






The influence of cognitive dimensions on memorable experiences within a marine tourism context

Authors:

Altouise G. Jonas¹ 
 Laetitia Radder¹ 
 Marlé van Eyk¹ 

Affiliations:

¹Department of Marketing Management, Nelson Mandela University, Port Elizabeth, South Africa

Corresponding author:

Altouise Jonas,
 Altouise.Jonas@mandela.ac.za

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Background: Consumers are increasingly demanding memorable experiences, thereby placing pressure on businesses to meet these demands. The provision of memorable experiences is particularly important to the tourism industry as its core business is to provide experiences. To stage these experiences, businesses must know which dimensions to include. For this purpose, cognitive dimensions present a reasonable starting point.

Aim: The current research aimed to explain and examine the cognitive dimensions that have an influence on the memorability of three marine tourism experiences, namely whale-watching, shark-cage diving and visits to marine protected areas. Marine tourism is one of the most popular forms of tourism worldwide, but also a desperately under-studied field, particularly in South Africa. The results of the research will assist providers and marketers of these activities in satisfying the experience needs of marine tourists by focusing their offerings on those dimensions that will enhance the memorability of the experience. The results will also help fill the gap in knowledge of the cognitive dimensions impacting the memorability of marine tourism experiences.

Setting: The study was conducted in South Africa.

Methods: Data were collected from 444 respondents using an exploratory design, mixed method approach and survey methods. Data were analysed through frequency distributions, Pearson's product-moment correlations and multivariate analysis of variance.

Results: Knowledge, meaningfulness, novelty and social interaction positively influence the memorability of marine tourism experiences in South Africa.

Conclusion: The results indicate that positive interrelationships exist among all the dimensions, suggesting that these dimensions all represent the cognitive domain. Furthermore, the results also indicate that all four dimensions have a positive influence on memorable marine tourism experiences. These findings are important for the enhancement of memorable marine tourism experiences. An understanding of the identified cognitive dimensions in a marine tourism experience will lead to a more memorable experience for consumers and can result in post-purchase behaviour such as a repeat purchase, loyalty and positive word-of-mouth recommendations resulting in increased profitability for the business.

Keywords: cognitive; memorable experience; marine tourism; memorable marine tourism experience; marketing.

Introduction

Economies worldwide are moving from being service-based to being experience-driven (Cornelisse 2018; Pine & Gilmore 1998). Not only is the demand for memorable experiences (MEs) increasing (Antón, Camarero & Laguna-García 2017), but experiences are also replacing commoditised products and services as forms of competitive advantage (Cetin & Bilgihan 2016) and as organisational differentiators (Radder, Van Eyk & Koekemoer 2019). Memorable experiences have become an important source of information for making repurchase decisions (Mahdzar 2018) or providing word-of-mouth recommendations (Marschall 2012). Satisfactory experiences thus lead to a repeat purchase and loyalty (Rather 2018) and ultimately increased profitability (Hsieh, Chiu & Chang 2018).

Experiences transpire when consumers receive a unique and memorable service, particularly resulting from co-creation between the organisation and the customer (Rather 2018). However, experiences are intangible and ever-fleeting (Ketchen 2018), and this highlights the importance of their memorability. Memorability is improved if the experience is special (Triantafillidou &

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Siomkos 2014), positive and easily recalled (Stangor & Walinga 2014). Experiences become memorable when they result in individual outcomes such as personal growth or renewal, mental, spiritual and physiological benefits (Jefferies & Lepp 2012), or provide customer value, which in turn results in specific feelings and emotions on the part of the customer (Radder et al. 2019).

The provision of MEs is particularly important in the tourism industry as its core business is experience-based (Bastiaansen et al. 2019). From a business perspective, MEs are valuable in ensuring competitiveness (Coudounaris & Sthapit 2017), in sustainable development of tourist destinations (Chen, Cheng & Kim 2020) and for retaining and growing tourist markets (Mgxekwa, Scholtz & Saayman 2017). From a tourist perspective, the positive emotions (Chen et al. 2020) and memories retained after participating in a tourism experience are some of the most valuable keepsakes, except perhaps for a few souvenirs and photographs (Braun-LaTour, Grinley & Loftus 2006).

Problem statement

Given the importance of staging MEs, particularly in a tourism context, a logical next step is explaining and examining those dimensions that influence memorable tourism experiences (MTEs).

Recent research that sought to identify the dimensions impacting MTEs dealt with Airbnb experiences (Sthapit & Jiménez-Barreto 2018), food, drink and culinary experiences (Stone et al. 2017), cultural experiences (Seyfi, Hall & Rasoolimanesh 2020) and hotel experiences (Sthapit 2017). During the search for studies on the dimensions of MTEs, the dearth of research into the dimensions of *memorable marine tourism experiences* (MMTEs), particularly whale-watching, shark-diving and visits to marine protected areas (MPAs), soon became evident. This is surprising given the worldwide popularity (Brumbaugh 2017) of marine tourism. In fact, marine tourism ranks among the top-10 tourism activities in South Africa (Website of South African Tourism 2018). Furthermore, instead of experience dimensions, research into marine tourism experiences focuses mostly on tourists' motivation for participation, learning (Stephen & Wantanee 2016), changes in tourists' environmental behaviour (Ballantyne, Packer & Falk 2011), profiling marine tourists (Buultjens et al. 2018) and challenges and opportunities (Dwyer 2017) presented by this tourism type.

In the absence of past research into the dimensions impacting marine tourism experiences associated with whale-watching, shark-cage diving and visits to MPAs, related research into the dimensions impacting other tourism experiences might be helpful. In research conducted by Barbieri, Henderson and Santos (2014:277) for example 'three themes regarding what constitutes a memorable surfing trip emerged: living surfing, having indelible experiences and discovering another'. Hurombo et al. (2014) explored the antecedents of a

memorable boating experience and identified eight elements: unique local food, cultural dance and entertainment, social interaction, scenery, encountering wild animals, professionalism of crew members, group involvement and refreshment. Wilson (2019) highlighted four components of memorable scuba diving experiences: demand side needs, supply side offerings, ME factors and control.

Against the gap in knowledge caused by the limited research into MTEs, the current study aimed to explain and examine those dimensions that have an influence on MMTEs, with particular relevance to whale-watching, shark-cage diving and visits to MPAs. These experiences all fall within the classification of leisure marine tourism.

A reasonable starting point for understanding the dimensions of a ME is the cognitive domain. Cognition refers to the mental processes that individuals use in evaluating information obtained from perception, knowledge acquired and subjective characteristics (Bustamante & Rubio 2017) and preceding affective (emotional) processes (Savolainen 2015). The tourist experience is formed within the individual tourist's mind through a cognitive process, which in turn results in the affective state of the experience. The latter corresponds to the individual's initial expectation and on-site encounter, in which the expectation itself is subjected to personal motivation and state of mind. This complexity of experience formation results from its psychological nature (Mohd et al. 2019).

Kim (2009) holds that the subjective nature of tourism experiences makes it vital to identify the components that have an influence on experience memorability. It is significant that Skavronskaya, Moyle and Scott (2020) highlight that the application of the cognitive psychology theory to tourism experiences is an emerging area of research that can enhance the understanding of the tourism phenomenon, and specifically the mental processes that underlie MEs. Their comment provides support for examining the dimensions that influence the memorability of marine tourism experiences from a cognitive perspective.

The current research explains and examines the cognitive dimensions that have an influence on the memorability of three marine tourism experiences, namely whale-watching, shark-cage diving and visits to MPAs. The results will assist providers of these activities in satisfying the experience needs of marine tourists by focusing their offerings on those dimensions that will enhance the memorability of the experience. The results will also help fill the gap in knowledge on cognitive dimensions impacting the memorability of experiences in general, and thus heed the repeated call from researchers (e.g. Chandralal & Valenzuela 2015; Kim et al. 2012; Sthapit & Coudounaris 2018) for further research into the dimensions of MEs in different contexts.

The remainder of this article is structured as follows: first, a brief description of marine tourism in South Africa, MTEs and the cognitive domain is given. Thereafter the research

methodology is explained and the results are reported. This is followed by a discussion, conclusions and recommendations. Thereafter, the contribution and limitations of the study and suggestions for future research are presented.

Literature review

The literature review consists of a brief explanation of marine tourism in South Africa, MTEs and the cognitive domain and related dimensions.

Marine tourism in South Africa

South Africa is ideally located for marine tourism activities because of its extensive coastline of more than 3000 km and its rich and complex seascape attributed to being surrounded by three oceans (SA Navy 2006). Since marine tourism affords South Africa substantial development opportunities (Bob et al. 2018), the goal of the coastal and marine tourism implementation plan is that, by 2030, South Africa will be known as the premier experience-based marine tourism destination in Africa, and as a world class marine tourism destination offering visitors a unique range of experiences (Department of Tourism Republic of South Africa 2017).

Recent data related to the economic impact of marine tourism on the South African tourism industry is limited (Bob et al. 2018). However, available data indicates that the sector made a direct contribution of R11.9 billion to the country's gross domestic product (Department of Tourism Republic of South Africa 2017) in 2015. This contribution was expected to increase to R21.4 billion in 2020 (Department of Tourism Republic of South Africa 2017) and to R177 billion in 2033 (Xasa 2017). Furthermore, marine tourism in South Africa was expected to create between 800 000 and 1 million jobs by 2033 (Xasa 2017). These expectations might, however, have to be significantly adjusted given the impact of the COVID-19 pandemic on the industry.

To make the study manageable, it focuses on three activities in the leisure category of marine tourism. Whale-watching, arguably South Africa's best-known marine tourism activity (Saayman 2014), was initially shore-based only (O'Connor et al. 2009) until boat-based whale-watching operations commenced in 1998 (O'Connor et al. 2009). The second activity, shark-cage diving, a relatively new, but rapidly growing activity, allows tourists' interaction with sharks (Vianna et al. 2011). The third activity covers visits to MPAs, which are broadly defined as areas 'of sea/and or coastline ... especially dedicated to the protection and maintenance of biodiversity and natural and cultural resources through being managed in a structured and legal manner' (World Wildlife Fund for Nature 2014:13). There are currently 24 MPAs located throughout South Africa (World Wildlife Fund for Nature 2014).

Memorable tourism experiences

Kim et al. (2012:13) explain that a MTE is 'a tourism experience positively remembered and recalled after the event has

occurred'. Kruger and Saayman (2014) explain that such an experience is remembered and treasured for a considerable length of time after the event has occurred, and often has mental, spiritual and physiological outcomes. Memorable tourism experiences are important for three reasons (Kim et al. 2012). Firstly, consumers have greater motivation to purchase (or engage in an experience) when positive information is retrieved from their past experiences. Secondly, consumers place more value and rely more heavily on past experiences as a source of information. Lastly, past experiences have a significant influence on future behavioural intentions.

According to De Freitas Coelho, De Sevilha Gosling and De Almeida (2018), research on MTEs can be divided into three categories: the expansive perspective, the managerial or economic perspective and the modelling perspective. However, we argue that such research can also be classified as Core studies, Behavioural studies, Experience theory studies and Dimension studies.

Core studies seem to be exploratory in nature, follow a qualitative approach, and attempt to enhance the understanding and explanation of the MTE phenomenon, thus helping in building theory. Tung and Ritchie (2011), for example, conducted in-depth interviews with participants to understand what makes certain experiences memorable, which cognitive processes distract individuals from paying attention to their experiences, and what the conceptual processes of memory formation and retention are. They identified the key dimensions of MTEs as affect, expectation, consequentiality and recollection. Seyfi et al. (2020) aimed at advancing the understanding of MTEs and identified six key factors affecting cultural tourist experiences in a specific destination, namely prior perceived experience, significance of the experience, authenticity, engagement, cultural exchange, culinary attraction and quality of service.

Behavioural studies evaluate different types of outcomes or behavioural intentions associated with MTEs. For example, Lončarić, Dlačić and Prodan (2018) examined the influence of memorable summer vacation experiences on overall customer satisfaction, Sthapit and Coudounaris (2018) investigated the relationship between MTE dimensions and subjective well-being, and Yu, Chang and Ramonpong (2019) assessed the effect of MTE on word-of-mouth and revisit intentions.

Experience theory studies are built on the four realms of an experience ('esthetics', education, escapism and entertainment) proposed by Pine and Gilmore (1998). Kastenholz et al. (2017) examined the influence that the four experience realms have on memorability and the relationships between experience, arousal, memory and satisfaction. Escapism and esthetics had the most profound influence on memorability. Lai, Lu and Liu (2019) explored the effects of the four realms on tourists' intentions to spread word-of-mouth recommendations, based on satisfaction and memory. Esthetics, education and entertainment influence

satisfaction, while all four realms influence memory and satisfaction. Memory ultimately influences word-of-mouth recommendations.

Experience theory studies appear to be advancing and merging with the fourth types of MTE studies that we term dimension studies. Dimension studies seek to identify the dimensions that make an experience memorable. Dimension studies are important as they highlight the cause of ME and therefore can assist practitioners with the design and staging of their experiences. Kim et al. (2012) identified seven dimensions of MTEs: hedonism, involvement, knowledge, meaningfulness, refreshment, novelty and social interaction, while Mahdzar, Zaidi and Shuib (2016) proposed eight dimensions, namely: perceptions with respect to novelty, social interaction and cultural knowledge, involvement, unexpected happenings, negative experiences, meaningfulness and stimulation.

The current study is positioned as a Dimension study. Since the cognitive domain was chosen as the point of departure in the investigation of the dimensions that impact the memorability of the three marine tourism experiences, the next section provides a review of relevant earlier research on the cognitive domain.

Cognitive domain

The cognitive domain, a component of the customer experience (Gentile, Spiller & Noci 2007) relates to the individual's belief or knowledge about an object (McLeod 2014) or, by implication, an experience. Therefore, the cognitive domain relates to thinking or conscious mental processes (Gentile et al. 2007). Cognitive evaluations assist in enhancing the recollection of memory since individuals use high levels of cognitive processes in their retrieval processes (Kim et al. 2012).

Chandralal and Valenzuela (2013) identified eight cognitive dimensions that influence the memorability of an experience, namely: perceptions of meaningfulness, opportunity to encounter authentic local experiences, significance of the experience, novelty, opportunity for social interactions, serendipity and surprises, local hospitality and professionalism of local guides as dimensions. Chen et al. (2020) proposed three cognitive dimensions of MTEs, namely: meaningfulness, novelty and social interaction, while Kim (2009) highlighted meaningfulness, knowledge, challenge, assessment of service and value, personal relevance and novelty as dimensions impacting the experience memorability. According to Jonas (2018) meaningfulness, novelty, knowledge and social interaction impact overall marine tourism experiences, while Zhang, Wu and Buhalis (2018) found that the cognitive dimensions of novelty, knowledge and meaningfulness affect the formation of MTEs.

Four cognitive dimensions were selected for the current study, namely knowledge, meaningfulness, novelty and

social interaction. These dimensions were derived from ME research by Chandralal and Valenzuela (2013), Chen et al. (2020), Jonas (2018) Kim et al. (2012), and Zhang et al. (2018). Jonas (2018) and Kim et al. (2012) identified all four dimensions, while the other researchers identified three out of the four dimensions. The four selected dimensions are discussed in the section that follows.

Knowledge

Knowledge, an educational outcome of experiences, refers to the acquisition of new information, skills and insights (Lončarić et al. 2018). Throughout the years, travel has always been considered an educational activity (Stone & Petrick 2013) as it helps to broaden the minds of travellers (LaTorre 2011; Stone & Petrick 2013), through the discovery of new knowledge and emotions and the acquisition of new skills and techniques (Cutler 2015). This is also evident in marine tourism, where knowledge acquisition is a key motivator for tourist engagement in various marine tourism activities (Geldenhuys, Van der Merwe & Saayman 2019). Education is a primary goal of tourism experiences (Cetin & Bilgihan 2016) as increasingly governments, industry bodies and tourists are demanding visitor experiences that enhance the traveller's knowledge (Ballantyne, Packer & Sutherland 2011). As a result, Coudounaris and Sthapit (2017) and Zhang et al. (2018) believe that new knowledge should be a fundamental component of a MTE. The first hypothesis of the current research consequently states that:

H₁: There is a positive relationship between knowledge and MMTEs.

Meaningfulness

Meaningfulness 'indicates [tourists'] engagement in personally significant activities' (Chandralal & Valenzuela 2015:293). For certain individuals, a tourism experience moves beyond observing new sights, meeting new people or visiting new places, to an 'inner journey of personal growth and self-development' (Kim 2014:37). This inner journey is frequently referred to as a search for meaningfulness and reflects travellers seeking a sense of physical, emotional or spiritual fulfilment by participating in a tourist activity (Wei et al. 2019).

Meaningful tourism experiences are more memorable (Gao et al. 2012) and meaningfulness was found to be one of the dimensions most vividly remembered by respondents in a study by Chandralal and Valenzuela (2013). Recalled experiences were highly relevant and personally beneficial to the individual as they helped improve self-confidence or changed their perception of life and the world. Sthapit and Coudounaris (2018) also found that an experience was memorable if it was meaningful or important and the tourist learnt something new about themselves while vacationing. The second hypothesis of the current study consequently states that:

H₂: There is a positive relationship between meaningfulness and MMTEs.

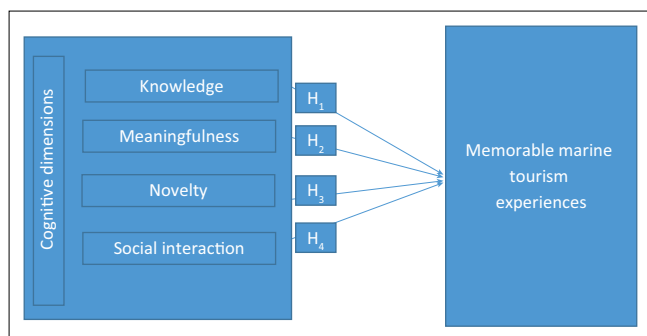


FIGURE 1: Hypothesised model.

Novelty

The third dimension of an MMTE is novelty. Novelty refers to experiencing something new or unique (Mahdzar 2018). In the tourism context, novelty-seeking is associated with the desire to enjoy a unique, first-time experience (Albaity & Melhem 2017). Novelty has become an important motivator for individual travel (Kim 2014), as is evident in the increasing number of tourists who seek novel experiences (Chandralal & Valenzuela 2013). Novel experiences have also been found to be more memorable than repeat experiences (Skavronskaya et al. 2020). According to Curtin (2010), participants in whale-watching and bird-watching tours often referred to first-time sightings as being memorable because of the novelty of the experience. Barbieri et al. (2014) agree that novel experiences are hard to forget and Hurombo et al. (2014) found that respondents' most vivid memories about food were the novelty of the food. The third hypothesis of the current study consequently states that:

H_3 : There is a positive relationship between novelty and MMTEs.

Social interaction

Social interaction, the fourth dimension, refers to individuals participating in an experience together with others (Gentile et al. 2007). In many instances the presence of fellow tourists, as part of a tourist experience, is unavoidable (Huang & Hsu 2010). This presence inevitably leads to some interaction among individuals and forms an indispensable part of the consumption experience (Huang & Hsu 2010) and hence of MTEs (Wei et al. 2019). Chandralal & Valenzuela (2015) confirmed that travel experiences where new relations were built or existing bonds with friends and family were strengthened are more memorable than experiences enjoyed alone. The fourth hypothesis of this study consequently states that:

H_4 : There is a positive relationship between social interaction and MMTEs.

Figure 1 shows the hypothesised model for the current study based on the foregoing literature review.

Research methodology

Design, target population and sample

The research reported here formed part of a more extensive study into marine tourism in South Africa. An exploratory

research design was applied as it enabled the researcher to gain better insights into the problem (Sahu & Singh 2016) and assisted in developing new hypotheses and a theoretical underpinning for the study (Akhtar 2016). A mixed method research approach was followed as the study included elements of qualitative and quantitative methods. Specifically, an exploratory sequential mixed method design was employed, starting with the qualitative phase followed by the quantitative phase (Cresswell & Cresswell 2017). The exploratory sequential mixed method design thus assisted the researchers in identifying important dimensions related to MMTEs (phase 1) for subsequent quantitative analysis (phase 2) (Edmonds & Kennedy 2016).

The target population comprised domestic and international respondents aged 19 years and older who had participated in at least one of three identified marine tourism activities in South Africa. Non-probability sampling was used to identify possible respondents since no comprehensive list of the target population was available. An online panel company, recruited based on their extensive database, sent an email inviting participation in the study to 11 764 individuals on their database who met the inclusion criteria. Interested respondents received the self-administered questionnaire, chosen for its convenience and speed of completion (Brace 2013). The survey was open for 4 weeks and yielded 83 usable responses. During the same time and extending for 4 more weeks thereafter, questionnaires were also emailed and physically distributed by the researcher and trained fieldworkers to respondents who met the criteria. This form of convenience and snowball sampling resulted in a further 361 usable questionnaires, resulting in 444 questionnaires being subjected to statistical analysis.

Measuring instrument

A self-administered questionnaire comprising closed-ended dichotomous and multiple choice questions served as the measuring instrument. A survey instrument was developed with the aid of interviews conducted with experts in the field of tourism experiences and information obtained from past research. The survey questionnaire was administered to a sample of the population (Cresswell & Plano Clark 2018). The items used to measure the dimensions for the current study were self-generated and, where necessary, adapted from existing measuring scales (Chandralal & Valenzuela 2013; Kim 2009; Triantafyllidou & Petala 2016). Four items were used to measure each dimension and five items were used to measure ME. Appendix 1 (Table 1-A1) lists these items.

Data analysis

The statistical package STATISTICA was used for the data analysis which included sample demographic profiling, calculations of Pearson's product-moment correlations, multivariate analysis of variance (MANOVA) and Scheffé post-hoc testing. It was important to establish a profile of the marine tourists participating in the three activities as marine

tourism businesses have to know whether the characteristics of participants in these activities differ significantly. Such knowledge can help businesses improve their planning and management of activities (Munien et al. 2019), aid the development and implementation of more effective marketing activities (Devault 2020; Geldenhuys et al. 2019) and help direct these activities to a specific segment, ultimately resulting in more success and increased profits (Devault 2020). Furthermore, an understanding of different profiles can assist businesses in creating appropriate marketing strategies that will appeal to their customers and attract more business.

Ethical consideration

The data collection process was preceded by obtaining ethical clearance from the institution where the study was registered. Furthermore, participation in the research was voluntary and anonymous, and respondents could withdraw from participation in the research at any stage of the study.

Results

The results section commences with a summary of the sample's demographic profile, followed by a cross-tabulation of this profile and the three marine tourism activities. The section continues with the descriptive results, the results of Pearson product-moment correlations, the outcome of MANOVA and the Scheffé post-hoc analysis.

Sample's demographic profile

A total of 444 tourists completed the questionnaire, of whom 51.8% were female and 48.2% were male. The largest age group of respondents (42%) were between the ages of 30 and 50 years (mature adults), while slightly fewer respondents (41%) were between 19 and 29 years old (young adults) and 17% of respondents were 51 years or older (seniors). The majority of respondents (77%) had a tertiary qualification. The largest group of respondents (81.1%) spent their childhood in Africa, 80.9% are currently residing in Africa and 80% were South Africans.

Table 1 shows the results of the cross-tabulation constructed to compare the participation in the three activities in terms of the demographic variables. The largest group of respondents (46.7%) visited MPAs while participation in whale-watching accounted for 27.9% and shark-diving for 25.4% of the respondents. Shark-diving attracted slightly more male respondents (51.3%), while visits to MPAs attracted more female (54.6%) respondents.

TABLE 2: Descriptive statistics for the cognitive dimensions of a memorable marine tourism experience.

Dimensions	Mean	Standard deviation	Minimum	Quartile 1	Median	Quartile 3	Maximum
Meaningfulness	4.74	1.58	1.00	3.50	4.75	6.00	7.00
Novelty	4.57	1.55	1.00	3.25	4.75	5.75	7.00
Knowledge	4.30	1.45	1.00	3.25	4.25	5.50	7.00
Social interaction	4.08	1.54	1.00	3.00	4.00	5.25	7.00
Memorable experience	5.00	1.59	1.00	4.00	5.20	6.20	7.00

Descriptive statistics related to the four dimensions

Table 2 shows the descriptive results of the study. All the dimensions attracted mean scores above 4.00, indicating that the respondents had a fairly positive perception of the marine tourism experience in which they participated. Meaningfulness attracted the highest mean score ($M = 4.74$, $SD = 1.58$) on the seven-point scale, while social interaction recorded the lowest score ($M = 4.08$, $SD = 1.54$). Novelty was the second-place dimension, followed by knowledge. The mean scores ranged from 4.30 to 4.57. The standard deviations ranged from 1.45 to 1.59.

Pearson's product-moment correlation coefficients determine how well the variables are related (Statistics how to 2019). The coefficients for the current study are shown in Table 3. All the correlations are positive, indicating moderate (0.300 to 0.499) to strong positive relationships (0.500 to 1.000) (Kornbrot 2005), thus suggesting that these dimensions all represent the cognitive domain.

A MANOVA was used to determine whether significant differences exist in respondents' perceptions, based on selected profile variables (gender, age, level of education, nationality and activity). The MANOVA results are displayed

TABLE 1: Cross-tabulation of sample's demographic profiles among activities.

Variable	Whale-watching (%)	Shark-diving (%)	Marine protected areas (%)
Participation in activity	27.9	25.4	46.7
Gender			
Male	50.0	51.3	45.4
Female	50.0	48.7	54.6
Age			
Young adult	26.6	50.4	44.9
Mature adult	46.8	39.8	40.6
Senior	26.6	9.8	14.5
Level of education			
Tertiary	79.1	86.7	71.0
Non-tertiary	20.9	13.3	29.0
Nationality			
South African	87.9	44.2	94.7
Foreign national	12.1	55.8	5.3
Continent where childhood was spent			
Africa	91.1	45.1	94.6
Other (Antarctica, Asia, Australia)	0.8	0.9	1.0
Europe	7.3	40.7	3.9
The Americas	0.8	13.3	0.5
Continent of residence			
Africa	89.5	41.6	97.1
Other (Antarctica, Asia, Australia)	1.6	1.8	1.5
Europe	8.1	42.4	1.4
The Americas	0.8	14.2	0.0

in Tables 4–7. The results for all the activities combined are shown first, followed by the results for each activity.

Table 4 shows that there were no statistical differences between respondents’ social interaction and the profile characteristics. A statistically significant difference exists between respondents’ perception of meaningfulness based on gender and the activity in which they participated. Statistically significant differences were also shown between respondents’ perception of knowledge based on the activity

TABLE 3: Correlations between variables – All activities.

Variable	Social interaction	Meaningfulness	Knowledge	Novelty
Correlations between variables – all activities				
Social interaction	-	-	-	-
Meaningfulness	0.581	-	-	-
Knowledge	0.655	0.766	-	-
Novelty	0.421	0.547	0.615	-
Meaningful experience	0.488	0.746	0.668	0.593
Correlations between variables – shark-diving				
Social interaction	-	-	-	-
Meaningfulness	0.555	-	-	-
Knowledge	0.636	0.662	-	-
Novelty	0.334	0.393	0.455	-
Meaningful experience	0.494	0.632	0.560	0.590
Correlations between variables – Marine protected areas				
Social interaction	-	-	-	-
Meaningfulness	0.529	-	-	-
Knowledge	0.613	0.766	-	-
Novelty	0.433	0.525	0.587	-
Meaningful experience	0.437	0.772	0.675	0.500
Correlations between dimensions – whale-watching				
Social interaction	-	-	-	-
Meaningfulness	0.684	-	-	-
Knowledge	0.752	0.834	-	-
Novelty	0.503	0.673	0.739	-
Meaningful experience	0.602	0.804	0.709	0.650

TABLE 4: Differences in perceptions of cognitive dimensions based on demographics.

Dimension	Respondent profile	F	df	p
Social interaction	Gender	1.96	1,436	0.162
	Age	0.14	2,436	0.869
	Level of education	2.09	1,436	0.149
	Nationality	0.69	1,436	0.407
	Activity	0.06	2,436	0.938
Meaningfulness	Gender	5.50	1,436	0.019
	Age	0.82	2,436	0.442
	Level of education	0.47	1,436	0.495
	Nationality	1.70	1,436	0.193
	Activity	4.37	2,436	0.013
Knowledge	Gender	1.75	1,436	0.187
	Age	0.11	2,436	0.896
	Level of education	0.02	1,436	0.887
	Nationality	0.59	1,436	0.444
	Activity	5.39	2,436	0.005
Novelty	Gender	1.50	1,436	0.222
	Age	2.32	2,436	0.099
	Level of education	1.06	1,436	0.303
	Nationality	1.69	1,436	< 0.194
	Activity	13.91	2,436	< 0.0005

df, degrees of freedom.

Note: Values in bold indicate significant differences exist.

in which they participated. Finally, there is a statistically significant difference between respondents’ perception of novelty based on the activity in which they participated.

Table 5 presents the MANOVA results for shark-diving. Statistically significant differences were identified between respondents’ perception of knowledge obtained during a shark-diving experience based on age.

Table 6 illustrates differences in respondents’ perceptions, based on gender, age, level of education and nationality, for visits to MPAs. There were statistically significant differences between the respondents’ perception of social interaction that they experienced at MPAs based on nationality. Statistically significant differences were also identified between the respondents’ perception of meaningfulness based on gender and level of education. Further, statistically significant differences were observed

TABLE 5: Differences in perceptions of cognitive dimensions based on demographics: Shark-diving.

Dimension	Respondent profile	F	df	p
Social interaction	Gender	3.12	1,107	0.080
	Age	2.11	2,107	0.126
	Level of education	0.22	1,107	0.643
	Nationality	0.63	1,107	0.429
	Gender	3.12	1,107	0.080
Meaningfulness	Gender	0.00	1,107	0.959
	Age	2.05	2,107	0.134
	Level of education	0.01	1,107	0.905
	Nationality	0.76	1,107	0.386
Knowledge	Gender	2.22	1,107	0.139
	Age	3.16	2,107	0.047
	Level of education	0.87	1,107	0.353
	Nationality	1.73	1,107	0.191
	Gender	0.28	1,107	0.599
Novelty	Age	1.08	2,107	0.344
	Level of education	0.31	1,107	0.581
	Nationality	0.37	1,107	0.543

df, degrees of freedom.

Note: Values in bold indicate significant differences exist.

TABLE 6: Differences in perceptions of cognitive dimensions based on demographics: Marine protected areas.

Dimension	Respondent profile	F	df	p
Social interaction	Gender	0.08	1,201	0.777
	Age	0.29	2,201	0.748
	Level of education	0.04	1,201	0.847
	Nationality	6.55	1,201	0.011
Meaningfulness	Gender	4.74	1,201	0.031
	Age	0.97	2,201	0.383
	Level of education	9.22	1,201	0.003
Knowledge	Nationality	1.75	1,201	0.187
	Gender	2.14	1,201	0.145
	Age	0.06	2,201	0.942
Novelty	Level of education	4.81	1,201	0.029
	Nationality	3.30	1,201	0.071
	Gender	1.32	1,201	0.252
	Age	0.33	2,201	0.716
	Level of education	0.66	1,201	0.419
Nationality	3.58	1,201	0.060	

df, degrees of freedom.

Note: Values in bold indicate significant differences exist.

between the respondents' perception of knowledge acquired during their experience at MPAs, based on level of education.

Table 7 shows the MANOVA results for whale-watching. There were statistically significant differences between the respondents' perception of social interaction experienced during a whale-watching experience, based on gender and level of education. Further, statistically significant differences are shown between the respondents' perception of knowledge acquired during a whale-watching experience, based on level of education. The MANOVA also points out statistically significant differences between the respondents' perception of novelty experienced during a whale-watching experience, based on age and level of education.

The MANOVA identifies whether there are significant differences between the mean scores, but it does not indicate where specific differences lie (Pallant 2013:259). Therefore, a post-hoc Scheffé test was performed to determine where the differences occur and to investigate the effect size of the difference. The results of the Scheffé tests are presented in Table 8 and Table 9.

TABLE 7: Differences in perceptions of cognitive dimensions based on profile variables: Whale-watching.

Dimension	Respondent profile	F	df	p
Social interaction	Gender	5.13	1;118	0.025
	Age	2.61	2;118	0.078
	Level of education	4.37	1;118	0.039
	Nationality	0.22	1;118	0.642
Meaningfulness	Gender	0.01	1;118	0.917
	Age	2.70	2;118	0.072
	Level of education	2.99	1;118	0.086
	Nationality	1.39	1;118	0.241
Knowledge	Gender	0.43	1;118	0.513
	Age	2.22	2;118	0.113
	Level of education	6.57	1;118	0.012
	Nationality	1.39	1;118	0.241
Novelty	Gender	0.00	1;118	0.951
	Age	5.80	2;118	0.004
	Level of education	5.24	1;118	0.024
	Nationality	0.00	1;118	0.983

df, degrees of freedom.

Note: Values in bold indicate significant differences exist.

TABLE 8: Scheffé post-hoc analysis: all activities combined.

Respondent profile	Level 1	Mean	Level 2	Mean	Scheffé p	Cohen's d
Meaningfulness						
Gender	Male	4.57	Female	4.90	0.019*	0.21
Activity	Shark-diving	5.03	Marine protected areas	4.75	0.310	0.18
	Shark-diving	5.03	Whale-watching	4.48	0.029*	0.34
	Marine protected areas	4.75	Whale-watching	4.48	0.336	0.17
Knowledge						
Activity	Shark-diving	4.65	Marine protected areas	4.26	0.073	0.27
	Shark-diving	4.65	Whale-watching	4.04	0.006*	0.43
	Marine protected areas	4.26	Whale-watching	4.04	0.413	0.15
Novelty						
Activity	Shark-diving	5.41	Marine protected areas	4.30	0.000*	0.79
	Shark-diving	5.41	Whale-watching	4.25	0.000*	0.80
	Marine protected areas	4.30	Whale-watching	4.25	0.995	0.03

Note: Values in bold indicate significant differences exist.

*, p < 0.05.

Table 8 shows that significant differences were found in three dimensions. Firstly, in meaningfulness, significant differences in perceptions were uncovered between male and female respondents ($p = 0.019$). Female respondents ($M = 4.90$) found the experience to be more meaningful than male respondents ($M = 4.57$). Cohen's d (0.21) indicates a small effect size. Significant differences were also identified in perceptions of meaningfulness among respondents who participated in shark-diving experiences and respondents who participated in whale-watching experiences ($p = 0.029$). Shark-diving experiences ($M = 5.03$) were perceived to be more meaningful than whale-watching experiences ($M = 4.48$). Cohen's d (0.34) indicates a small effect size. Secondly, regarding knowledge, significant differences exist in perceptions among respondents who participated in shark-diving experiences and respondents who participated in whale-watching experiences ($p = 0.006$). Shark-diving experiences ($M = 4.65$) equipped respondents with more knowledge than whale-watching experiences ($M = 4.04$). Although the difference was significant, the Cohen's d (0.43) shows the effect size was small. Lastly, with novelty, significant differences are present in perceptions of novelty among respondents who participated in shark-diving experiences and respondents who visited MPAs ($p = 0.000$). This suggests that shark-diving experiences ($M = 5.41$) were perceived to be more novel than visits to MPAs ($M = 4.30$). Cohen's d (0.79) shows a moderate effect size. It also emerged that significant differences exist in perceptions of novelty among respondents who participated in shark-diving experiences and respondents who participated in whale-watching experiences ($p = 0.000$). Shark-diving experiences ($M = 5.41$) were found to be more novel than whale-watching experiences ($M = 4.25$). Cohen's d (0.80) indicates a large effect size.

Table 9 summarises the results of the Scheffé tests for all the factors concerning shark-diving, MPAs and whale-watching. The results will be discussed per activity.

Shark-diving

Although differences exist among the different age groups regarding the knowledge acquired during a shark-diving experience, these differences were not significant.

TABLE 9: Scheffé post-hoc analysis: Individual activities.

Scheffé post-hoc analysis	Respondent profile	Level 1	Mean	Level 2	Mean	Scheffé <i>p</i>	Cohen's <i>d</i>
Shark-diving experiences	Knowledge						
	Age	19–29	4.44	30–50	4.72	0.570	0.21
		19–29	4.44	51+	5.41	0.080	0.72
		30–50	4.72	51+	5.41	0.285	0.55
Marine protected areas	Social interaction						
	Nationality	South African	3.98	Foreign national	5.14	0.011*	0.79
	Meaningfulness						
	Gender	Male	4.51	Female	4.94	0.031*	0.28
	Level of education	Non-tertiary	4.20	Tertiary	4.97	0.003*	0.52
	Knowledge						
Whale-watching	Level of education	Non-tertiary	3.90	Tertiary	4.41	0.029*	0.35
	Social interaction						
	Gender	Male	4.32	Female	3.80	0.025*	0.33
	Level of education	Non-tertiary	5.64	Tertiary	4.91	0.044*	0.54
	Knowledge						
	Level of education	Non-tertiary	4.86	Tertiary	3.83	0.012*	0.73
	Novelty						
	Age	19–29	4.92	30–50	4.35	0.241	0.37
		19–29	4.92	51+	3.40	0.001*	0.97
30–50		4.35	51+	3.40	0.020*	0.61	
Level of education	Non-tertiary	5.09	Tertiary	4.03	0.024*	0.67	

Note: Values in bold indicate significant differences exist.

*, $p < 0.05$.

Marine protected areas

As indicated in Table 9, statistically significant differences exist between South Africans and foreign nationals ($p = 0.011$) regarding social interaction during visits to MPAs. The mean score for foreign nationals ($M = 5.14$) was relatively high compared to the mean score for South African nationals ($M = 3.98$). Cohen's d (0.79) shows a moderate effect size, implying that a difference of moderate practical significance exists.

Significant statistical differences were also found between male and female respondents ($p = 0.031$) regarding the meaningfulness of their visit to MPAs. Cohen's d (0.28) indicates a small effect size. The data also indicates that significant differences exist between respondents who had a tertiary qualification and those without (0.003) concerning the meaningfulness of their visit to MPAs. Cohen's d (0.52) suggests a moderate effect size.

Whale-watching

Statistically significant differences between male and female respondents ($p = 0.025$) were observed for social interaction; however, the effect size was small (0.33). Statistically significant differences were also uncovered between respondents who had a tertiary qualification and those without a tertiary qualification ($p = 0.044$). Cohen's d (0.54) indicates a moderate effect size. The results also showed statistically significant differences in perceptions of knowledge between respondents with a tertiary qualification and those without a tertiary qualification ($p = 0.012$). The effect size is moderate (0.73).

Statistically significant differences were observed for novelty between the scores for respondents aged 19–29 years and 51 years and older ($p = 0.001$) and for respondents aged 30–50 years and 51 years and older ($p = 0.020$). Cohen's d shows a

large effect size (0.97) for the age group 19–29 years and 51 years and older. The remaining two cases in which statistically significant differences were found showed a moderate effect size. The data also reveal statistically significant differences between respondents with a tertiary qualification and those without a tertiary qualification.

Discussion, conclusions and recommendations

An integrated approach is followed to present the discussion, conclusions and recommendations to better structure this section dealing with the demographic profile and the four cognitive dimensions.

The provision of MEs is extremely important for tourism businesses, and to stage these experiences, businesses must understand which dimensions contribute to a ME. This study aimed to explain and examine the dimensions that can assist businesses, specifically marine tourism businesses such as shark-cage diving, whale-watching operators and MPAs, in providing a ME. The findings highlighted differences between the demographic profile of participants in these three activities. For example, more female respondents participated in the selected marine tourism activities and the majority of participants were young and mature adults who are well educated. This supports the findings of Geldenhuys et al. (2019) that the largest portion of marine wildlife tourists are female and between the ages of 35 and 40 years with a tertiary qualification, but contradicts the findings of Munien et al. (2019) who found that more men participate in marine tourism. The findings of the current research only partially support those of Munien et al. (2019) who found marine tourists to be well educated and mainly middle-aged. It is, however, acknowledged that the sample composition of the

different studies could have impacted the demographic profiles of the samples.

Impact of demographic profile on the dimensions

Perceptions of the four cognitive dimensions (meaningfulness, knowledge, novelty and social interaction) were found to differ based on the demographic profile. Women appeared to find visits to MPAs more meaningful than men did. This could be attributed to the fact that women are believed to be more reflective than men and take time to think about activities that they have participated in. Furthermore, women tend to be more selective than men, mainly participating in activities that hold meaning or pique their interest. Age groups differed in terms of novelty and ME related to whale-watching. The young and mature adults found the experience to be more novel and memorable than the seniors did. Stage of life could be an explanation for this finding. Seniors have most likely had more novel and MEs than their younger counterparts, therefore making it more difficult for businesses to stage MEs for this age group. Respondents with different levels of education differed in terms of meaningfulness, knowledge and ME related to visits to MPAs. Respondents with different levels of education also differed in terms of knowledge, novelty, social interaction, meaningfulness and ME related to whale-watching experiences. These differences can be ascribed to some individuals (those with tertiary education) being exposed to more information, knowledge and experiences than others. Further differences were shown between South Africans and foreigners who differed in terms of social interaction related to visits to MPAs. South Africans found the experience to be more socially interactive than foreign visitors. This could be due to language barriers among different participants, preventing them from interacting with participants who speak a different language, or South Africans visiting MPAs with family and friends.

Meaningfulness

The findings of the study suggest that respondents were more positive about the meaningfulness of the experience than the other dimensions, demonstrating that marine tourism experiences are perceived to be meaningful. Therefore, the meaningfulness of the experience was found to be an influential dimension for MMTEs. This supports the findings of Sthapit and Coudounaris (2018), that meaningfulness significantly increases the memorability of an experience.

Based on the strong positive relationship that was found between meaningfulness and MMTE (this is the case for all activities combined and each of the three activities individually), hypothesis H_2 relating to meaningfulness and MMTEs is supported.

It is known that personally significant and beneficial experiences have a higher likelihood of being remembered, and that tourists' interaction with marine wildlife in their natural space, or learning something new, contributes to the

meaningfulness of the experience. Tourism providers should therefore provide tourists with opportunities for learning, stimulate curiosity, or take customers out of their comfort zones. For example, marine tourism operators can establish volunteer programmes extending over a few days or several months, which will provide tourists with a more meaningful experience, should they become involved in these programmes.

Novelty

An analysis of the relationships indicates a strong positive relationship exists between novelty and MMTE (this is the case for all the activities combined and for the three activities individually), Hypothesis H_3 relating to novelty and MMTEs is thus supported. The significant influence of novelty on the MMTEs found in the current study supports past research findings (e.g. Barbieri et al. 2014; Kim 2014; Skavronskaya et al. 2020) that emphasised the impact of first-time, distinct experiences on memorability.

It is recommended that marine tourism businesses enhance the memorability of their experiences by tailoring customised packages to individual tourists' needs, for example by providing themed tours, or they could also offer rare or infrequent experiences such as birthing turtle experiences in MPAs. A novel idea for shark-diving companies and whale-watching operators is to offer simulator programmes for their customers.

Knowledge

The current study indicated that tourists who acquired new knowledge during their experience found the experience to be memorable.

The strong positive relationship that was found to exist between the dimensions (this is the case for all the activities combined, and for each of the three activities individually) points to the support of Hypothesis H_1 relating to knowledge and MMTEs.

Marine tourism businesses can contribute to tourists' knowledge levels by including educational programmes as part of their experience, setting up a visitor education centre that offers informal face-to-face or virtual talks before and after returning from participation in the experience, interactive material and demonstrations. Conservation programmes or talks could be hosted by the different operators – this will assist in creating more awareness and the transfer of knowledge. Prior to departure on guided tours the group can be divided into teams. These teams will meet to receive important pre-tour information and will meet again post-tour to share their experience with each other and compete in a small activity related to the tour against the other teams. This is a different method to ensure that customers are acquiring new knowledge. Guides should also be well trained and knowledgeable to provide visitors with quality in-depth information through paper-based pamphlets, displays, audio presentations and visual presentations.

Social interaction

The current study found that social interaction among respondents positively affects the respondents' memories of the experience. This supports Chandralal et al.'s (2015) suggestions that experiences where interaction occurs tend to be more memorable than experiences devoid of social exchange.

A strong positive relationship exists between social interaction and MMTE (this is the case for whale-watching) and a moderate positive relationship exists between social interaction and MMTE (this is the case for all the activities combined, shark-diving and MPAs). Hypothesis H₄ relating to social interaction and MMTEs is thus supported.

To enhance social interaction, whale-watching or shark-diving operators can allocate a space for their customers to interact before departure or while waiting for the information, educational and or DVD-viewing session after the tour, dividing the group into teams and holding quizzes before and after the tour or holding a 'who spots the whale first' competition. An online site can be created by the operators for the use of customers who have participated in an experience. Customers can join this site to remain in contact with other participants whom they have met while on tour, or to upload images or videos of their experience. This will further assist in improving social interaction. Marine tourism businesses (particularly those situated in regions popular for marine tourism activities such as Gansbaai in South Africa) can also host annual festivals or smaller events, serving as a tool to transfer knowledge and create opportunities for social interaction.

Contributions and limitations of the study

The study makes the following contributions. Firstly, this study contributes to the under-researched topic of marine tourism in South Africa, particularly shark-cage diving, whale-watching and visits to MPAs. Secondly, the study contributes to describing the demographic profile of marine tourists participating in the three activities. Thirdly, this research adds to the field of the cognitive domain by examining the influence of four dimensions (meaningfulness, novelty, knowledge and social interaction) on MMTEs. Fourthly, a further contribution of this study is to marine tourism businesses and marketers of these businesses who wish to enhance the memorability of the experience that they stage. The results of this study show which cognitive dimensions should be included to stage MMTEs. This information can also be used as an assessment tool to evaluate business strengths and weaknesses and improve competitiveness.

A limitation of the current research is the sample distribution. Although the sample size was adequate, a more even distribution of respondents among the different activities and nationalities is desired.

Future research

The following possibilities exist for future research opportunities. Firstly, research into the dimensions with an influence on MMTE could also be investigated in the affective or behavioural domain as this will provide a more comprehensive picture of the dimensions that influence MMTEs. Secondly, the study could also be repeated within different types of marine tourism activities or different experience contexts such as medical, health or religious tourism. It would be interesting and necessary (for experience staging purposes) to determine whether the same cognitive dimensions examined in the current study also apply to the other contexts.

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Competing interests

The authors have no competing interests that may have influenced the findings of this research.

Authors' contributions

A.J., L.R and M.v.E. worked together to complete the different sections of the article.

Ethical consideration

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References

- Akhtar, I., 2016, *Research design*, viewed 11 August 2020, from <https://ssrn.com/abstract=2862445> or <http://dx.doi.org/10.2139/ssrn.2862445>.
- Albaity, M. & Melhem, S., 2017, 'Novelty seeking, image and loyalty: The mediating role of satisfaction and moderating role of length of stay. International tourists' perspective', *Tourism Management Perspectives* 23(1), 30–37. <https://doi.org/10.1016/j.tmp.2017.04.001>

- Antón, C., Camarero, C. & Laguna-García, M., 2017, 'Experience value or satiety? The effects of the amount and variety of tourists' activities on perceived experience', *Journal of Travel Research* 57(7), 1–16. <https://doi.org/10.1177/0047287517727366>
- Ballantyne, R., Packer, J. & Falk, J., 2011, 'Visitors learning for environmental sustainability: Testing short and long term impacts of wildlife tourism experiences using structural equation modelling', *Tourism Management* 32(6), 1243–1252. <https://doi.org/10.1016/j.tourman.2010.11.003>
- Ballantyne, R., Packer, J. & Sutherland, L., 2011, 'Visitors' memories of wildlife tourism: Implications for the design of powerful interpretive experiences', *Tourism Management* 32(4), 770–779. <https://doi.org/10.1016/j.tourman.2010.06.012>
- Barbieri, C., Henderson, K. & Santos, C., 2014, 'Exploring memorable surfing trip', *Annals of Tourism Research* 48(1), 277–280. <https://doi.org/10.1016/j.annals.2014.06.008>
- Bastiaansen, M., Lub, M., Mitas, O., Jung, T., Ascensão, M., Han, D. et al., 2019, 'Emotions as core building blocks of an experience', *International Journal of Contemporary Hospitality Management* 31(2), 651–668. <https://doi.org/10.1108/IJCHM-11-2017-0761>
- Bob, U., Swart, K., Ngalawa, H. & Nzimande, N., 2018, 'Methodological challenges in assessing the economic impacts of coastal and marine tourism in South Africa: Reflections from piloting project', *Euro Economica* 37(2), 202–217.
- Brace, I., 2013, *Questionnaire design. How to plan, structure, and write survey material for effective market research*, 3rd edn., Kogan Page Limited, London.
- Braun-LaTour, K., Grinley, M. & Loftus, E., 2006, 'Tourist memory distortion', *Journal of Travel Research* 44(1), 360–367. <https://doi.org/10.1177/0047287506286721>
- Brumbaugh, R., 2017, *Healthy coral reefs are good for tourism – And tourism can be good for reefs*, viewed 11 August 2020, from <https://www.weforum.org/agenda/2017/06/healthy-coral-reefs-are-good-for-tourism-and-tourism-can-be-good-for-reefs>
- Bustamante, J. & Rubio, N., 2017, 'Measuring customer experience in physical retail environments', *Journal of Service Management* 28(5), 884–913. <https://doi.org/10.1108/JOSM-06-2016-0142>
- Buultjens, J., Ratnayake, I., Gnanapapa, A. & Nedelea, A., 2018, 'Whale watching tourism in Sri Lanka: A visitor satisfaction & behavioural characteristics', *Journal of Tourism Studies & Research in Tourism* 24(24), 22–33.
- Cetin, G. & Bilgihan, A., 2016, 'Components of cultural tourists' experiences in destinations', *Current Issues in Tourism* 19(2), 137–154. <https://doi.org/10.1080/13683500.2014.994595>
- Chandralal, L. & Valenzuela, F., 2013, 'Exploring MTE: Antecedents and behavioural outcomes', *Journal of Economics, Business and Management* 1(2), 117–181.
- Chandralal, L. & Valenzuela, F., 2015, 'MTE: Scale development', *Contemporary Management Research* 11(3), 291–310. <https://doi.org/10.7903/cm.13822>
- Chen, X., Cheng, Z. & Kim, G., 2020, 'Make it memorable: Tourism experience, fun, recommendations and revisit intentions of Chinese outbound tourists', *Sustainability* 11(12), 1–24. <https://doi.org/10.3390/su12051904>
- Cornelisse, M., 2018, 'Understanding MTE: A case study', *Research in Hospitality Management* 8(2), 93–99. <https://doi.org/10.1080/22243534.2018.1553370>
- Coudounaris, D. & Sthapit, E., 2017, 'Antecedents of memorable tourism experience related to behavioural intentions', *Psychology of Marketing* 1(34), 1084–1093.
- Cresswell, J. & Cresswell, J., 2017, *Research design: Qualitative, quantitative, and mixed methods approaches*, 5th edn., Sage Publications, Thousand Oaks, CA.
- Cresswell, J. & Plano Clark, V., 2018, *Designing and conducting mixed methods research*, Sage Publications, Thousand Oaks, CA.
- Curtin, S., 2010, 'What makes memorable wildlife encounters? Revelations from "serious" wildlife tourists', *Journal of Ecotourism* 9(2), 149–168. <https://doi.org/10.1080/14724040903071969>
- Cutler, S., 2015, 'Exploring the moments and memory of tourist experiences in Peru', unpublished PhD thesis, Wilfrid Laurier University, Waterloo.
- De Freitas Coelho, M., De Sevilha Gosling, M. & De Almeida, A., 2018, 'Tourism experiences: Core processes of memorable trips', *Journal of Hospitality and Tourism Management* 37(1), 11–22. <https://doi.org/10.1016/j.jhtm.2018.08.004>
- Department of Tourism Republic of South Africa, 2017, *Cabinet approves coastal and marine tourism implementation plan*, viewed 12 August 2020, from <https://www.tourism.gov.za/AboutNDT/Publications/Cabinet%20approves%20Coastal%20and%20Marine%20Tourism%20Implementation%20Plan.pdf>
- Department of Tourism Republic of South Africa, 2017, *Development of a framework to assess the economic impact of coastal and marine tourism in South Africa*, viewed from <https://tkp.tourism.gov.za/Documents/CPUT%20Final%20Report%20March%202017.pdf>, Viewed 12 August 2020.
- Devault, G., 2020, *Consumer profile: Defining the ideal customer*, viewed 12 August 2020, from <https://www.thebalancesmb.com/consumer-profile-defining-the-ideal-customer-2296932>
- Dwyer, L., 2017, 'Coastal and marine tourism in the Indian Ocean rim: Challenges and opportunities', *Journal of Indian Ocean Rim Studies* 1(1), 38–55.
- Edmonds, W. & Kennedy, T., 2017, *An applied guide to research designs. Quantitative, qualitative and mixed methods*, 2nd edn., Sage Publications, Thousand Oaks, CA.
- Gao, L., Scott, N., Ding, P. & Cooper, C., 2012, 'Tourist experience development: Designed attributes, perceived experiences and customer value', in R. Tsiotsou & R. Goldsmith (eds.), *Strategic marketing in tourism services*, pp. 215–230, Emerald Group Publishing Ltd, Bingley.
- Geldenhuys, L., Van der Merwe, P. & Saayman, M., 2019, 'Determining the market for marine wildlife tourism in South Africa', *African Journal of Hospitality, Tourism and Leisure* 8(4), 1–18.
- Gentile, C., Spiller, N. & Noci, G., 2007, 'How to sustain the customer experience. An overview of experience components that cocreate value with the customer', *European Management Journal* 25(5), 395–410. <https://doi.org/10.1016/j.emj.2007.08.005>
- Hsieh, Y., Chiu, H. & Chang, W., 2018, 'Examining the determinants of valuable customer experiences in O2O commerce context', Paper delivered at the twenty-fourth Americas conference on Information Systems, 16–18 August, New Orleans, LA.
- Huang, J. & Hsu, C., 2010, 'The impact of customer to customer interaction on cruise experience and vacation satisfaction', *Journal of Travel Research* 49(1), 79–92. <https://doi.org/10.1177/0047287509336466>
- Hurombo, B., Kwanisai, G., Mirimi, K. & Nyamandi, T., 2014, 'Exploring the determinants of memorable tourism experience in the boating sector. A case of Kariba, Zimbabwe', *Research Journal's Journal of Hospitality Management* 1(2), 1–11.
- Jefferies, K. & Lepp, A., 2012, 'An investigation of extraordinary experiences', *Journal of Park and Recreation Administration* 30(3), 37–51.
- Jonas, A., 2018, 'Dimensions of a ME in a marine tourism context', unpublished PhD thesis, Nelson Mandela University, Port Elizabeth.
- Kastenholz, E., Carneiro, M., Marques, C. & Loureiro, S., 2017, 'The dimensions of rural tourism experience: Impacts on arousal, memory and satisfaction', *Journal of Travel and Tourism Marketing* 35(2), 189–201. <https://doi.org/10.1080/10548408.2017.1350617>
- Ketchen, E., 2018, *Measuring experiential marketing: Finding tangible KPIs in ephemeral experiences*, viewed 12 August 2020, from <https://www.adexchanger.com/brand-aware/measure-experiential-marketing-finding-tangible-kpis-in-ephemeral-experiences>
- Kim, J., 2009, 'Development of a scale to measure MTE', unpublished thesis, Indiana University, Bloomington, IN.
- Kim, J., 2014, 'The antecedents of MTE: The development of a scale to measure the destination attributes associated with MTEs', *Tourism Management* 44(1), 34–45. <https://doi.org/10.1016/j.tourman.2014.02.007>
- Kim, J., Ritchie, B. & McCormick, B., 2012, 'Development of a scale to measure MTE', *Journal of Travel Research* 51(1), 12–25. <https://doi.org/10.1177/0047287510385467>
- Kornbrot, D., 2005, *Encyclopedia of statistics in behavioral science*, Wiley, Hatfield.
- Kruger, M. & Saayman, M., 2014, 'Exploring South Africa's black diamonds at live music performances', *Acta Commercii* 14(1), 1–13. <https://doi.org/10.4102/ac.v14i1.222>
- Lai, I., Lu, D. & Liu, Y., 2019, 'Experience economy in ethnic cuisine: A case of Chengdu cuisine', *British Food Journal* 122(6), 1081–1817. <https://doi.org/10.1108/BJF-08-2018-0517>
- LaTorre, E., 2011, 'Lifelong learning through travel', *Delta Kappa Gamma Bulletin* 78(1), 17–19.
- Lončarić, D., Dlačić, K. & Prodan, M., 2018, 'What makes summer vacation experience memorable? An empirical study from Croatia', *Zbornik Vevečičlišta u Rijeci* 6(11), 67–80. <https://doi.org/10.31784/zvr.6.1.2>
- Mahdzar, M., 2018, 'Tourist perception on memorable tourism experience towards their revisit intentions to Islamic tourism destination in Shah Alam, Selangor', *Journal of Emerging Economies and Islamic Research* 7(1), 37–44. <https://doi.org/10.24191/jeeir.v7i1.6034>
- Mahdzar, M., Zaidi, N. & Shuib, A., 2016, 'MTE in Mulu National Park: Scale development', Paper presented at the 3rd International Hospitality and Tourism Conference, 12–16 October, Bandung.
- Marschall, S., 2012, 'Tourism & memory', *Annals of Tourism Research* 39(4), 2216–2219. <https://doi.org/10.1016/j.annals.2012.07.001>
- McLeod, S., 2014, *Attitudes and behavior*, viewed 12 August 2020, from <https://www.simplypsychology.org/attitudes.html>
- Mgexkwa, B., Scholtz, M. & Saayman, M., 2017, 'Creating a ME for Nelson Mandela Heritage site visitors', *African Journal of Hospitality, Tourism and Leisure* 6(1), 1–17.
- Mohd, N.S., Ismail, H.N., Isa, N. & Jaafar, S.M.R.S., 2019, 'Millennial tourist emotional experience in technological engagement at destination', *International Journal of Built Environment and Sustainability* 6(1–2), 129–135. <https://doi.org/10.11113/ijbes.v6.n1-2.396>
- Munien, S., Gumedé, A., Gounden, R., Bob, U., Gounden, D. & Perry, N., 2019, 'Profile of visitors to coastal and marine tourism locations in Cape Town, South Africa', *Geographical Journal of Tourism and Geosites* 27(4), 1134–1147. <https://doi.org/10.30892/gtg.27402-421>
- O'Connor, S., Campbell, R., Cortez, H. & Knowles, T., 2009, *Whale watching worldwide: Tourism numbers, expenditures and expanding economic benefits: A special report from the International Fund for Animal Welfare*, Economists at Large, Yarmouth, MA.
- Pallant, J., 2013, *A step by step guide to data analysis using IBM SPSS*, 5th edn., McGraw-Hill, Berkshire.
- Pine, B. & Gilmore, J., 1998, 'Welcome to the experience economy', *Harvard Business Review* 76(4), 97–105.
- Radder, L., Van Eyk, M. & Koekemoer, E., 2019, 'The off-line retail experience: A suggested integrated framework', *The Retail and Marketing Review* 15(2), 29–38.
- Rather, R., 2018, 'Customer experience, memories and loyalty in Indian hospitality sector', *International Journal of Marketing and Business Communication* 7(3), 36–48.
- Saayman, M., 2014, 'A missed opportunity?', *Tourism Business Africa*, January/February, pp. 18–19.

- Sahu, S. & Singh, T., 2016, *Research methodology*, SBPD Publications, Agra.
- SA Navy, 2006, *The maritime environment*, viewed 12 August 2020, from <https://www.yumpu.com/en/document/read/31756194/sangp100-chap-2-the-maritime-environment-south-african-navy>.
- Savolainen, R., 2015, 'The interplay of affective and cognitive factors in information seeking and use: Comparing Kuhlthau's and Nahl's models', *Journal of Documentation* 71(1), 175–197.
- Seyfi, S., Hall, M. & Rasoolimanesh, S., 2020, 'Exploring memorable cultural tourism experiences', *Journal of Heritage Tourism* 15(3), 341–357. <https://doi.org/10.1080/01743873X.2019.1639717>
- Skavronskaya, L., Moyle, B. & Scott, N., 2020, 'The experience of novelty and the novelty of experience', *Frontiers in Psychology* 11(322), 1–11. <https://doi.org/10.3389/fpsyg.2020.00322>
- Stangor, C. & Walinga, J., 2014, *Introduction to psychology*, 1st Canadian edn., BCcampus, Victoria.
- Statistics how to, 2019, *What is Pearson correlation?*, viewed 11 August 2020, from <https://www.statisticshowto.datasciencecentral.com/probability-and-statistics/correlation-coefficient-formula/#mean>.
- Stephen, P. & Wantanee, S., 2016, 'Can marine wildlife tourism provide an "edutaining" experience?', *Journal of Travel and Tourism Marketing* 33(6), 867–884. <https://doi.org/10.1080/10548408.2015.1069778>
- Sthapit, E., 2017, 'A netnographic examination of tourists' memorable hotel experiences', *Anatolia* 29(1), 108–128. <https://doi.org/10.1080/13032917.2017.1402190>
- Sthapit, E. & Coudounaris, D., 2018, 'MTE: Antecedents and outcomes', *Scandinavian Journal of Hospitality and Tourism* 18(1), 72–94. <https://doi.org/10.1080/15022250.2017.1287003>
- Sthapit, E. & Jiménez-Barreto, J., 2018, 'Exploring tourists memorable hospitality experiences: An Airbnb perspective', *Tourism Management Perspectives* 28(1), 89–92. <https://doi.org/10.1016/j.tmp.2018.08.006>
- Stone, M. & Petrick, J., 2013, 'The educational benefits of travel experiences: A literature review', *Journal of Travel Research* 52(6), 731–744. <https://doi.org/10.1177/0047287513500588>
- Stone, M., Soular, J., Migacz, S. & Wolf, E., 2017, 'Elements of memorable food, drink & culinary tourism experiences', *Journal of Travel Research* 57(8):1121–1132.
- Triantafyllidou, A. & Petala, Z., 2016, 'The role of sea-based adventure tourism experiences in tourists' satisfaction and behavioural intentions', *Journal of Travel and Tourism Marketing* 33(1), 67–87. <https://doi.org/10.1080/10548408.2015.1008667>
- Triantafyllidou, A. & Siomkos, G., 2014, 'Consumption experience outcomes: Satisfaction, nostalgia intensity, word of mouth communication and behavioural intentions', *Journal of Consumer Marketing* 31(6–7), 526–540. <https://doi.org/10.1108/JCM-05-2014-0982>
- Tung, V. & Ritchie, J., 2011, 'Investigating the MEs of the senior travel market: An examination of the reminiscence bump', *Journal of Travel and Tourism Marketing* 28(3), 331–343. <https://doi.org/10.1080/10548408.2011.563168>
- Vianna, G., Meeuwig, J., Pannell, D., Sykes, H. & Meekan, M., 2011, *The socio-economic value of the shark-diving industry in Fiji*, Australian Institute of Marine Science, University of Western Australia, Perth.
- Website of South African Tourism, 2018, *South Africa at a glance*, viewed 12 August 2020, from <http://www.southafrica.net>.
- Wei, C., Zhao, Z., Zhang, C. & Huang, K., 2019, 'Psychological factors affecting MTE', *Asia Pacific Journal of Tourism Research* 24(7), 619–632. <https://doi.org/10.1080/10941665.2019.1611611>
- Wilson, O., 2019, 'Assessing the aspects to create a memorable scuba-diving experience', Unpublished dissertation, North West University, Potchefstroom.
- World Wildlife Fund for Nature, 2014, *State of management of South Africa's MPAs*, Worldwide Fund, Cape Town.
- Xasa, T., 2017, 'The tourism sectors' contribution to the national priorities of the Republic of South Africa', Speech, presented at the SANPARKS Tourism Investment Summit, Maslow Hotel, 04 April, Sandton.
- Yu, C., Chang, W. & Ramanpong, J., 2019, 'Assessing visitors' MTE (MTEs) in forest recreation destination: A case study in Xitou Nature Education Area', *Forests* 10(636), 1–15. <https://doi.org/10.3390/f10080636>
- Zhang, H., Wu, Y. & Buhalis, D., 2018, 'A model of perceived image, MTE and revisit intention', *Journal of Destination Marketing and Management* 8(1), 326–336. <https://doi.org/10.1016/j.jdmm.2017.06.004>

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Appendix 1

TABLE 1-A1: Sources of scale items.

Variable	Item	Source
Social interaction	I regularly interacted with different people during this experience.	Triantafyllidou and Petala (2016:78)
	I interacted with people with similar interests during this experience.	Triantafyllidou and Petala (2016:78)
	Meeting new people during this experience was important to me.	Adapted from Kim (2009:117)
	Building friendships during this experience was important to me.	Adapted from Kim (2009:117)
Meaningfulness	I did something meaningful during this experience.	Kim (2009:117)
	I did something that is important to me during this experience.	Kim (2009:117)
	I learned something about myself from this experience.	Kim (2009:117)
	The experience has changed my perspectives about life and the world.	Own based on Chandralal and Valenzuela (2013:178)
Knowledge	I learned new skills from this experience.	Kim (2009:117)
	The activities during this experience required lots of skills.	Kim (2009:117)
	The experience stimulated my curiosity to learn new things.	Triantafyllidou and Petala (2016:78)
	The experience was educational for me.	Adapted from Triantafyllidou and Petala (2016:78)
Novelty	The experience was a once in a lifetime experience.	Kim (2009:118)
	This was a unique experience.	Kim (2009:118)
	I was unfamiliar with the activities that occurred during this experience.	Kim (2009:118)
	There were things new to me.	Adapted from Kim (2009:118)
Memorability	As I remember the experience, I feel as though I am reliving it.	Kim (2009:119)
	As I remember the experience, I can now feel the emotions that I felt then.	Kim (2009:120)
	As I think about the experience I can clearly remember it.	Adapted from Kim (2009:120)
	I can remember this experience in much detail.	Adapted from Kim (2009:121)
	My memory of this experience is so clear that it fits easily into a story I would tell about that part of my life.	Adapted from Kim (2009:121)

Note: Please see the full reference list of the article, Jonas, A.G., Radder, L. & Van Eyk, M., 2020, 'The influence of cognitive dimensions on memorable experiences within a marine tourism context', *South African Journal of Economic and Management Sciences* 23(1), a3579. <https://doi.org/10.4102/sajems.v23i1.3579>, for more information.