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Tourism/Eng/ID: 118

TOURISM INTERPRETATION: AN OVERVIEW OF ITS INFLUENCE AND RESEARCH TREND

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ABSTRACT

Tourist's understanding and interest towards destination, especially urban tourism cities, is highly subjected to its interpretation that concern about tourist information acquisition. Tourism interpretation reveals significance of destination, instils emotional value, and consequently creates meanings to tourist. Existing literatures indicates that interpretation would significantly deepened tourist's destination insight, and improves travel experience. From the psychological perspective, personal connection with destination can be established when there is a good match between tourist expectation and interpretation provided. As tourist experience is highly psychological and cognitive in nature, quality interpretation is crucial in manipulating experience development. Specifically in urban destination, complexity of urban environment complicates tourist spatial cognition process. With technological engagement, it does give positive influence to the quality of interpretation, which may psychologically manipulate the way tourist perceives the destination. Witnessing the evolution in interpretation system, there is a need to relook on the impact of interpretation and understand its current research trend to apprehend the future direction of interpretation system development. Thus this review paper is intended to firstly unveil the importance of effective interpretation system in enhancing tourist travel experience and secondly to review the research trend in tourism interpretation within the research literature in the recent ten years.

Keywords: Interpretation, tourist experience, technological engagement, research trend

*Proceedings of the 4th International Conference of Languages,
Education and Tourism 2021
Language, Education and Tourism - Embracing Changes and Challenges
International Islamic University Malaysia
28th – 30th June 202*

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TOURISM 2021

1. INTRODUCTION

The important of tourism interpretation in delivering the insight of a particular destination is indisputable, especially to instil tourist's interest towards the new environment. As tourism destination is commonly foreign to the visitor, the availability of interpretation through provision of information is crucial, either for navigation to basic tourism facilities or for complex explanation of tourism point of interest (Huang, Weiler, and Assaker 2015; Moscardo 1998). Tourist information acquisition, which seen as the determinant for successful destination interpretation, is not only significant to develop spatial knowledge but at the same time capable in nurturing visitor's excitement in exploring the destination. Since travelling is associated with time limitation, effective interpretation is vital throughout tourist travel consumption to assure the experience formed salient enough to give emotional meanings.

While the formation of travel experience is highly psychological in nature, the extensiveness of interpretation in delivering the essential insight to tourist is seen as capable in initiating emotional attachment with the destination. As tourism interpretation may come in various form, the sensual stimulation and the information content within it can be regarded as the mediator to gain meaningful experience (Md Noor et al. 2015). In the other words, effective interpretation at a certain point seen as able to psychologically influence the way tourist perceive the destination, as it relates with "the engagement of the tourist in making sense of the tourism" (Crouch 2005, p. 18). With the current technological advancement, it is perceived that its engagement in tourism industry able to aid tourist in their process of destination consumption. Other than retrieve geographical information, tourist used of technologies is seen to affect social interaction and sensory experience (Pierdicca, Paolanti, and Frontoni 2019; Tussyadiah and Zach 2011), to which it enhances the way interpretation being delivered.

Understanding the impact of interpretation on tourist and the evolution in tourism interpretation system, this paper thus presents the overview on the influence of effective interpretation on tourist travel experience, as well as the technological engagement in existing interpretation system. Concurrently, the trend in existing research related to tourism interpretation reviewed to better understand the current and future direction of interpretation development. This paper therefore covers two research objectives as follows:

1. The overview of tourism interpretation, its influence on tourist experience, and the current interpretation enhancement through technological engagement.
2. The research trend of scholarly literature related to tourism interpretation from the past 10 years and the main topics covered.

2. TOURISM INTERPRETATION IN TRAVEL DESTINATION

Interpretation at tourism destination is aim to provide insight to visitors on the knowledge related to the place in triggering interest and excitement. For the presenter or interpreter, either for human (such as tour guide) or digital guide (such as mobile apps), the principal for meaningful interpretation is to 'share' every aspect of the local knowledge to the visitor. Through this sharing process, it is expected that visitors able to establish personal connection, be empathy and thus have emotional attachment with the place. Sharing of

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knowledge of the place is one of the way for the destination to communicate and connect with visitors and it need to be done in a way which able to get others excited about it (Benton 2009; Huang et al. 2015). Through this, visitors is expected to develop meaningful experience, which leads to their satisfaction of the interaction and interpretive experience made (Huang et al. 2015; Moscardo 1998).

2.1 Defining Tourism Interpretation

In tourism industry, interpretation play a crucial role in instilling knowledge and understanding of destination to tourist. The availability of interpretation is seen as medium to inform public on various aspects and it is important particularly to nature and culture tourism destination to educate tourist on the environmental significance as well as heritage conservation (Moscardo 1998; Tilden 1977; Uzzell 1998; Wolf, Stricker, and Hagenloh 2013). Although it is commonly correlate with sustainable tourism, interpretation actually encompasses a larger perspective.

> "An educational activity which aims to reveal meanings and relationships through the use of original objects, by first-hand experience, and by illustrative media, rather than simply to communicate factual information." (Tilden 1977, p. 8).

> "A mission-based communication process that forges emotional and intellectual connections between the interests of the audience and meanings inherent in the resource." (National Association for Interpretation 2007).

From both of these definitions, interpretation is clearly described in the context of psychological connection and relationship through education. In the other words, interpretation does not only focus on deliverance of information, but also highlight on the emotional excitement and experience development. Interpretation is a special kind of communication in destination that made available to instil fun and excitement of a place that capable of influencing the visitor behaviour and simultaneously resulting to place attachment to a certain extent (Benton 2009; Morgan 2009; Moscardo 1998). This means the availability of effective interpretation is perceived able to satisfy visitors psychological need of dynamic human-environment interaction hence making them treasuring the destination as the place of their own.

The discussion on interpretation commonly equated with sustainable tourism, such as tourism activities in historical sites and protected areas, to better instil the educating elements regarding the need to protect these areas into visitors mind (Knapp and Benton 2004; Md Noor et al. 2015). It is known that these areas are more fragile, and damage inflicted by tourism activities are often concealed from visitors knowledge for the sake of economic development (Ham and Weiler 2002; Krippendorf 1987). Availability of effective interpretation in these resource-sensitive destination is important not only to instil environmental message but at the same time function as strategy to manage visitor. Injection of creative elements within the planning of interpretation would better inculcate the sense of responsibility within visitors and being a part of the strategic action in sustainably managing a tourism destination (Malik 2020). By providing alternatives, interpretation act as filter in managing the movement of visitors, which vital in reducing ecological impact of fragile area

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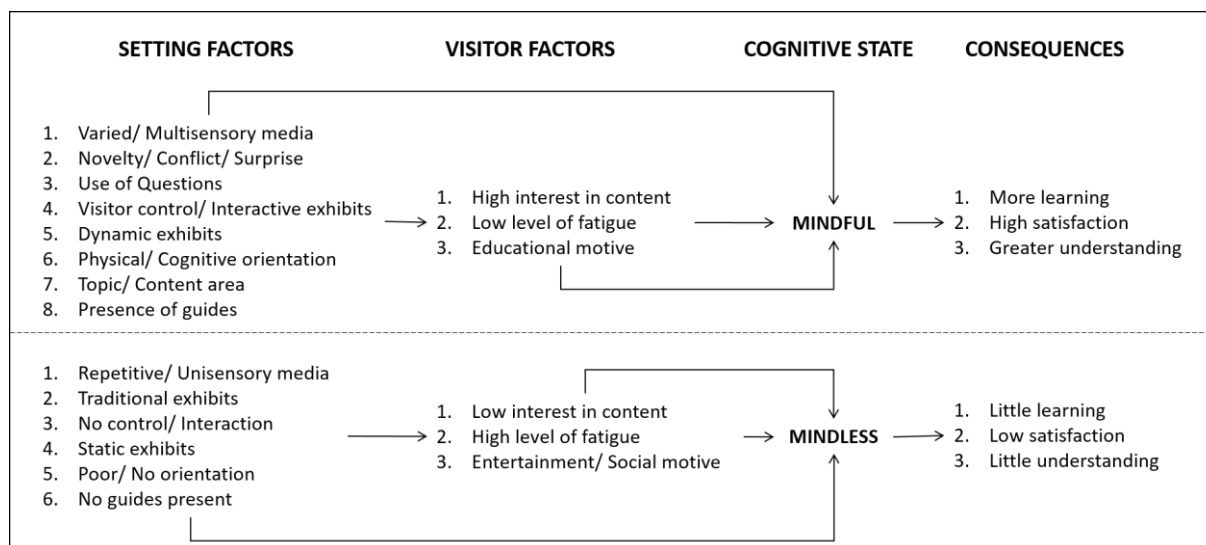*International Islamic University Malaysia*
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(Bramwell and Lane 1993; Coghlan and Carter 2020; Kuo 2002). Hence, interpretation play significant role to enlighten them on these consequences and encouraging towards sustainable behaviour in a more effective and enjoyable manner (Moscardo 1996; Wolf et al. 2013).

While for urban tourism, the need for interpretation was minimally discussed in this context since tourism activities there are less critical and more towards entertainment. However, the fact that urban setting is the place for most tourism activities and facilities, interpretation there is demanded to be contrastive from those in protected environment, to hold visitors interest towards the host area. With the complex nature of urban setting, interpretation is not only expected to facilitate visitor's movement and wayfinding, but at the same time shade light on the hectic information-rich cities environment (Klippel, Hirtle, and Davies 2010; Pica et al. 2018; Rasinger et al. 2009; Yovcheva, Buhalis, and Gatzidis 2012). In a certain extent, interpretation also be perceived as a part of tool for destination and resource management through which it is significant in daily operation of tourism related activities (Benton 2009; Huang et al. 2015; Knapp and Benton 2004).

2.2 Tourist Mindfulness through Tourism Interpretation

Interpretation involves visitor's interaction with surrounding environment; in which it perform communication function and act as means for information transfer. From the perspective of communication, interpretation is referred as information transmission between two entity, from the 'presenter' (the interpreter) to the 'viewer' (the visitors), with educational purpose (Kuo 2002; Md Noor et al. 2015; Poria, Biran, and Reichel 2009). Looking into the flow of information transmission, the process of interpretation involves several components, which are two of the above said: the 'presenter' and the 'viewer', as well as the interpretive medium and its content (Burgoon, Hunsaker, and Dawson 1994). Each of these components must be carefully planned and implemented in order for the interpretation to function effectively and have a favourable effect on the visitor's mind.

Visitors' continuousness interest towards exploration of host area can be seen as a part of the determinant for successfulness of interpretation. In having continued interest, visitors should be able to regard the interpretation as an enjoyment, most importantly ability to make it under user's control and personalised it according to individual preferences (Md Noor et al. 2015; Reisinger and Steiner 2006; Roy et al. 2019). Interpretation is seen as effective by successfully drawing visitor interest, hence the viewers' cognitive experience would lead towards the state of mindfulness. Mindful visitor would have continued curiosity and enthusiasm towards destination. This state of mind is critical in psychologically boosting towards a better visitor's engagement with the surrounding and being emotionally bonded with the destination (Moscardo 1996; Reisinger and Steiner 2006). Conversely, mindlessness is when the interpretation presents unable to trigger viewer excitement towards exhibit, the situation when visitors could not connect with the exhibit and being mindless with the environment. In this situation visitors tend to disregard the interpretation, especially when it is not well presented and distant from their anticipation. Figure 1 shows mindfulness model of visitor behaviour, which illustrate factors influencing mindfulness and mindlessness as well as their consequences.

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Figure 1. Mindful and mindless model of visitor (Moscardo 1996).

In reference to the process of interpretation by Burgoon et al. (1994), visitor mindfulness is subjected to the state of 'viewer', interpretive content and medium, which referred as visitor factors and setting factors in Figure 1. For interpretive content and medium to be dynamic, interactive and fun as described in the 'setting factors' of Figure 1, thorough consideration of visitor behaviour is required. The mindfulness model clearly demonstrates that the planning, designing and development of interpretation system is important to assure its significant influence on visitors' emotion. The state of elements in interpretation process not only affects directly on viewers mindfulness, but also concurrently determine visitors' satisfaction towards the destination. Mindless visitors signify the failure of interpretation to be planned in the manners that meeting their needs and expectation of travel experience. It is detrimental to tourist travel satisfaction and reducing the possibilities of repeating visitation to the attraction.

2.3 Impact of Effective Interpretation on Tourists Behaviour

Visitors behaviour and consumption at destination is corresponds to their information acquisition, in which the way they behave is subjected to their pre-travel expectation and on-site sensory stimulation (Larsen 2007). To assure visitor's satisfaction towards travel experience, it is critical for interpretation to be delivered in the manner that tackling their expectation and at the same time capturing their emotional desire. In the other words, the process of visitors perceiving the destination environment is highly cognitive that requires the design of interpretation to be in consideration of social cognition, that is the psychological process of human thinking and learning (Malik 2020; Moscardo 1996).

Focusing on the visitor's cognitive experience, the design of interpretation should take into consideration the aspects that affecting the way they think and behave. Not only that it facilitate tourist information processing, interpretation that being design in effective manner would significantly provoke visitors learning and engagement (Wyatt, Leask, and Barron 2021). As for Moscardo (1996), 'principles of visitors behaviour' by Patterson and Bitgood (1988) is seen as the one that in line with social cognition. In this principles (Table 2), the relationship between the way visitors behaved and characteristics of exhibit are categorised into three major area: exhibit design factors, visitor factors and

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architectural factors; which can be related with the 'process of interpretation' explained in the previous subtopic (Table 1).

Table 1. Aspect of interpretation design (Burgoon et al., 1994; Patterson and Bitgood, 1988)

No.	Process of interpretation (Burgoon et al., 1994)	Principles of visitor behaviour (Patterson and Bitgood, 1988)
1	Information sender (presenter)	Exhibit design factor
2	The medium	
3	Information content	Architectural factor
4	Receiver (viewer)	Visitor factor

Table 2. Principles of visitor behaviour (Patterson and Bitgood, 1988 and Moscardo, 1996)

Categories	Principles of visitor behaviour	Description
Exhibit design factors	Size	Large sizes results in increased viewing times and better recall.
	Motion	Moving features in an exhibit lead to better visitor's attention.
	Aesthetic factors	Shapes, colours and patterns of exhibit objects have a role in capturing the visitor's attention.
	Novelty/ Rarity	Novel/rare objects have an inherent appeal.
	Sensory factors	Multisensory exhibits result in increased viewer time.
	Interactive	Interactive exhibits offer viewers some control over their experiences, result in increased level of attentiveness.
	Triangulation	Presence of other person or object that promote interaction between viewer and exhibit.
Visitor factors	Visitor participation	Participation of visitors is related with increased attention and better memory recall.
	Object satiation and fatigue	Repeated material or exhibit style is associated with diminished attention.
	Special interests	Visitors are more inclined to choose exhibitions that are of interest to them.
	Demographic factors	Visitor behaviour is related to factors such as age, educational level, and group composition.
	Other psychological factors	Perception of visitors towards subject of exhibits may influence their use of the exhibits
Architectural factors	Visibility of exhibit	Visibility barriers shorten viewing times.
	Proximity of exhibit	Visitors stay longer when they can get closer to exhibits.
	Realism	Naturalism exhibits create more memorable experience.
	Sensory competition	Exhibit stimuli contend for viewers attention.

Referring to the principles of visitor behaviour in Table 2, interpretation is to be design in the manners that considering not only the physical, but also the social and psychological needs of its viewer, only then interpretation would effectively establish meaning of the destination and at the same time produce mindful visitors. By the criteria

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indicated under these three categories, exhibit design factors, visitor factors and architectural factors, the effectiveness of interpretation is expected to be upgraded. To develop and sustain significant attraction, the presence of effective tourism interpretation is vital to triggers visitors' interest and improves enjoyment (Malik 2020). This may psychologically manipulate the way tourists consume their journey, which thus enhance the positive formation of experience.

3.   Tourist Travel Experience Development

Tourists are frequently subjected to different dimension of experience desired during their trip, as it is commonly related to the motivation and the psychographical influence of the tourists themselves, such as emotion, character and value system. The experience of a tourist is make up of sensory experience, which involved the stimulation of tourist senses from various different way, including psychological experience, as well as the social experience (Larsen 2007; Tussyadiah and Zach 2011). This thus involved with the positive and negative experience that tourist encounter in obtaining the required information and interpretation related to the destination. The dynamic engagement with spatial environment and ability to have social interaction with friends and families during travel are among the significant aspects in satisfying tourist expectation in relation to their experience (Kounavis, Kasimati, and Zamani 2012; Linaza et al. 2012). Due to that reason, the extensive demand by tourist regarding this matter requires the presence of effective interpretation to develop attachment with destination as well as enhance travel experience and satisfaction.

3.1 Tourist Experience Formation

Tourist experience referred to the knowledge and understanding of a destination and the entirety of vacation made through interactions using various medium. Technically, the process of experience formation entailed the accumulation of psychological reflections of the tourist's interactions with his surroundings. In enabling this interaction to take place, the presence of interpretation is required in delivering understanding and meanings. Crouch (2005) stated that tourist encounters upon travel "is essentially the process of making meaning of spaces and cultures". The social and physical interaction of tourist at a place are contextualised by the sensory quality and geographical aspects of the destination, and these stimulations have an effect on the various levels of experience that build within the tourists' minds (Sugathan and Ranjan 2019; Tussyadiah and Zach 2011). Contrary to the common perception of experience satisfaction that achievable through luxurious hospitality and mesmerizing vistas, the "interaction" between tourist and the surrounding during travel is actually the key and the fundamental element in tourist experience development (Larsen, 2007).

More than the tangible encounters of a trip, tourism experience is more on individual tourist psychological perception, involving preferences, emotion, cognitive, personality etc. Not like a templet, tourism experience formation may be co-created, differ between individuals due to the psychological phenomenon (Larsen 2007; Zhang et al. 2018). The way visitor behave at destination is a part of the entire process of experience formation, starting

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with pre-travel consumption and on-destination stimulation, which justify visitor behaviour, then resulted in the formation of experience and finally determine their travel satisfaction. Theoretically, tourism experience can be categorised into several different stages of encounter, involving performance quality, experience quality, overall satisfaction, and revisit intention (Cole and Scott 2004). Similarly, Larsen (2007) suggested the flow of tourist experience to be started from the initial expectation, follow by on-site travel perception and post-travel memory.

As engagement and interaction is the key to tourist experience, it signify the important role of senses in the whole process and involved the accumulation of various different stimulation, such as sensory, cognition and perception, social, and emotion (Sugathan and Ranjan 2019; Tussyadiah and Zach 2011), as highlighted earlier. The whole stimulation process in experience development affected by internal factor, such as cognitive mind and emotion, as well as external factors that is the tourist surrounding interaction and the facilitation of interpretive medium. By understanding the psychological phenomenon of tourist experience, it is important to note that the main highlight is not on the complexity of its nature, yet on defining how the experience changes base on the different characteristics of individuals (Volo 2009). The difficulty of understanding the changeability of tourist experience can only be overcome through experience personalisation and customisation. In this case, personalisation can only be embedded in the planning and design of tourism interpretation.

3.2 Influence of Interpretation on Experience Development

Human-environment interaction is seen as the key to the tourist experience development. The term 'interaction' signifies the connection between tourists and the surrounding that continues beyond their interaction, it is expanded to include the tourists' feelings and emotions towards the destination. In the other words, the physical stimuli in the setting, mainly the interpretation, facilitate in understanding the environment, which in the end triggering the interaction to take place and developing emotional bond (Md Noor et al. 2015; Williams and Vaske 2003). Upon engagement with the surrounding, tourists' moment of consciousness as well as their immediate response and participation is what matter the most in the stimulation for experience formation (Larsen 2007). With the responses given, tourist are actually in the process of co-creating their experience, and it is a good start in establishing positive expectation and moulding a satisfactory travel experience (Sugathan and Ranjan 2019). At this stage, tourism interpretation play a crucial role as tourist continuous encounter of interpretation, regardless of its state and form, slowly drawing tourist interest and connect them with the environment. The fact that tourists collect experiences throughout their excursion, which entails a steady flow of thought during their state of consciousness (Mossberg 2007) visualised how important an effective interpretation is in constructing a satisfactory experience.

Indeed, the psychological nature of experience development make it hardly understandable. Yet from another perspective, it is a potential by itself and a golden opportunity to the destination management organisation and related stakeholders. The psychological process of inner mind is easily changeable and manipulable, hence the experience formation process can be impacted in a variety of ways to ensure the establishment of an emotional bond with the destination. This thus signify the important role of effective destination interpretation, not just merely educating, but also dominating the

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experience development process. In addition, the design of interpretation should be in the manner that able to connect tourist with the subject physically and emotionally. In this regard, the dynamic and interactive nature of technology the creation of a novel type of stimulation, enabling the personalisation desired by tourist, and holding their interest towards destination in a more fun and exciting way.

4.   TECHNOLOGICAL ENGAGEMENT IN TOURISM INTERPRETATION

With the 'on-the-go' nature, the use of mobile device become more significant in human daily activities, including travelling, and seen as an efficient instrument for tourism service delivery and product purchasing (Condratov 2013; Lamsfus et al. 2013, 2015). Especially for Y generation, mobile devices, mainly smart phone, is seen as the mean for interaction with tourism destination, due to their strong attachment with the gadget (Femenia-Serra, Perles-Ribes, and Ivars-Baidal 2019). By having vast information at the fingertips, mobile devices capable to facilitate in exploring the destination and concurrently enhance tourist travel excitement by having the gadget as the intermediary to psychologically connect them with the site.

4.1 Adoption of Technology in Tourism Destination

The world currently witnessing the progression of the mobile phone into one of the most fundamental human necessities, in conjunction with the constant push towards stable and high speed internet to keep up with the on-the-go lifestyle. The evolution of the mobile phone's functionality has altered how this technology is used socially. The function was extensively expended, enabling limitless communication and hence re-outline the institutional operation et cetera (Fortunati 2002; Xiang 2018). Tourism industry had encountered a similar impact with the growing pressure among consumer on effective m-commerce adoption. With the proven business potential of m-commerce, particularly in terms of expanding market prospects, service providers in the tourism industry have embraced the usage of mobile information systems (Kim, Park, and Morrison 2008; Pierdicca et al. 2019).

Through the technological empowerment, the current tourist market had evolved to be more independent and sophisticated. With the information on the destination and the travel journey at the fingertips, travel preparation has been made easy and tourist are more prepared mentally on what to expect during the trip. While some travellers continue to rely on printed travel guides, particularly Asian travellers (Asia Travel Leaders Summit 2014; Chen, Sato, and Zheng 2019), it cannot be denied that in the current digital era, the use of mobile devices to acquire travel information has rapidly displaced this traditional information retrieval technique. (Buhalis, Leung, and Law 2011).

In terms of the technology's ability to boost interaction with the destination, the employment of this mobile technology not only enhances the interpretation of the physical surroundings, but also the interaction between users (Bohlin and Brandt 2014; Coghlan and Carter 2020; Wagner et al. 2005). This incident exemplified the users' excitement about the capabilities of the technology they were using, which was expressed through the sharing of information and understanding. On the other hand, the adoption of advance technology such as mobile augmented reality (AR) also capable to arouse the interest of its user on the destination through the dynamic information content (Linaza et al. 2012). Information and knowledge provided in the interpretation that supported with this advance technology enable

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users to perceived the physical surrounding to be more attractive through the digital augmentation of various media, including audio and video. The ability of this digital innovation on the current destination interpretation in enhancing users interest and excitement are important in the sense of manipulating tourist psychology and make information more interactive only via the use of virtual information. The proper application of technology is capable of increasing tourists' interest in the places visited and convincing them to continue exploring, since it enables them to experience the places from a completely new perspective (Fritz, Susperregui, and Linaza 2005; Kourouthanassis et al. 2015; Pierdicca et al. 2019). In the other words, tourist interpretive experience can be psychologically boosted with the interactive information content from innovative use of technology.

Other than the adoption of advance technology such as AR, creativity and innovation injection in the current conventional interpretation may as well be found in the current era. In light of mobility and accessibility restrictions due to diverse unavoidable circumstances, online guiding of tourism sites and products has started to emerge in the industry and become a unique platform for destination marketing, especially for a quick tour and destination overview(Matthews, See, and Day 2021). With the aim to establish emotional and social connection and tasting the unique feeling of being physically presence through virtual medium, online synchronous tourism guiding and storytelling provoking the sense of excitement as well as offering an inimitable experience (Pisoni et al. 2019; Viñals et al. 2021), particularly when people are longing for travel and vacation. Given the speed and coverage of ICT development worldwide, technological innovation in interpretation system would undoubtedly evolving 'travel' to be done in a much simple yet authentic manner.

4.2 Mobile Phone as Medium for Urban Tourism Interpretation

Cities are frequently regarded as must-see destinations for travellers, due to their functions and the breadth of their services and infrastructure. Unlike the other destination, urban tourism can be both either destination itself or only as a staging point (Ismail and Baum, 2006). Visitation to cities are associated to complexity of spatial setting and various options of tourism attractions. This complex nature of urban tourism destination requires extensive interpretation to support spatial awareness and thus to effectively interact with the surrounding. Apart from the hectic environment, the size of the urban area, its history, function, surroundings, and image are all aspects that contribute to the city's complexity. (Caldeira and Kastenholz 2018; Ismail and Baum 2006), which at the same time becoming the main reason for it to be a perfect tourism destination.

The significant of effective interpretation in urban tourism destination is justified by its purpose to enlighten tourist fuzziness of the site through information management. In light of this, the employment of mobile technology for interpretation, particularly advanced technology such as augmented reality, should be prioritised in urban areas over other geographical settings. Rationally, its' use to facilitate the understanding of complex environment are more significant, either for the matters related to wayfinding, interpretation, or information retrieval (Tokusho and Feiner 2009; Yovcheva et al. 2012), and may as well be an effective medium for both visitors management and destination information management (Pierdicca et al. 2019). Linaza et al. (2012) in their research revealed that this technology had significantly assist visitors and tourists' execution of tourism activities by manoeuvring their movement within urban areas. Consequently, such technological engagement in tourism

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interpretation is seen as one of the possible solution for effective development of tourism interpretation system. Other than being effective in facilitating tourist travel planning and movement, it is vital in bringing alternatives to the traditional interpretation process, as mean to better enhance the depth of tourist experience.

5.   METHODOLOGY

In achieving the second research objectives, trend study of scholarly research from the past 10 years was executed to better understand the existing research trend in the area of tourism interpretation and better forecast the future development and progress of interpretation system in tourism destination. Being the most commonly known database for scholarly literature search, Google Scholar database has been used in this study to extract the relevant articles for the trend study. The main filtering steps taken in the research trend review in this study are as listed:

1. Identification of keywords
2. Using identified keywords to gather articles
3. Apply overview analysis to analyse the research trend

5.1 Identification of Keywords

The selection of keywords was based on previous literature related to tourism interpretation. Interpretation related keywords were compiled from various literature from the year 2002 to 2021. 14 related keywords were identified from 55 past literature, obtained from diverse sources, mainly Google Scholar. Based on the keywords, the final list of keywords was identified and used in the search of relevant articles for trend study. The keywords used in searching and filtering of relevant articles were as in Table 3.

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Table 3. Keyword combination used for sources extraction

Interpretation related keywords from past researches	Year of publication	Keywords combination selected
interpretation; tourism interpretation; heritage interpretation; environmental interpretation; interpretive planning; interpretation service quality; interpretive media; authentic heritage interpretation; effectiveness of interpretation; environmental interpretation; aesthetic interpretation; interpretive guiding; interpretive conversation; interpretation design	2002 - 2021	Tourism + interpretation Tourism + interpretive guiding Tourism + interpretation planning

5.2 Gathering Articles in Database

Articles were retrieved from Google Scholar databased. The selected keywords as in Table 3 were entered in Google Scholar search bar. The search was further filter based on publication from the last 10 years, 2011 until 2021. Based on the search results appeared, only research articles were selected, and the other category of scholarly literature such as conference paper and book chapter were excluded. A total of 37 articles obtained and were used for the trend study.
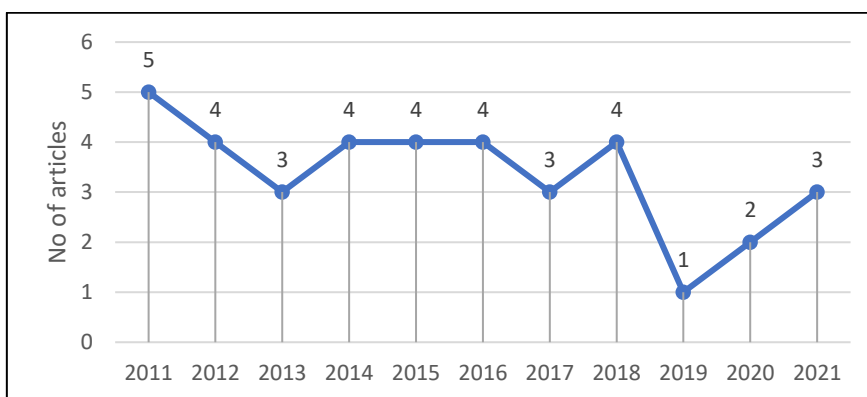
5.3 Overview Analysis

Overview analysis was performed to identify the research trend from the interpretation related articles gathered. It is an analysis used to identify the general trend represented by selected articles (Yuan, Tseng, and Ho 2019). Basic frequency counts such as distribution of publication by years and publication sources were done to get the overview of the trend. Thematic study was also done to identify the main research topics from the past 10 years.

6.   FINDINGS

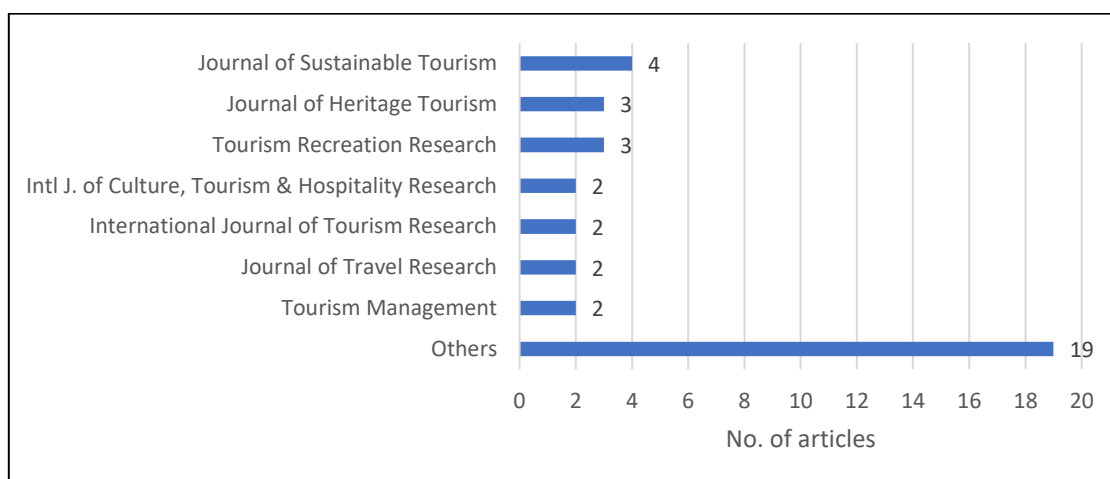## 6.1 Overall Research Trends related to Tourism Interpretation

Figure 2 illustrated the distribution of scholarly articles on tourism interpretation from 2011 until 2021, as extracted from Google Scholar database. The number of publication in this area is slightly decreasing by years from the past 10 years. The average annual article publication related to this area was around four publications.

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Figure 2. Distribution of interpretation related articles by years from 2011 until 2021

6.2 Publication Sources

Figure 3 shown the distribution of articles based on journal published. Out of 37 articles analysed, the tourism interpretation related researches were seen repeatedly published in several journals, namely Journal of Sustainable Tourism, Journal of Heritage Tourism, Tourism Recreation Research, International Journal of Culture, Tourism and Hospitality Research, International Journal of Tourism Research, Journal of Travel Research, and Tourism Management. The remaining articles were published in diverse different journals, including Tourism Management Perspective, International Journal of Tourism Cities, Journal of Outdoor Recreation and Tourism, and others.
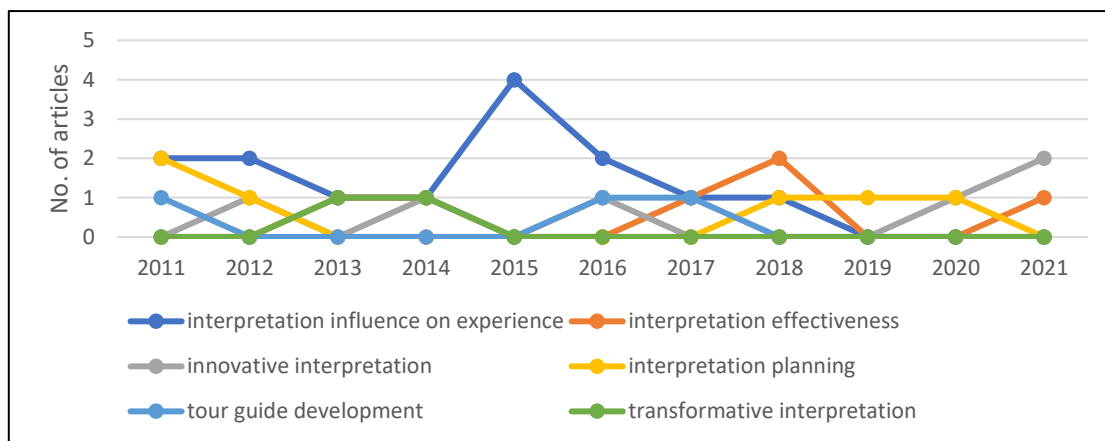

Figure 3. Distribution of articles by publication sources

6.3 Main Research Topics

Figure 4 illustrated the frequency studies based on main research topics for articles related to tourism interpretation. The existing research trend shown researches related to innovative interpretation and interpretation effectiveness as among the topics that available in the field and increasing in numbers since 2019 and 2016 respectively. The topic related to the influence of interpretation on experience is almost equally distributed

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throughout the years, with the highest number of articles in 2015. Similarly, articles on interpretation planning are almost consistently available throughout the years. While the topic on tour guide development in relation to tourism interpretation is seen as among the least, with no related articles found since 2018.

Figure 4. Distribution of articles based on main research topics

Figure 5 illustrated the numbers of articles analysed based on research scope. Most of the current studies on tourism interpretation focused on the context of sustainable tourism which included nature and culture heritage. 17 articles looked into interpretation in the context of cultural and heritage, and 12 articles in nature and wildlife tourism. The remaining articles were in diverse different scope, including dark tourism, food tourism, film tourism, urban tourism and cruise tourism.
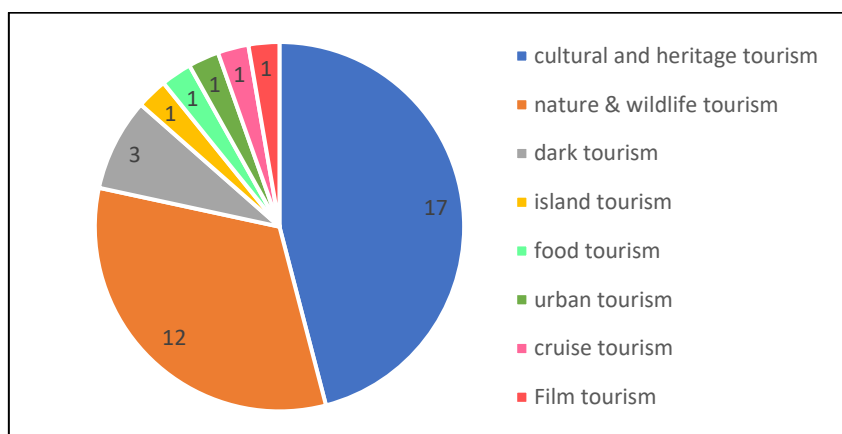
Figure 5. Articles based on research scope

7. DISCUSSION

Travelling is commonly associated with new foreign spatial environment, and the presence of interpretation is crucial, either to gain local knowledge through provision of information or to consume tourism related activities. The provision of interpretation at tourism point of interest is meant to provide significant insight regarding the place and draw tourist's interest towards the new environment. From another perspective, interpretation aim to develop psychological

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connection and relationship between visitor and the host area through education. Other than deliverance of information, it also concentrated on visitor emotional attachment with host area and experience development.

As the development of experience is psychological in nature, the availability of interpretation at tourism attraction do gives significant impact to the execution of tourism related activities at the area. Not only to present the interpretation, but proper planning and design of interpretation do facilitate visitors' management at the destination and strengthening visitors' connection between the visitors and the exhibit. In a certain extent, tourism interpretation is seen as resource management tool due to its capability in influencing tourist behaviour based on the meaning given and relationship established (Benton, 2009). Strong personal connection between the visitors and the place not only triggering their interest, but at the same time developing sense of ownership of the place, making the visitors to be care about the host area, be attached emotionally, and successful in creating mindful tourist. With the continued interest towards the site, the quality of interpretation is seen as among the determinant that influence cognitive experience development of tourist.

The dimension of experience during tourist travel is subjected to the stimulation of tourist senses by the physical environment (including the interpretation) as well as the psychographical influences, such as their own inner emotion, character and value system. The complexity of tourist experience formation making it to be hardly predicted but yet easily manipulated, especially through psychological perspective. As tourism is highly experiential-demanding, ability of interpretation to be design in the manner that encourage dynamic interaction between the tourist and the attractions through whichever method would significantly influence the formation of experience and their behaviour towards the destination. Findings from the research trend study supported the significant role of interpretation on tourist, which shown from the high number of researches that looked into the effectiveness of interpretation system and assessing its influence on tourist psychology and experience. This area consistently being the focus of researches related to tourism interpretation despite the technological evolution that take place in the system. Due to the significant role of tourism interpretation, technological integration in the design of interpretation, especially through the use of mobile technology, is perceived as one of the possible solution to enhance traditional interpretation system through a more dynamic and interactive interpretive medium development.

The complex nature of urban tourism destination and the fuzziness of new environment, making the presence of interpretation in the urban setting to be more significant compare to the other tourism site. Past researches on tourism interpretation focused on sustainable tourism destination as interpretation was an effective measure to encourage tourists' awareness on conservation and preservation efforts. Yet, the emergence of researches that covering other areas such as dark tourism, urban tourism, and food tourism signifies the importance of interpretation in other tourism products and destinations development. Integration of mobile technology in interpretation of urban tourism is seen as a method to facilitate tourist in managing new information at destination. Research shows that the adoption of technology such as mobile AR had significantly improve the interpretation of destination through the dynamic information management, as well as the capacity of its platform to meet with the mobile situations of travelling. This technological transition can be clearly seen in the current research trend with the increasing numbers of researches that focusing on the topic related to innovative interpretation, including digital interpretive guiding

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and innovative transformation of conventional interpretation. By adopting all of innovative and transformative improvement, the quality of interpretation system at destination is perceived to be improved and expected to uplift the performance of local tourism industry.

8. RECOMMENDATION AND CONCLUSION

For future research, it is important to note that the existing discussion on tourism interpretation was concentrated on sustainable tourism destination compared to the others. The need for effective interpretation in destination such as urban cities is also critical due to the complex nature of its setting and the hectic information-rich environment. For urban tourism destination, interpretation is also a part of tool for destination management, which significant for the daily operation of tourism activities. Hence future research should look into the importance of effective interpretation system in urban area as a part of destination management strategy.

In addition, literature discussion above had indicated that planning and design of interpretation need to consider the psychological process of human thinking and learning. Visitors frequently overlook interpretations, particularly when the it is presented in a dull manner and falls short of their expectations. Technological engagement in interpretation may psychologically manipulate the way tourists consume their journey, which thus enhance the positive formation of experience. Tourist interpretive experience can be psychologically boosted with the interactive information content adopted in the technology. Therefore, future research could look specifically on how the whole technological stimulation can actually influence the psychological process of tourist experience development.

The research trend study in this paper had only covered Google Scholar database as the source of articles extraction. Despite the breadth of scholarly literature available in the Google Scholar platform, some reliable index articles and publication might not be available due to copyright and technical issues. The access to reliable indexed articles is crucial to have a more holistic and inclusive research trend study of scholarly literature. Hence, it is recommended for future research to include other database such as Web of Science and Scopus in the search to have a more comprehensive look on the research trend related to tourism interpretation.

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