented reality, allowing the user to share photos, chat with other users and give recommendations.

Contrary to usability and performance issues, few studies have researched the relationship between features and the intention to adopt apps (Lu et al., 2015). Based on Kennedy-Eden and Gretzel, Lu et al. (2015) categorized 22 items to measure these features.

The results showed that performance outcomes i.e. functionalities, are crucial determinants in the intention of using travel apps, having obtained more significant results than personal outcomes. More specifically, the results showed that tourists have high expectations regarding transaction functions, and moderate expectations regarding information, navigation, marketing, social interaction and entertainment functions (Lu et al., 2015).

## Travel App Usability and Use Intention

Being defined as a component of product design in various scientific fields, initially the term usability consensually designated the perception of ease of use (Gould & Lewis, 1985), having later acquired a broader meaning, also

relating to the ability to achieve the expected results with effectiveness, efficiency and satisfaction (Nielsen, 1994) (Venkatesh & Davis, 2000) (Lee et al., 2018) (Baek & Yoo, 2018).

The System Usability Scale (SUS) by Brooke (1996) was used to assess the usability of a wide variety of interfaces, having proved to be a fast and effective tool for this purpose (Bangor et al., 2008).

However, most studies carried out started from a linear approach to the technical definitions of effectiveness, efficiency and satisfaction. Consequently, usability constructs have been widely evaluated in a generalized way, as Baek et al. (2018) refer, without regarding the relational dimensions between the consumer and the brand.

Baek and Yoo's approach defines the usability of an app as the ability it has to perform a specific task effectively, taking into account the interactions between brand and consumer holistically, and that responds to consumer perceptions of usability. In this viewpoint, Baek et al. measured the variables User-Friendliness, Personalization, Speed, Fun and Omnipresence with the consumer perspective as the central focus.

In the study by Lee et al., the SUS template was used and design attractiveness interface variable was added (Lee et al., 2017). The results proved that the type of interface design has a bearing on the user experience and that the application with the least complex functions and the simplest and most direct visual display was considered the most effective, efficient and satisfactory for the participants (Lee et al., 2018).

## Current Research on Tourism Apps and Creative Tourism

According to Binkhorst and Den Dekker, tourism is a generator of experiences and an important economic engine for many societies, some of which depend almost exclusively on this sector. It is perceived that the tourist plays an essential role in the process of creative experiences in tourism: Co-creation involves processes of interaction and activities that connect the tourist to other stakeholders before the trip, during the stay at the destination or even after the trip, and it involves participating in activities focused on entertainment or based on learning, perceived as stimulating, different from daily routines and potentially significant (Campos et al., 2018) (Tan et al., 2014). The forms of creative tourism that have developed in cities range from very active creative involvement to passive visualization of other people's creativity, or even just to the purchase of "creative" products (Richards, 2014). In this sense, there are many recent studies

focusing on tourists and creative experiences, whose findings are relevant to a greater perception of this matter:

Tan et al. (2014) identified five types of creative tourists: novelty-seekers, those looking for new experiences; knowledge and skills learners, those looking to learn skills and new knowledge; individuals aware of travel partners' growth, those looking to achieve an intrinsic evolution together with the travel partner; green issue enthusiasts, those who are concerned with the issues of sustainability; and relax and leisure type, those who seek to relax and enjoy activities. Each of these types of tourists can provide ideas on how to build their personal creative experiences, and how they perceive them, subjectively.

More recently Tan et al. (2016) limited the types of creative tourists to three groups according to the parameters that involve the experiences: relaxers, sensation-seekers, and existential-type. Relaxers emphasize the environmental issues and characteristics of the activity, sensation-seekers emphasize issues related to tutors and existential type tourists emphasize the characteristics of the activity itself.

The findings of Ali et al. (2016) demonstrate that the creative tourist experience constitutes five dimensions: escape and recognition, peace of mind, unique involvement, interactivity and learning. There is a relationship between the experiences of tourists, memories, satisfaction and behavioral intentions (Ali et al., 2016).

Hung, Lee and Huang (2016) reached the same conclusions establishing that there are significantly positive relationships between creative experiences, memories and intentions to revisit. The analysis found that the memories completely mediated the effect of the creative experiences carried out, in the intentions of revisiting, more specifically, that the creative experiences have a positive relationship with the creation of memories of the activities and knowledge, and consequently, with the intention of revisiting.

Regarding the intention of tourists using travel apps, several studies have been carried out in recent years, most of which were based on TAM or some combination of it with another model, and UTAUT. Ukpabi and Karjaluoto (2017) gathered and compared some studies in this area. From the most recent researches, the following are highlighted:

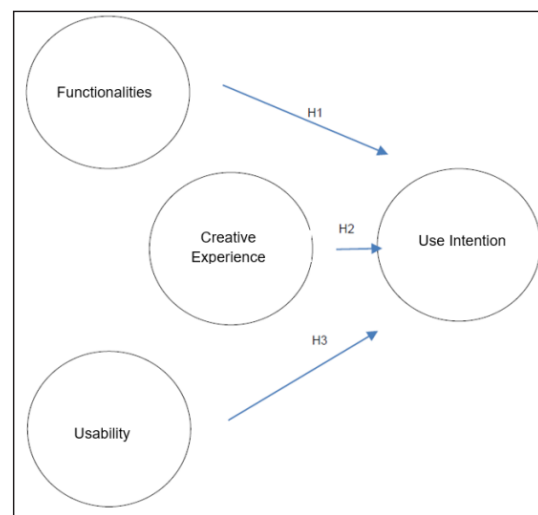
No and Kim (2014) used the UTAUT model to analyze the intention of adopting travel apps, with 400 tourists, concluding that Usefulness, ease of use, social influence and satisfaction positively influenced use intention.

Kim, Chung, Lee and Preis (2015) concluded in a study conducted in South Korea with 357 respondents that

Perceived Usefulness positively influences online shopping on mobile devices, based on the Elaboration Likelihood Model (ELM).

Lai (2015) also resorted to an extension to the UTAUT model to also analyze the factors that influence the intention to use travel apps in tourism, concluding in a study addressed to 205 Chinese residents that Informativeness was the most determining factor in Use Intention. Performance Expectancy, Effort Expectancy, Social Influence, and Facilitating Conditions also had a direct and positive impact on Use Intention.

Despite the growing commitment to creative experiences and mobile technologies, few studies have recently analyzed the link between travel app guides and the creative experiences of tourists. One of the creative trends that use mobile technologies to create creative experiences is the focus on Playable Cities, providing new interpretations of the city for residents and visitors (Marques & Borba, 2017).



**Fig. 1: Conceptual Model**

H1: Travel App features positively influence Use Intention.

H2: Creative experience positively influences Use Intention.

H3: Usability of Travel Apps positively influences Use Intention.

It is intended to analyze the creativity of the selected travel apps and identify possible opportunities or gaps. To this end, a survey of the Creative Tourism Offer in Lisbon will be carried out in order to Evaluate and Compare the Creativity of the experiences provided. Correlations between Usability, Functionalities, Creativity of Experiences and Intention to use Apps were also analyzed.

## METHOD

### Measures

The 22 items proposed by (Ali et al., 2016) were used to measure Creative Experiences: Escape and Recognition; Peace of Mind; Unique Involvement; Interactivity and Learning.

QP1: Are the promoted experiences truly creative?

H3: Creative experience positively influences Use Intention.

To measure Use Intention, the measures proposed by Fang et al. (2017) were applied: User Interface (UI) attractiveness, Privacy and Security, Portability, Compatibility, Ease of Use and Relative Advantage.

To measure the functionalities, the 22 items categorized by Lu et al. (2015) were used: Navigation, Social, Mobile Marketing, Security/Emergency, Transaction, Entertainment and Information.

Regarding usability, as with Baek et al. (2018), there was a need to adopt a stance centered on the consumer and the user experience, therefore the measures of Baek et al. were used: User-Friendliness, Personalization, Speed, Fun and Omnipresence. However, as the focus of this study also revolves around app creativity and innovation, it proved essential to further deepen the perception of users in relation to Interface Design, which has a bearing on the user experience as demonstrated by Lee (2017) and for this reason Interface Design Attractiveness was added.

### Instruments

Based on literary review, a questionnaire was elaborated, with the purpose of evaluating the Creativity of the Tourist Experiences they present, and on the other hand, to measure the impacts of the Usability, Functionalities, and Creativity of the Tourist Experiences in Use Intention. This study depicts a quantitative nature, being supported by primary data attained through questionnaire.

## Sample

For a comprehensive perception that allows to detect opportunities in this niche, out of 164 travel apps available for iOS or Android, the 4 most used were chosen: TripAdvisor (+ 100M) Airbnb Experiences (+ 50M) Expedia (+ 10M) and Lonely Planet (+ 1M), and also 2 apps that targeted Portugal specifically: Visit Portugal Travel Guide and Lisbon Travel Guide by Ulmon Apps.

The sample was collected in person in the city of Lisbon in several touristic locations, such as viewpoints, gardens and at the airport. Giveaways were used to encourage, or reward, tourist participation, such as *pastéis de nata* and Regina® chocolates. Tourists were asked to read the complete questionnaire first, and then to thoroughly handle each application, previously installed on a smartphone.

At the end of the assembly, a total of 50 valid responses were obtained. The Lonely Planet, Visit Portugal Travel Guide, and Lisbon Travel Guide by Ulmon apps did not get enough answers in order to make the study, and for this reason they were excluded.

56% of respondents were female and the remaining 44% male, belonging to several countries of different origin. The market with the most responses was the domestic market, Portugal, comprising 14% of the sample, and then Spain, Germany and the United States, each with 10%. The age group that most responded was 30-39 years old, which corresponds to 42% of the sample, with 20-29 years old age gap following behind, corresponding to 38%.

The data collected was validated and analyzed using the IBM SPSS® program in order to verify the proposed hypotheses.

## DATA ANALYSIS AND DISCUSSION

In this section, the results obtained were discussed in order to verify the established hypotheses.

## Descriptive Statistics

**Table 1: Statistics for Each App**

	Mean	SD	Cronbach	1	2	3	4	5	6	7	8	9	10	11	12
1. TripAdvisor Creativity	4,2946	0,37911	0,839				,402*			,527**			0,325		
2. Airbnb Experiences Creativity	4,3254	0,48129	0,916					0,387			0,217			0,221	
3. Expedia Creativity	4,3889	0,35654	0,861						0,635			0,191			0,507
4. TripAdvisor Usability	4,7962	0,44806	0,866	,402*						0,225			,648**		
5. Airbnb Experiences Usability	4,9533	0,62663	0,949		0,387						0,217			,646**	
6. Expedia Usability	4,5864	0,63006	0,934			0,635						,291*			,821**
7. TripAdvisor Functionalities	4,0936	0,51592	0,892	,527**			0,225						,405**		
8. Airbnb Experiences Functionalities	4,112	0,51056	0,911		0,217			0,217						,527**	
9. Expedia Functionalites	3,9949	0,52986	0,899			0,191			,291*						,485**
10. TripAdvisor Use Intention	4,4837	0,42698	0,935	0,325			,648**			,405**					
11. Airbnb Experiences Use Intention	4,5747	0,41633	0,947		0,221			,646**			,527**				
12. Expedia Use Intention	4,2916	0,60737	0,967			0,507			,821**			,485**			

The Table above illustrates the viability of each measured variable, with the respective Cronbach's alpha and standard deviation (SD); mean scores; and correlation values.

The TripAdvisor Creativity variables; Expedia Creativity, TripAdvisor Usability, TripAdvisor Features and Expedition Features have an alpha greater than, 800 and the remaining, Airbnb Experiences Creativity; Usability Airbnb Experiences; Expedia usability; Airbnb Experiences features; TripAdvisor Use Intention, Use Intention Airbnb Experiences and Use Intention Expedia have an alpha greater than, 900.

### Tripadvisor

Regarding the descriptive statistics of TripAdvisor Creativity, in 32 cases the average mean score was 4.2946 and standard deviation of 37911.

The frequencies of the answers given are described with 87.5% who evaluated this variable on average above 4, in a Likert scale from 1 to 5.

As for the usability of Tripadvisor, all responses were valid and presented an average of 4.7962 and 4.4806 standard deviation. About 44% rated TripAdvisor Usability above 5, on a Likert scale from 1 to 7. In general the results are closer to 7.

As for TripAdvisor Features, the overall average response was 4.0936, with around 64% of responses rated above 4, on a Likert scale from 1 to 5.

The TripAdvisor Use Intention variable has an average rating of 4.4837 with 86% of the ratings above 4, on a scale of 1 to 5.

### Airbnb Experiences

In the creativity variable Airbnb Experiences, out of 12 cases the average mean score was of 4.3254 and standard deviation of 48129.

In this variable, the ratings are more distributed on the Likert scale from 1 to 5, with 75% rated above 4. The average is slightly higher than that of TripAdvisor Creativity, although the number of cases in this variable is much lower.

Regarding the usability of Airbnb Experiences, all the answers were also valid, presenting an average of 4,533 even higher than that of TripAdvisor, with about 50% of the ratings above 5 in a school from 1 to 7.

The Airbnb Functionalities variable has an average slightly higher than that of TripAdvisor, with 4.1120 and 66% of the ratings above 4, on a scale of 1 to 5.

The Airbnb Experiences Use Intention rating was the highest of the 3 apps, averaging 4.5747 and about 94% of responses above 4.

### Expedia

The Expedia Creativity variable presents an average higher than the previous variables, of 4.3889 although it has an even smaller number of valid cases, that is, 9 cases, in which 88.9% evaluated above 4.

The Expedia Usability variable obtained the lowest average rating of the 3 apps, 4.5864 in 49 valid cases, with about 24.5% of the evaluations made above 5, on a scale of 1 to 7. For the other apps, the answers stand more towards the middle of the scale.

In Expedia Functionalities, the average was the lowest of the 3 applications, with 3.9949 on a scale of 1 to 5, in which 55% responded above 4.

Finally, the ratings for the Use Intention place high on the scale, with an average of 4.2916, with about 75% of responses above 4.

## Hypothesis Testing

The hypotheses were tested for each app, individually, and also taking into account all responses in general, regardless of the app. Again using IBM's SPSS®, Spearman's correlations were tested.

In Tripadvisor there is a strong correlation between usability and use intention, with, 648. This corroborates the findings of (Baek & Yoo, 2018), (L. S. A. Lee et al., 2018) and (Fang et al., 2017), which reached the same results. There is also a correlation between the functionalities and the intended use, 527 as contested (Lu et al., 2015).

In Airbnb Experiences, similar to Tripadvisor, it is possible to observe in this application correlations between usability and use intention, and features and use intention, 646 and, 527 respectively.

Finally, in the Expedia app there is again a correlation between usability and use intention and features and use intention, 821 and, 485 respectively.

The individual results for each app do not indicate any significant correlation between the creativity of the experiences that tourists had with use intention. However, there was a correlation between usability and use intention, as concluded (Fang et al., 2017) (Lee et al., 2018) or (Baek & Yoo, 2018), and between functionalities and intention to use, as verified (Lee et al., 2017).

**Table 2: General Statistics**

	1.	2.	3.	4.
1. Creativity all		,402**	0,226	,385**
2. Usability all	,402**		0,221	,718**
3. Functionality all	0,226	0,221		,515**
4. Use Intention all	,385**	,718**	,515**	

In contrast, the general correlation analysis, including all responses, indicates a correlation between Creativity of experiences and Use Intention (,385) although significantly lower than the correlations between usability and use intention (,718) and functionality and use intention (,515).

Thus, the following hypotheses are confirmed:

H1: Travel App features positively influence use intention.

H3: Usability of Travel Apps positively influences use intention.

**Table 3: Hypothesis Validation**

	H1 Travel Apps Features Positively Influence Intention to Use	H2 Creative Experience Positively Influence Intention to Use	H3 Usability of Travel Apps Positively Influence Intention to Use
Tripadvisor	√	×	√
AirbnbExperiences	√	×	√
Expedia	√	×	√

## CONCLUSIONS

### Discussion and Implication for Theory

Although there were few valid cases for the analysis of Creativity of Experiences, the results indicate a good classification of the experiences of tourists, having obtained the following mean score averages: Expedia [4,3889] Airbnb [4,3254] and Tripadvisor [4.2946], which may mean that tourists actually perceive the experiences they have as creative. Among the responses collected, the experiences vary from guided walking tours, tuktuk tours, gastronomic experiences or technical workshops, therefore also varying in the level of participation, more active or more passive, and in the level of immersion or absorption.

Usability obtained the best ratings, which may indicate that the usability of travel apps is the most satisfactory parameter for users of travel apps, with Airbnb reaching the best rating, receiving praise for the content of videos and images, and the best User Experience in general. This reinforces the idea of Lee et al. (2017) and Baek and Yoo (2018), that the user experience is one of the crucial factors in app use intention.

In the functionalities, the answers obtained were more centralized towards the middle of the scale, however they are also the ones that varied the most. It is possible to notice that Entertainment and Information, and Security/Emergency were the parameters that obtained the lowest classification in the 3 applications, which may represent shortcomings.

The individual results for each app did not indicate any significant correlation between the creativity of the

experiences that the tourists described with use intention, and thus Hypothesis 2 was not confirmed.

However, there was a correlation between usability and use intention, as concluded by Fang et al. (2017) Lee et al., (2018) or Baek and Yoo, (2018), and between functionalities and use intention, as verified by Lu et al. (2015).

## Implications for Management

Although with few cases, the average ratings seem satisfactory, which may indicate that tourists enjoy the experiences they are involved in and perceive them as creative. Touristic entities must continue to invest in a variety of creative experiences, whether these are more active or passive, immersive or absorbable.

They should also continue to invest in providing a good user experience in their apps, and innovate in usability issues, since it has a direct correlation with use intention.

Finally, they should also improve the experience of certain features, since there is also a correlation between the features and use intention. Apps can improve the parameters of entertainment and information, making them more interactive or including more informative content, such as videos/trailers of experiences or products. It could even allow users to share videos themselves in addition to images, elevating the travel app to a kind of social network. The results also indicate that the Safety/Emergency factor could receive improvements, or more disclosure if the app already has emergency solutions, since users have not rated this factor positively.

## Limitations and Future Investigations

The obtained sample did not allow to evaluate all the proposed apps. For future research it could be advantageous to compare the same parameters in less popular apps, so as to state the differences between big and small brands.

Social networks were also mentioned by some respondents as determinants in the choice of activities and experiences at destinations, through photographs and/or “Instagram stories” that users share from their travels. Investigating the role of social networks in motivating tourists and choosing tourist experiences may produce interesting results for Theory and Management.

## REFERENCES

- Ali, F., Ryu, K., & Hussain, K. (2016). Influence of experiences on memories, satisfaction and behavioral intentions: A study of creative tourism. *Journal of Travel & Tourism Marketing*, 33(1), 85-100. doi:https://doi.org/10.1080/10548408.2015.1038418
- Andersson, T. D. (2007). The tourist in the experience economy. *Scandinavian Journal of Hospitality and Tourism*, 7(1), 46-58. doi:https://doi.org/10.1080/15022250701224035
- Baek, T. H., & Yoo, C. Y. (2018). Branded app usability: Conceptualization, measurement, and prediction of consumer loyalty. *Journal of Advertising*, 47(1), 70-82. doi:https://doi.org/10.1080/00913367.2017.1405755
- Bangor, A., Kortum, P. T., & Miller, J. T. (2008). An empirical evaluation of the system usability scale. *International Journal of Human-Computer Interaction*, 24(6), 574-594. doi:https://doi.org/10.1080/10447310802205776
- Binkhorst, E., & Den Dekker, T. (2009). Agenda for co-creation tourism experience research. *Journal of Hospitality Marketing & Management*, 18(2-3), 311-327. doi:https://doi.org/10.1080/19368620802594193
- Blapp, M., & Mitas, O. (2018). Creative tourism in Balinese rural communities. *Current Issues in Tourism*, 21(11), 1285-1311. doi:https://doi.org/10.1080/13683500.2017.1358701
- Campbell, C. (2009, August 25). What is Creative Tourism? Catriona campbell - The creative tourism marketing specialist. Retrieved from <https://catrionacampbell.wordpress.com/what-is-creative-tourism/>
- Campos, A. C., Mendes, J., Valle, P. O. do, & Scott, N. (2018). Co-creation of tourist experiences: A literature review. *Current Issues in Tourism*, 21(4), 369-400. doi:https://doi.org/10.1080/13683500.2015.1081158
- Carson, S., & Pennings, M. (Eds.). (2018). *Performing cultural tourism: Communities, tourists and creative practices*. Routledge.
- Cetin, G., & Bilgihan, A. (2016). Components of cultural tourists' experiences in destinations. *Current Issues in Tourism*, 19(2), 137-154. doi:https://doi.org/10.1080/13683500.2014.994595
- Condesso, F. (2011). Desenvolvimento rural, património e turismo. *Cuad. Desenv. Rural*, 26.
- Dickinson, J. E., Ghali, K., Cherrett, T., Speed, C., Davies, N., & Norgate, S. (2014). Tourism and the smartphone app: Capabilities, emerging practice and scope in the travel domain. *Current Issues in Tourism*, 17(1), 84-101. doi:https://doi.org/10.1080/13683500.2012.718323
- Ek, R., Larsen, J., Hornskov, S. B., & Mansfeldt, O. K. (2008). A dynamic framework of tourist experiences: Space-time and performances in the experience economy. *Scandinavian Journal of Hospitality and Tourism*, 8(2), 122-140. doi:https://doi.org/10.1080/15022250802110091
- Engeset, M. G., & Elvekrok, I. (2015). Authentic concepts: Effects on tourist satisfaction. *Journal of Travel Research*, 54(4), 456-466. doi:https://doi.org/10.1177/0047287514522876

- Fang, J., Li, J., & Wang, R. (2017). Mobile travel apps' adoption: Integrating perceived characteristics of innovation and software quality. *Proceedings of the 2017 International Conference on Software and E-Business - ICSEB 2017*, 38-42. doi:https://doi.org/10.1145/3178212.3178213
- Fang, J., Zhao, Z., Wen, C., & Wang, R. (2017). Design and performance attributes driving mobile travel application engagement. *International Journal of Information Management*, 37(4), 269-283. doi:https://doi.org/10.1016/j.ijinfomgt.2017.03.003
- Filho, L., Batista, J., Cacho, A., & Soares, A. (2017). Mobile applications and tourism: A quantitative study applying the theory of planned behavior. *Revista Rosa dos Ventos - Turismo e Hospitalidade*, 9(2), 179-199. doi:https://doi.org/10.18226/21789061.v9i2p179
- Gould, J. D., & Lewis, C. (1985). Designing for usability: Key principles and what designers think. *Commun. ACM*, 28(3), 300-311. doi:https://doi.org/10.1145/3166.3170
- Gupta, A., Dogra, N., & George, B. (2018). What determines tourist adoption of smartphone apps? An analysis based on the UTAUT-2 framework. *Journal of Hospitality and Tourism Technology*, 9(1), 50-64. doi:https://doi.org/10.1108/JHTT-02-2017-0013
- Hung, W.-L., Lee, Y.-J., & Huang, P.-H. (2016). Creative experiences, memorability and revisit intention in creative tourism. *Current Issues in Tourism*, 19(8), 763-770. doi:https://doi.org/10.1080/13683500.2013.877422
- Jelinčić, D. A., & Žuvela, A. (2012). Facing the challenge? Creative tourism in Croatia. *Journal of Tourism Consumption and Practice*, 4(2), 78-90. doi:http://hdl.handle.net/10026.1/11705
- Jia, Z., Li, D., & He, F. (2016). Analysis and reviews on tourism and travel mobile apps of China. *Proceedings of the International Conference on Electronics, Mechanics, Culture and Medicine*. International Conference on Electronics, Mechanics, Culture and Medicine, Shenyang, China. doi:https://doi.org/10.2991/emcm-15.2016.13
- Jiang, Y., Ramkissoon, H., Mavondo, F. T., & Feng, S. (2017). Authenticity: The link between destination image and place attachment. *Journal of Hospitality Marketing & Management*, 26(2), 105-124. doi:https://doi.org/10.1080/19368623.2016.1185988
- Kennedy-Eden, H., & Gretzel, D. U. (2012). A taxonomy of mobile applications in tourism. *Research*, 10(2), 5.
- Kim, D., & Kim, S. (2017). The role of mobile technology in tourism: Patents, articles, news, and mobile tour app reviews. *Sustainability*, 9(11), 2082. doi:https://doi.org/10.3390/su9112082
- Kim, M. J., Chung, N., Lee, C.-K., & Preis, M. W. (2015). Motivations and use context in mobile tourism shopping: Applying contingency and task-technology fit theories. *International Journal of Tourism Research*, 17(1), 13-24. doi:https://doi.org/10.1002/jtr.1957
- Lai, I. K. W. (2015). Traveler acceptance of an app-based mobile tour guide. *Journal of Hospitality & Tourism Research*, 39(3), 401-432. doi:https://doi.org/10.1177/1096348013491596
- Lee, L. S. A., Shaharuddin, S. S., Ng, G. W., & Wan-Busrah, S. F. (2018, February). *An Investigation on the Usability of Mobile Travel Guide Application: A Comparison Study* [Text]. doi:https://doi.org/info:doi/10.1166/asl.2018.10677
- Lee, L. S. A., Shaharuddin, S. S., Ng, G. W., & Wan-Busrah, S. F. (2017). Co-creation tourism experience in perceived usability of interactive multimedia features on mobile travel application. *Journal of Telecommunication, Electronic and Computer Engineering*, 9(2-9).
- Lim, S. E. Y., & Bouchon, F. (2017). Blending in for a life less ordinary? Off the beaten track tourism experiences in the global city. *Geoforum*, 86, 13-15. doi:https://doi.org/10.1016/j.geoforum.2017.08.011
- Lu, J., Mao, Z., Wang, M., & Hu, L. (2015). Goodbye maps, hello apps? Exploring the influential determinants of travel app adoption. *Current Issues in Tourism*, 18(11), 1059-1079. doi:https://doi.org/10.1080/13683500.2015.1043248
- Magano, J., & Cunha, M. Z. N. (2019). Mobile apps and travel apps on the tourism journey. *Tourism and Leisure*, 8, 17.
- Marques, L., & Borba, C. (2017). Co-creating the city: Digital technology and creative tourism. *Tourism Management Perspectives*, 24, 86-93. doi:https://doi.org/10.1016/j.tmp.2017.07.007
- Mossberg, L. (2007). A marketing approach to the tourist experience. *Scandinavian Journal of Hospitality and Tourism*, 7(1), 59-74. doi:https://doi.org/10.1080/15022250701231915
- Nielsen, J. (1994). *Usability engineering*. Elsevier.
- No, E., & Kim, J. K. (2014). Determinants of the adoption for travel information on smartphone. *International Journal of Tourism Research*. Retrieved from https://onlinelibrary.wiley.com/doi/abs/10.1002/jtr.1945
- Park, S., & Santos, C. A. (2017). Exploring the tourist experience: A sequential approach. *Journal of Travel Research*, 56(1), 16-27. doi:https://doi.org/10.1177/0047287515624017
- Pawlusiński, R., & Kubal, M. (2018). A new take on an old structure? Creative and slow tourism in Krakow (Poland). *Journal of Tourism and Cultural Change*, 16(3), 265-285. doi:https://doi.org/10.1080/14766825.2017.1330338

- Pine, B. J., Pine, J., & Gilmore, J. H. (1999). *The experience economy: Work is theatre & every business a stage*. Harvard Business Press.
- Prahalad, C. K., & Ramaswamy, V. (2004). Co-creating unique value with customers. *Strategy & Leadership*. doi:https://doi.org/10.1108/10878570410699249
- Ram, Y., Björk, P., & Weidenfeld, A. (2016). Authenticity and place attachment of major visitor attractions. *Tourism Management*, 52, 110-122. doi:https://doi.org/10.1016/j.tourman.2015.06.010
- Richards, G. (2011). Creativity and tourism. *Annals of Tourism Research*, 38(4), 1225-1253. doi:https://doi.org/10.1016/j.annals.2011.07.008
- Richards, G. (2014). Creativity and tourism in the city. *Current Issues in Tourism*, 17(2), 119-144. doi:https://doi.org/10.1080/13683500.2013.783794
- Richards, G., & Marques, L. (2012). Exploring creative tourism: Introduction. *Journal of Tourism Consumption and Practice*, 4(2).
- Richards, G., & Raymond, C. (2000). Creative tourism. *ATLAS News*, 23(8), 16-20.
- Richards, G., & Wilson, J. (2006). Developing creativity in tourist experiences: A solution to the serial reproduction of culture? *Tourism Management*, 27(6), 1209-1223. doi:https://doi.org/10.1016/j.tourman.2005.06.002
- Santos, J. F., Carvalho, R., & Figueira, L. M. (2018). A importância do turismo cultural e criativo na imagem de um destino turístico. *Revista Turismo & Desenvolvimento*, 3(17/18), 1559-1572.
- Sørensen, F., & Jensen, J. F. (2015). Value creation and knowledge development in tourism experience encounters. *Tourism Management*, 46, 336-346. doi:https://doi.org/10.1016/j.tourman.2014.07.009
- Stipanović, C., Rudan, E., & Zadel, Z. (2017). *The challenges of small enterprises in generating destination creative offer* (pp. 579-590). doi:https://doi.org/10.20867/tosee.04.20
- Tan, G. W.-H., Lee, V. H., Lin, B., & Ooi, K.-B. (2017). Mobile applications in tourism: The future of the tourism industry? *Industrial Management & Data Systems*, 117(3), 560-581. doi: https://doi.org/10.1108/IMDS-12-2015-0490
- Tan, S.-K., Kung, S.-F., & Luh, D.-B. (2013). A model of 'creative experience' in creative tourism. *Annals of Tourism Research*, 41, 153-174. doi:https://doi.org/10.1016/j.annals.2012.12.002
- Tan, S.-K., Luh, D.-B., & Kung, S.-F. (2014). A taxonomy of creative tourists in creative tourism. *Tourism Management*, 42, 248-259. doi:https://doi.org/10.1016/j.tourman.2013.11.008
- Tan, S.-K., Tan, S.-H., Luh, D.-B., & Kung, S.-F. (2016). Understanding tourist perspectives in creative tourism. *Current Issues in Tourism*, 19(10), 981-987. doi:https://doi.org/10.1080/13683500.2015.1008427
- Tiberghien, G., Bremner, H., & Milne, S. (2017). Performance and visitors' perception of authenticity in eco-cultural tourism. *Tourism Geographies*, 19(2), 287-300. doi:https://doi.org/10.1080/14616688.2017.1285958
- Travelport (2018). Mobile travel trends 2018. *Travelport Digital Research*. Retrieved from https://travelportdigital.com
- Ukpabi, D. C., & Karjaluo, H. (2017). Consumers' acceptance of information and communications technology in tourism: A review. *Telematics and Informatics*, 34(5), 618-644. doi:https://doi.org/10.1016/j.tele.2016.12.002
- UNESCO Creative Cities Network. (2006). Towards sustainable strategies for creative tourism: Discussion report of the planning meeting for 2008. *International Conference on Journal of Tourism Consumption and Practice*, 4(2), ISSN 1757-031X 90. Creative Tourism Santa Fe, New Mexico, U.S.A. October 25-27, 2006. Retrieved from http://portal.unesco.org/culture/fr/files/34633/11848588553oct2006\_meeting\_report.pdf/oct2006\_meeting\_report.pdf
- Venkatesh, Morris, M. G., Davis, G. B., & Davis, G. B. (2003). User acceptance of information technology: Toward a unified view. *MIS Quarterly*, 27(3), 425. doi:https://doi.org/10.2307/30036540
- Venkatesh, V., & Davis, F. D. (2000). A theoretical extension of the technology acceptance model: Four longitudinal field studies. *Management Science*, 46(2), 186-204. doi:https://doi.org/10.1287/mnsc.46.2.186.11926
- Venkatesh, V., Thong, J. Y. L., & Xu, X. (2012). Consumer acceptance and use of information technology: Extending the unified theory of acceptance and use of technology. *MIS Quarterly*, 36(1), 157-178. JSTOR. doi:https://doi.org/10.2307/41410412
- Virginija, D. J. (2016). Interaction between cultural/creative tourism and tourism/cultural heritage industries. *Tourism - From Empirical Research Towards Practical Application*. doi:https://doi.org/10.5772/62661
- Wickens, E. (2017). The consumption of cultural experiences in city tourism. *Tourism and Hospitality Research*, 17(3), 264-271. doi:https://doi.org/10.1177/1467358416646606
- Zhou, Q. (Bill), Zhang, J., Zhang, H., & Li, X. (Robert). (2018). Is all authenticity accepted by tourists and residents? The concept, dimensions and formation mechanism of negative authenticity. *Tourism Management*, 67, 59-70. doi:https://doi.org/10.1016/j.tourman.2017.12.024