# SERVICE QUALITY ATTRIBUTES IN ECOTOURISM: THE INCORPORATION OF EXPERIENTIAL ASPECTS

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#### **ABSTRACT**

The recent development of the tourism industry is characterized by a shift from mass tourism towards sustainable tourism, the most noticeable form of which is ecotourism. In response to the growing academic interest in this topic, the paper aims to explore the different quality attributes of ecotourism services that contribute to tourist satisfaction. Drawing on the well-established scale of ECOSERV, it argues for the need to include interactive and expressive aspects of the ecotrip experience in measurement. Both qualitative and quantitative methods are employed in the research, which shows tourist interactions, feelings and quality-price fit are also important elements of the ecotourism service quality.

Keywords: Ecotourim; ECOSERV; Tourist satisfaction; Tourist interactions; Ecotourism experience.

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## 1. INTRODUCTION

There has been a noticeable shift from mass tourism to sustainable tourism, in which ecotourism, one of its fastest growing subsectors, has received considerable attention from both tourism researchers and practitioners (Wearing & Neil, 2009). While ecotourism development has a relatively long history in developed countries (Whelan, 1991), it is on its infancy in most developing countries including Vietnam (Doan, 2000; Magio et al., 2013).

Most studies about ecotourism in the literature are interdisciplinary and mainly focus on exploring the impact of ecotourism activities on the environment, local economy and community life quality (e.g. Palacio, 1997; Wight, 1997), travelling patterns (e.g. Hvenegaard, 2002), ecotourist motivation and experience (e.g. Eagle, 1992; Lian Chan & Baum, 2007a,b), or ecotourist segmentations (Ballantine & Eagles, 1994; Meric & Hunt, 1998). In marketing, few studies focus on ecotourism service quality and its effect on satisfaction (Abou-Shouk et al., 2017a; Lu & Stepchenkova, 2012). One of the most notable model in this stream is ECOSERV, a revised version

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of SERVQUAL for the ecotourism services (Ladhari, 2008). The model, however, has been criticized for the lack of comprehensiveness as it fails to consider many important aspects of the ecotourism experience (Devesa et al., 2010; Kastenholz et al., 2012; Reichenberger, 2017).

Vietnam is a tropical country that has enormous potential for ecotourism, with stunning natural resources and valuable culture identity. Ecotourism opportunities in Vietnam are ample, including rafting, mountain climbing, diving, birdwatching, boating, and forms of cultural tourism. However, a lack of unanimous understanding of ecotourism nature and activities has caused confusion and difficulties in designing and organising tours to attract customers and create positive word of mouth. More importantly, this has negatively affected tourists' experiences as a result of poorly designed and performed services. Although services in the tourism industry may have some underlying similarities, significant differences do exist among different locations and national cultures. This calls for new research efforts to clarify the concept of ecotourism and identify factors that contribute to tourist satisfaction in developing countries.

In summary, the contribution of this study is twofold. Firstly, it aims to identify the ecotourism service attributes in the context of a developing country, Vietnam. Secondly, as ecotourism is regarded as a holistic, experience-based product and service (Lian Chan and Baum, 2007a), the study extends the ECOSERV model to include interactive and experiential aspects to existing service quality attributes. This study uses a combination of both qualitative methods and quantitative methods to fulfil the purposes.

#### 2. LITERATURE REVIEW

# 2.1. Ecotourism Definition

There is no consensus on the nature and characteristics of ecotourism. Ziffer (1989) pointed out that ecotourism is 'a complex notion which ambitiously attempts to describe an activity, set forth a philosophy and espouse a model of development' (p.5). Ecotourism is conceptualized as an emphasis on the preservation of natural resources of ecotourism sites and environmental knowledge of tourists (Chiu et al., 2014). Ecotourism is also defined as nature-based tourism activities which have strong links with sustainable development (Dolnicar et al., 2008; Lu & Stepchenkova, 2012), or as community-based tourism activities which create positive influences on the local economy and the life quality of poor local people (Carter et al., 2004; Lu & Stepchenkova, 2012).

On the other hand, many researchers in tourism service marketing (e.g. Ban & Ramsaran, 2016; Wurzinger & Kohansson, 2006) accepted a definition of ecotourism by Khan (2003): 'purposeful time spent in natural environment to interact, learn, and experience other cultures, and to economically help local communities that work toward preservation of the ecosystem' (p.111). Therefore, ecotourism involves travelling to relatively undisturbed or uncontaminated areas with the specific objective of studying, admiring and enjoying the scenery and its wild plants and animals, as well as any existing cultural manifestations (both past and present) found in these areas (Ceballos-Lascurain, 1991). It also provides opportunities for experiencing and appreciating the nature, local customs and culture (Wurzinger & Kohansson, 2006) and allows tourists to learn

about responsible traveling (Ban & Ramsaran, 2016). This study follows this research stream and defines ecotourism as ecotourist motivations for natural, cultural, soft, discoverable, adventurous and responsible tourism activities and experiences.

Indeed, despite potential conflicts between the definitions, some prominent values of ecotourism emerge: the appreciation of the natural environment, the conservation of nature, interactive and learning experiences, and local community responsibility. This also separate ecotourism from mass tourism: eco-tourists are characterized by a greater interest in the environment, more engagement in authentic outdoor activities, wider involvement in local culture and eco-friendly view and practices.

# 2.2. Ecotourism as an Experience

As tourism evolves, previously popular forms that emphasize recovery and relaxation receive less enthusiasm from an emerging group of tourists who travel not only for the reason of escaping routine life. Instead of the conventional sun, sand and sea holidays, they seek self-fulfillment and more unique, rewarding and enriching experiences (Urry 1990, 1995; Poon 1993). No other types of tourism fit the description better than ecotourism products, which offer authentic experiences in the form of small-scale, nature-based, more intimate, carefully constructed and physically demanding activities (Wight 1997, Ayala 1996).

Many of the definitions of ecotourism point out an educational element and the contribution to nature conservation as the basis of this type of travelling (Fennell 2014; Weaver 2001). Accordingly, ecotourists have been largely depicted by academics as people with sincere concerns about the environment. However, Gossling (2006), analysing marketing campaigns of Swedish tour operators, argue that there is indeed a disparity between ecotourists' real motivations and the academic understanding of those. Ecotourists interact with different elements at the eco-site, the environment, wildlife and local people and such interactions with different sources of stimulation create tourism experiences, 'the subjective mental state felt by participants during a service encounter' (Otto & Ritchie, 1996, p.166). According to Gossling (2006), the majority of ecotourists might be more interested in these consuming experiences than sustainable trips themselves and might mainly buy ecotours for this purpose. Experiences, as many psychological and marketing researchers point out, are not simply the result of a cognitive process but a combination of sensory, affective, cognitive, physical and behavioral responses (Schmitt 2003). Therefore, in addition to ensuring the good quality of products and services (utilitarian aspects), understanding of ecotourists' experience (hedonic aspects) may contribute to the improvement of quality in ecotourism services. This topic, despite its significance, has little empirical evidence in the literature.

# 2.3. Measuring Ecotourism Service Quality

Many studies have agreed that service quality plays a pivotal role in building a company's competitive advantage. Service quality is generally considered the result of an assessment process in which the customer compares the perceived performance of a specific service with his or her expectations of how it should be (Parasuraman, Zeithaml & Berry, 1988). Parasuraman, Zeithaml & Berry (1988) proposed that the level of service quality should be evaluated according to the difference between expectation and performance along a number of quality dimensions. They

developed the SERVQUAL model, a 22-item instrument that measures customer expectation and perception along 5 dimensions: tangibles, reliability, assurance, responsiveness and empathy. Since its introduction, the scale has become a popular tool for measuring service quality across different sectors. Several authors, however, argue the need to adapt the original scale to the industry-specific context in which each research is conducted due to the model's lack of comprehensiveness (Ladhari 2009).

In the field of tourism, the SERVQUAL model has been employed to measure service quality in various sectors such as hotel, restaurant, airline, sport tourism (Juwaheer 2004). The original model has received criticism for failing to cover many further dimensions that are considered important by tourists (Akbaba, 2006; Briggs et al., 2007; Gilbert & Wong, 2003). This has led to attempts to adapt and develop the scale. In ecotourism in particular, one of the most widely recognised instruments in measuring eco-service quality is ECOSERV, a model largely adapting SERVQUAL. ECOSERV as proposed by Khan (2003) included 6 dimensions of ecotourism services that travelers expect to experience. Besides the 5 dimensions inherited from SERVQUAL (reliability, responsiveness, assurance, empathy and tangibles), the dimension Eco-tangibles is added. While SERVQUAL measures the tangible aspect of the service by 4 items, ECOSERV measures it by 14 items which are divided into two categories: the equipment and service facilities, and the elements related to the environment.

Despite its wide application in the context of ecotourism, the ECOSERV model needs modifying for a more accurate reflection of the distinct nature of this emerging form of tourism. While ECOSERV places greater emphasis on physical facilities and equipment appropriate to the environment, local recreational activities and other factors with endemic characteristics, arguably a major motivation for many ecotourists, are largely ignored. In addition, except for the relationship with staff, other social interactions which can affect the ecotourism experience are not mentioned adequately in the model. Given that ecotourism is a form of community-based tourism, the interactions between tourists and local people or cultures at the destination is one of the driving forces behind the decision to choose ecotours (Devesa et al. 2010; Kastenholz et al. 2012). Similarly, ecotourists' experiences can also be affected by the presence, behavior and quality of their interactions with other travellers (Camelis et al. 2014). It has been shown that meeting and exchanging views with people having the same interest is important to many tourists (Reichenberger, 2017) as such interactions create social values related to personal orientation (Richins, 1994). Also, as "ecotourists are likely to perceive ecotourism site visits in terms of their expressive experience rather than merely as an utilitarian transaction", the feelings of tourists towards their visit will shape their experiences (Lian Chan & Baum, 2007b). As such, "relaxation" feelings play a vital role in the process of the ecotourists' experience (Eagle, 2002).

In conclusion, as supported by previous studies, ecotourism service quality is intimately linked with experience. Tourists' judgment of the quality of ecotourism services is significantly based on their experience with such services through sense, feel, think, act and relate (Schmitt 2003). However, this experiential approach has not been addressed adequately in both SERVQUAL and ECOSERV, two most popular tools used to measure service quality in ecotourism. In response to this gap in the literature, this study aims to understand, describe and measure service quality and tourist experience in the context of ecotourism.

#### 3. METHODOLOGY

The study consists of two main phases. Qualitative research was first conducted, followed by a quantitative analysis.

# 3.1. Qualitative Study

# 3.1.1. Qualitative study design

As discussed above, while ECOSERV is used in this study as a basic framework for assessing ecotourism service quality, further dimensions, such as ecotourism experience, interaction and price-quality inference, are the subjects to be explored. Therefore, an in-depth interview approach was implemented in order to determine ecotourism service quality dimensions and their attributes according to the view of Vietnamese ecotourists. Richardson (1999) suggests that for understanding subjective experience, we need to ask customers to talk about what happened and their experiences to elicit firsthand and personal information from informants and provide an insight into the complex behavior of ecotourists (Walsh, 2005). In-depth interviews were conducted with 22 local eco-tourists who have travelled in a national forest or park areas in the last two years. The sample size of 22 was adequate for qualitative research as 20-40 in-depth interviews are recommended as sample size for qualitative research (Travers, 2009).

An interview guide with a combination of open-ended and semi-structured questions was used, which ensures consistent conduct of the interview and systematic collection of data. Each interview took place in around 35-40 minutes. The reviewers started by explaining the aims of the research and introducing three parts of the main interview questions. First, the informants were asked about their recent trip at one ecotourism place regarding: (1) what they saw; (2) what they did; (3) what they explored about ecotourism service quality including the tangibles, environment, culture of the place; (4) what they perceived and felt about the staff; (5) what they felt about the local people; (6) what their feelings and emotions were during their trip; (7) what they would say about the social interactions in their trip, and what they perceived about the overall service quality of the trip. Next, the participants were asked about critical service quality attributes during their experience. This second step included open-ended sub-questions based on service expectation attributes on ECOSERV and the ecotourism service quality attributes explored in the first step. Finally, the informants were asked about the most positive and negative experience in order to explore more about ecotourism service quality attributes that they have not mentioned before.

All responses were recorded, transcribed and analyzed by inductive reasoning techniques (Lincoln & Guba, 1985). For enhancing to understand the intended concepts, the content analysis recommended by Lauri and Kyngas (2005) was conducted by manual procedures. This method focuses on the content or contextual meaning of the text (Lauri & Kyngas, 2005; Potter & Levine-Donnerstein, 1999). Basically, it works by dividing the many contents of the text into much smaller content units, then classifying the units that share similar meaning into the same category (Bardin, 2001). The relevant units contribute to the explanation for each category. After the different categories had been established, we counted the frequencies of the units (attributes) to identify the presence of dominant and less dominant units. Some units were similar across most of the responses while others were unique. The units whose frequencies were less than half of the total number of interviewees will be removed. We noted that convergence in the responses or repetition

and saturation started to occur at the 15-interview mark. Seven more interviews were conducted to ensure no new information was being provided.

Next, data analysis that includes the coding and labeling of categories and concepts was conducted. The interactive process was applied for coding and labeling procedures, which were examined and re-examined (Strauus & Corbin, 1990). To achieve triangulation, the qualitative data obtained from the interviews were then compared with the information found in the literature on ecotourism to see if they corroborated or disconfirmed the existing literature (Gerrish et al. 2006), and were checked again by 5 experts in the fields (including 3 tour operators and 2 customer service managers at ecotourism locations).

# 3.1.2. Findings: Defining Service Quality Attributes Based On Experience In Ecotourism

Following the procedure, similar units were clustered together to produce nine dimensions (47 units or attributes). The first four are consistent with service quality dimensions suggested in SERVQUAL and ECOSERV, including assurance, reliability, responsiveness, empathy, tangibles, eco-tangibles. However, there were additional service experience attributes found under each of these dimensions. Five new dimensions are labeled price-quality inference, interaction nature, interaction with locals, interaction with other customers, and relaxation feelings.

**Table 1:** Description of Ecotourism Service Attributes

		DESCRIPTION
DIMENSION	NUMBER OF	DESCRIPTION
-	ATTRIBUTES	
<ol> <li>Staff competence</li> </ol>	9	Knowledge and courtesy of the employees, their
		ability to convey trust and confidence, and to
		provide necessary information.
2. Staff attitude	7	Ability to perform the promised service
		dependably and accurately; willingness to help
		customers and provide prompt service and ability
		to provide details regarding services and
		products; caring, individualized attention the firm
		provides its customers.
3. Tangibles support	5	Physical facilities, equipment, and appearance of
		the personnel that reflects local influence,
		transport system, accessibility to natural
		resources.
4. Eco-tangibles	7	Physical facilities and equipment that are safe and
C		appropriate to the environment, the transport
		modes appropriate to the environment protection,
		unpolluted ambiance, undisturbed and attracted
		nature.
5. Price-Quality	3	Comparison between price and perceived quality
6. Interaction with nature	5	Different nature-based local activities.

DIMENSION	NUMBER OF ATTRIBUTES	DESCRIPTION
7. Interaction with local people	3	Different local people behavior and interaction
		between local people and tourists.
8. Interaction with other	3	Behaviors of other tourists, exchange with other tourists.
customers		tourists.
9. Relaxation feelings	5	Different feelings during the visit.

Here are some examples of interview responses that demonstrate the emerging dimensions and attributes of service experience quality and experience in the ecotourism industry, thus that should be incorporated in the literature.

# Attributes related to the competence and attitude of staff at ecotourism locations (assurance, reliably, responsiveness and empathy):

A respondent stated that "I'm satisfied with the guides who provided me with relevant and necessary information" (IR20) or "the guide is one key element that makes my experience during the trip a good one....All needed information was provided with details. I appreciate it because this makes me feel safe, also I can arrange my private plan" (IR3).

# **Attributes related to Eco-tangibles:**

When asked to describe their ecotourism experience, informants mentioned the wilderness, undisturbed environment, a factor not included in ECOSERV. A respondent reported that "I really love the wild and undisturbed nature. It's impressive. It makes me feel free from the busy life, industrial ambiance in the city" (IR4). One respondent described his excitement by saying that "It's so cool to see the wildlife, crocodiles, birds, and big elephants nearby" (IR4) or "I'm impressed with the clean environment with comfortable accommodation" (IR 13).

## Attributes related to Interaction with nature and local people:

The findings show that the ecotourism experience at its core means having authentic interactions with nature. The recognition and feelings of the nature, the environment and local people emerged clearly from the responses. Respondents define the ecotourism experience with reference to moments when they have interactive experiences with nature and outdoor activities. For examples: "It is amazing! I can touch the flowers, and see plants, animals, and listen to the birds singing. I love it. Also there are a lot of outdoor activities to participate in" (IR 9), "It's the first time I've seen a bird making its nest" (IR 5). Interaction between tourists and the natural environment contributes to positive experiences, as narrated by respondents: "The river trip, seeing animals, the monkeys, the elephants, all make me feel extremely happy because they are funny and it is entertaining to look at how they act" (IR 11).

The findings also reveal that respondents define ecotourism through their interactions with local people and discovery of local habitats and way of life, as indicated by respondents "I loved seeing nature with my own eyes, seeing the villages, the green, getting some ideas about how locals live, their local customs and culture generally" (IR 22), "I find the local people sincere and hospitable. They do not ask me to buy things or ask for money. Some of them also help me to discover things without any demand. It's so kind!" (IR 18), "During the trip, I tasted a lot of foods, for example the rice cooked in a bamboo tube. It's so delicious. The taste is different" (IR1), "I tried the traditional costumes of the local people. They gave me and helped me to wear. It was not too complicated but looked nice." (IR 2). It was what made this place more special" (IR 22).

## Attributes related to Interaction with other customers:

The findings show that positive or negative ecotourism experiences are also associated with the presence and behavior of other visitors. One respondent stated that "I'm not happy with other tourists in my group. They do not share the same feelings and do not have kind behaviors" (IR14). One other felt uncomfortable: "The worst thing during my recent trip is the presence of other tourists in the group who do not behave correctly. They laugh a lot and loudly. Sometimes, they tease the animals, which makes them scared and escape. They do not care about the presence of others." (IR13). Most of respondents felt better when they were only with their family or relatives, as reported: "I love this recent eco-trip. I was only with my relatives. We talked a lot. Every member in my family wanted to discover things deeply and walk slowly in the byroad..." (IR15), or "My husband and I enjoyed a private guided tour with one of the most experienced tour guides! We had a private time, not disturbed by other tourists. The last time we were with other eco-tourists, we felt uncomfortable." (IR6)

#### **Attributes related to Price-Quality:**

Like in other forms of tourism, price-quality is a major concern for eco-tourists. However, this dimension seems to be neglected in all measurement scales of ecotourism quality or expectation in the literature. This might stem from the assumption that ecotourists are often more affluent people whose main purpose is to have some unique and memorable travel experiences. However, the findings of this exploratory research reveal this issue as an important point that influences the experience quality perception. As indicated by respondents: "I think the staff do not serve the food equivalent to the fixed price. The food is delicious but the dish is too small" (IR3), "I'm not satisfied with the price of the foods and specialties. It seems that there is no control or regulation of prices in the shops or restaurants in this place" (IR8). Other respondents reported more positively, for example: "The ticket price is ok. The food is delicious and the price is reasonable", "Another good thing is there is no gap between price and product or service quality." (IR14)

#### Attributes related to Relaxation feelings

The findings show that relaxation and physical comfort are associated with ecotourism experience, as indicated by respondents, for example: "I went to this place to relax and I'm satisfied. I really had a great time in this quiet place" (IR5), or "I get "open" ambiance. This is a comfortable place." (IR20), "It's mostly about experiencing the contrast from the busy city life and relaxing out here" (IR7), "The best thing is that I felt away from home while being very near to nature, totally different to my job place! It was what made this place so special!" (IR12), "Here, everything's very different from a big city like Ho Chi Minh city" (IR20).

**Table 2:** Service Quality and Experience Attributes at Ecotourism Locations

	ole 2: Service Quality and Experience			
Service	e and experience attributes	Examples of existing literature in ecotourism	Frequency in interviews results	
			(Ratio equivalent n/22*100)	
Assurance1	I feel safe during my visit	Parasuraman et al. (1988), Khan (2003), Lian Chan & Baum (2007a,b)	22	
Assurance2	The staff provide the necessary information	Parasuraman et al. (1988), Khan (2003)	18	
Assurance3	The staff have knowledge to answer my questions	Parasuraman et al. (1988), Khan (2003)	11	
Assurance4	The staff instill confidence in customers	Parasuraman et al. (1988), Khan (2003)	20	
Assurance5	The staff were consistently courteous	Parasuraman et al. (1988), Khan (2003)	17	
Reliability1	The staff provide services at promised time	Parasuraman et al. (1988), Khan (2003)	13	
Reliability2	The staff insist error-free service	Parasuraman et al. (1988), Khan (2003)	12	
Reliability3	The staff perform the service right the first time	Parasuraman et al. (1988), Khan (2003)	11	
Reliability4	The staff show sincere interest in solving a problem	Parasuraman et al. (1988), Khan (2003)	13	
Reliability5	The staff provide accurate information	( ,	14	
Responsiveness1	The staff are always willing to help	Parasuraman et al. (1988), Khan (2003)	20	
Responsiveness2	The staff give prompt service to customers	Parasuraman et al. (1988), Khan (2003)	20	
Responsiveness3	The staff were never busy to help	Parasuraman et al. (1988), Khan (2003)	11	
Responsiveness4	The staff provide details regarding services and products offered	( ,	14	
Empathy1	The staff provide tourists with personal attention	Parasuraman et al. (1988), Khan (2003)	14	
Empathy 2	Operating hours of services at this place are convenient	Khan (2003)	11	
Empathy3	The staff understand the specific needs of tourists	Parasuraman et al. (1988), Khan (2003)	15	
Tangible1	Facilities reflect local influence	Parasuraman et al. (1988), Khan (2003)	21	
Tangible2	Materials and facilities are visually appealing	Parasuraman et al. (1988)	22	

Service and experience attributes		Examples of existing literature in ecotourism	Frequency in interviews results  (Ratio equivalent	
			n/22*100)	
Tangible3	Facilities are clean		20	
Tangible4	Facilities are comfortable		13	
Tangible5	Natural resources are easy to access		19	
Eco-tangible1	Facilities are appropriate to the environment	Khan (2003)	15	
Eco-tangible2	Equipment minimizes degradation	Khan (2003)	14	
Eco-tangible3	Facilities are environmentally safe	Khan (2003)	13	
Eco-tangible4	The transport modes minimize the pollution		12	
Eco-tangible5	Ambiance is unpolluted		20	
Eco-tangible6	Nature is wild and undisturbed	Eagles (1992)	22	
Eco-tangible7	The scenery and nature are attractive	Lu & Stepchenkova (2012)	22	
Price-Quality1	Price fits service quality	Völckner & Hoffmann (2007)	22	
Price-Quality2	The staff respect the listed prices (i.e. they do not ask the tourists to pay more)		13	
Price-Quality3	The staff ensure the quality of services fits the listed prices		14	
Interaction with local1	The local people show hospitality towards tourists		22	
Interaction with local2	The local people do not have discrimination with different tourists		17	
Interaction with local3	Simple and authentic meetings with local people		16	
Interaction with local4	Experience of new lifestyles (local culture)	Eagles (1992)	18	
Interaction with nature1	Authentic interaction with nature		22	
Interaction with nature2	Different nature-based local activities (jungle tracking, kayaking,	Holden & Sparrowhawk (2002), Lu &	20	
Interaction with nature3	live animals,) Delicious local foods are made with natural materials	Stepchenkova (2012)	22	

Service and experience attributes		Examples of existing literature in ecotourism	Frequency in interviews results  (Ratio equivalent	
			n/22*100)	
Interaction with nature4	Beautiful and original local products are made by using natural resources		14	
Interaction with other customers1	Not disturbed by the presence of other tourists in my visit (number, density)		20	
Interaction with other customers2	Nice exchange with other tourists in my visit	Eagles (1992), Lian Chan & Baum (2007a,b), Lu & Stepchunenkova (2012)	16	
Interaction with other customers3	Correct behavior of other tourists in my visit		13	
Relaxation1	Feeling of being at home away from home	Eagles (1992) Lian Chan & Baum (2007 a,b)	16	
Relaxation2	Feeling of a change from a busy job	Eagles (1992)	21	
Relaxation3	Feeling of escape from demands of life	Eagles (1992)	22	
Relaxation4	Feeling of to act the way i feel	Eagles (1992)	16	
Relaxation5	Feeling of peaceful atmosphere	Lian Chan & Baum (2007 a,b), Lu & Stepchenkova (2012)	22	

Note: A statement with a negative meaning is regarded the same as one with a positive meaning (of the same item) for the purpose of counting the frequencies of the items in 22 interviews.

# 3.2. Quantitative study

The empirical work was carried out with the participation of 347 ecotourists who have visited some ecotourism locations in Vietnam such as Ho Tram, Bach Ma, and Can Gio area. In cooperation with local travel agents, we asked tourists in the bus on the way back from an ecotourism site to answer a questionnaire with 47 questions that took approximately 15-20 minutes to complete. They were asked to assess 47 quality and experience attributes of ecotourism locations by using a five-point Likert scale (1: strongly disagree – 5 strongly agree). The items are adopted from findings from the literature review and the qualitative research. 324 valid responses were used.

 Table 3: Sociodemographic Profile of Valid Sample

Variable Variable	Valid percentage (%)
Age:	, man per consider ( , c)
14-25	138
26-34	133
35-44	43
45-54	7
>65	3
Job:	J
Employee	38.9
Businessman	5.9
Officer	21.3
Student	29.0
Others	4.9
Goal of trip:	
Relaxation	13.6
Discovery	12.6
Holiday with family and friends	56.8
Multi-goals	15.1
Others	1.9
Members in trip:	1.7
Alone	6.8
With family	30.6
With friends	57.1
Others	5.5
Education:	
Higher education	25.3
University	57.4
College	16.4
High School	0.9
Income:	
No income	18.2
≤ 5 milion dongs (roughly 250 USD)	19.1
5-<10 million dongs (roughly 250 – 500 USD)	30.2
10-<20 million dongs (roughly 500 – 1000 USD)	30.6
20-<50 million dongs (roughly 1000 – 2500 USD)	1.9
Accommodation:	
Resort	15.7
Hotel	29.3
Guest house	23.5
Home stay	21.9
Others	9.6
Number of visits	
First time	43.2
More than one time	56.8

#### 4. RESULTS AND DISCUSSION

At first, the study used principal component analysis with a Varimax rotation (Kinnear & Taylor, 1996). The number of factors was not restricted. For the sake of convergent validity, 0.5 was used as a factor loading cut-off point. Items had to display a 0.3 loading difference with any other factors to ensure distinctive validity. After the first exploratory factor analysis (EFA), one item had been eliminated because of factor loading being less than 0.50 ("Operating hours of services at this place are convenient"). After deleting this item, we ran the EFA again. The result showed 9 factors with the factor structure fully matched: Bartlett's test of sphericity is statistically significant (p(Bartlett) = 0.000), which verified that the correlation matrix was not an identity matrix, thereby validating the suitability of the factor analysis; The Kaiser-Meyer-Olkin (KMO) was performed, which showed KMO = 0.951, higher than the suggested 0.60. Total variance explained is 68.04%. The factor loadings of each remaining item ranged from 0.515 to 0.783. The results of the reliability test also met requirements (all Cronbach's alpha -  $\alpha \ge 0.828$ ), which showed the internal cohesiveness among items within each factor (Hair et al. 2010) (table 4).

Next, the confirmatory factor analysis (CFA) was conducted to examine the full measurement model which included 9 first-order constructs and their respective items. This study utilized three types of overall model fit measures: absolute, incremental, and parsimonious. The absolute fit index evaluated how well the theoretical model fits the sample data, the incremental fit index assessed the incremental fit of the model compared to a null model that usually specifies no relation among the constructs and variables, and the parsimonious fit measure was used to diagnose whether model fit has been achieved by overfitting the data with too many coefficients.

The CFA resulted in satisfactory fit indices (Roussel et al. 2002). The CMIN = 1744.969; df = 965, SRMR = 0.047 indicated that the measurement model was significant. Also, the model fit measures indicated support for the proposed model which the Goodness-of-fit-index (GFI) = 0.820, the Comparative fit index (CFI) = 0.928, the Tucker\_Lewis index (TLI) = 0.919. The Root mean square error of approximation (RMSEA) and the normed CMIN were calculated to test parsimonious fit. The REMSEA value was 0.050 that indicated a good model fit. Moreover, the normed (CMIN/df) was 1.808, falling between 1 and 2, further indicating a parsimonious fit. Thus, the suggested factorial structure fits properly.

As presented in table 4, factor loadings of items ranged from 0.537 to 0.920 which were all above 0.50, and the value of Average variance extracted (AVE) was from 0.623 to 0.770 (> 0.50); indicating satisfactory convergent validity (Hair et al. 1998) (table 4). The discriminant validity was also confirmed as the AVEs were larger than the squared correlation coefficients between factors (Fornell & Larcker, 1981) (table 5). The Composite reliabilities (CR) were from 0.832 to 0.922 (> 0,70) (table 4). Thus, the measurement of service quality and experience in ecotourism destination were satisfactory in terms of convergent validity, discriminant validity and reliability. In summary, the results confirm 9 dimensions of service quality and experience at ecotourism destinations assessed by tourists. A brief description of each dimension is presented below:

Table 4: Items of the Refined Measurement Scales and Measures of Reliability

	Factor	Factor		~
	loading (EFA)	loading (CFA)	Average	Standard deviation
Competency of staff (Cronbach's $\alpha = 0.912$ , CR = 0.922,		, ,		
AVE = 0.683) Staff ensure safety for tourists	0.667	0.758	3.52	0.867
Staff provide the necessary information	0.605	0.756	3.72	0.807
Staff provide details regarding services and products offered	0.662	0.775	3.62	0.821
Staff have knowledge to answer my questions	0.669	0.773	3.02	0.830
Staff insist error-free service	0.651	0.093	3.12	0.949
	0.631	0.763		0.860
Staff perform the service right the first time			3.49	0.839
Staff provide accurate information	0.622	0.712	3.63	
Staff give prompt service to customers	0.693	0.799	3.48	0.885
Staff understand the specific needs of tourists	0.585	0.706	3.28	0.864
Attitude of staff (Cronbach's α = 0.902, CR = 0,896, AVE = 0.680)				
Staff instill confidence in customers	0.643	0.858	3.52	0.902
Staff are consistently courteous	0.687	0.808	3.63	0.817
Staff provide services at promised time	0.520	0.693	3.49	0.835
Staff show sincere interest in solving a problem	0.734	0.709	3.48	0.902
Staff are always willing to help	0.783	0.764	3.50	0.882
Staff were never busy to help	0.679	0.637	3.82	0.826
Staff provide tourists with personal attention	0.688	0.809	3.48	0.902
Tangibles support (Cronbach's $\alpha = 0.892$ , CR = 0.886,				
AVE = 0.710				
Materials reflect local influence	0.621	0.736	3.75	0.866
Materials and facilities are visually appealing	0.561	0.791	3.56	0.998
The scenery and nature are attracted	0.534	0.741	3.34	0.892
Natural resources are easy to access (i.e. adequate transport,	0.694	0.725	3.40	0.991
materials to interact with nature)				
The facilities are clean	0.728	0.745	3.49	0.952
The facilities are confortable	0.748	0.772	3.42	0.949
Eco-tangibles (Cronbach's $\alpha = 0.854$ , CR = 0.841, AVE =				
0.770)				
Facilities are appropriate to the environment	0.515	0.706	3.74	0.904
Equipment minimizes degradation	0.737	0.784	3.75	0.964
Facilities are environmentally safe	0.531	0.704	3.77	0.883
The transport modes minimize pollution	0.545	0.649	3.56	0.986
The environment is unpolluted	0.607	0.646	3.65	0.973
The nature is wild and undisturbed	0.644	0.613	3.62	0.952
Price-Quality (Cronbach's $\alpha = 0.828$ , CR = 0.832, AVE =				
0.623)				
Price fits service quality	0.622	0.737	3.59	0.922

	Factor loading (EFA)	Factor loading (CFA)	Average	Standard deviation
Staff respect the listed prices (i.e. they do not ask the	0.717	0.806	3.77	0.828
tourists to pay more)				
Staff ensure the quality of service fits the listed prices	0.593	0.822	3.66	0.867
Interaction with nature (Cronbach's $\alpha = 0.862$ , CR =				
0.856, AVE = 0.773	0.670	0.017	2.70	0.005
Authentic interaction with nature	0.679	0.817	3.79	0.905
Different nature-based local activities (jungle tracking, kayaking, live animals,)	0.625	0.693	3.69	0.916
Delicious local foods are made with natural materials	0.544	0.790	3.65	0.995
Beautiful and original local products made by using natural resources	0.543	0.789	3.63	0.843
Interaction with local people (Cronbach's $\alpha$ = 0.893, CR = 0.897, AVE = 0.687)				
Local people show hospitality towards tourists	0.555	0.688	3.56	0.963
Local people do not have discrimination with different tourists	0.673	0.850	3.56	1.016
Simple and authentic meetings	0.725	0.920	3.51	1.066
Experience of new lifestyles (local culture)	0.736	0.840	3.48	1.045
Interaction with other customers (Cronbach's $\alpha$ = 0.835, CR = 0.836, AVE = 0.630)				
Not disturbed by the presence of others tourists in my visit (number, density)	0.594	0.764	3.60	0.920
Nice exchange with others tourists in my visit	0.633	0.822	3.46	0.922
Correct behavior of others tourists in my visit	0.675	0.795	3.56	0.900
Relaxation feelings (Cronbach's $\alpha$ = 0,883, CR = 0.868, AVE = 0.686)				
Feeling at home	0.537	0.693	3.29	0.888
Feeling of a break from the busy job	0.693	0.723	3.76	0.871
Feeling of escape from demands of life	0.763	0.773	3.78	0.888
Feeling free to act the way I feel	0.643	0.785	3.63	0.893
Feeling of peaceful atmosphere	0.622	0.794	3.89	0.890

*Notes*: CR: composite reliability, AVE: average variance extracted, ASV = Average shared variance, MSV = Maximum shared variance

**Table 5:** Discriminant Validity

	Interaction customers	Competency	Attitude	Tangibles Support	Eco Tangibles	Interaction Nature	Relaxation Feelings	Interaction Local People	Price Quality
Interaction_Customers	0.794								
Competency	0.606	0.826							
Attitude	0.553	0.822	0.825						
Tangibles support	0.673	0.738	0.614	0.825					
EcoTangibles	0.687	0.677	0.596	0.840	0.877				
Interaction_Nature	0.708	0.577	0.530	0.660	0.876	0.879			
RelaxationFeelings	0.776	0.623	0.581	0.719	0.774	0.791	0.828		
Interaction_LocalPeople	0.709	0.571	0.545	0.693	0.715	0.820	0.735	0.829	
Price-Quality	0.693	0.661	0.605	0.572	0.681	0.642	0.742	0.643	0.789

The results show that tourists' evaluation of an ecotourism location is not only made through their perception of the quality level of services offered (e.g. staff and the natural environment) but also through their assessment of experiential attributes of the eco-service (e.g. interactions with other people).

The service attributes that reflect the competence and attitude of employees at ecotourism sites are largely similar to those that have been suggested by previous models of service quality such as SERVQUAL and ECOSERV. The corroboration of the attributes in existing literature indeed confirms the rigor of this research study. On the other hand, a new contribution of this study is to propose and investigate the role of the compatibility of price and service quality in building customer satisfaction. To the authors' knowledge, it is the first time "price-quality fit" has been added to a quality measurement scale. This also refutes the general belief that ecotourists, usually groups of wealthy travellers, are less concerned with the costs of their trips. As the study suggests, they do compare the price and the service quality they receive, and expect a high degree of agreement between these factors. Also, compared to ECOSERV and other studies in the same field, this research has added two further elements to the eco-tangibles dimension: transport modes that minimize pollution, unpolluted environment, and wild and undisturbed nature.

The experiential aspects of the ecotourism service have also been explored in the paper through elements such as tangibles support, eco tangibles (sensory experiences), interaction with nature, interaction with local people, with interaction other customers (social/interactive experiences), and relaxation feelings (feelings/hedonic experience). These elements have contributed to distinguishing the paper from earlier findings.

Unlike the scales proposed in other studies in ecotourism (e.g. Khan 2003; Lian Chan and Baum, 2007b) which integrate one or two items of interactions with locals into the dimension of eco tangibles or service quality ensured by staff, the separation of the two dimensions 'Interaction with nature' and 'Interaction with local people' in the study highlights the interactive nature of the

ecotourism experience and its importance during the visit of ecotourists at eco-sites. Another distinctive finding of this study is the introduction of a new dimension (Interaction with other customers), which is often neglected or is represented by only one item in previous studies. Finally, relaxation-oriented feelings represent the hedonic aspect of the ecotourism experience, which is mainly absent in the scales measuring ecotourism quality. The finding is not totally novel, as some items can be found in studies that focus on ecotourists' experience or motivation (e.g. Eagle, 1992; Chan and Baum, 2007a) although they do not make up a single dimension of these scales.

The added service experience attributes correspond well with the domains of service experience identified by Schmitt (1999). However, attributes related to cognitive experience, for example responsibility for the environment and the hedonic aspects, have not been shown very clearly in the study.

#### 5. CONCLUSION

This study's contribution to the existing academic literature is unique in that it points out when describing an experience, ecotourists do not just mention utilitarian or functional aspects of service quality but also focus on expressive, sensory, interactive aspects of the experience. The paper shows the combination of quality perception and experience aspects.

The attributes from the findings are in congruence with five modules of service experience in Schmitt' study (1999), based on which Schmitt has suggested effective marketing strategies which help to enhance customer experience: 'sense marketing' is directed towards consumers' aesthetic and sensory experiences (through sight, sound, touch, taste and smell), 'feel marketing' involves customers' inner feelings, moods and emotions, 'think marketing' holds intellectual appeal through delivering cognitive, problem-solving experiences for customers, 'act marketing' targets physical behaviors and interactions, and 'relate marketing' aims at enhancing customer's social experiences. As can be seen, our study shows the quality attributes of staff corresponds strongly to sensory experiences, the eco-tangible attributes are somewhat related to cognitive experiences, the attributes of interaction of customers with people local, nature, and other customers match social experiences, and relaxation-oriented feelings are compatible with feelings/hedonic experiences.

This paper has two significant managerial implications for the management of ecotourism destinations. Firstly, the study reveals that the ecotourists' perception of the ecotourism destination is multidimensional in nature, not only referring to quality attributes but also to experiential aspects. Managers of ecotourism destinations must take into consideration both the utilitarian aspects of quality and the hedonic aspects of experience. As shown in the findings, not only do tourists want to observe nature and discover cultures but they also expect to have authentic interactions.

Moreover, the design of ecotourism destinations with materials and equipment reflecting nature and local features will contribute to positive experiences. It is advisable for managers at ecotourism area to focus on the preservation of environment and nature in order to provide eco-tourists a wilderness and undisturbed nature. This is because eco-tourists appreciate unspoilt nature and want to have authentic look and engagement in a variety of nature-oriented activities which help them

to feel calm, relaxed and stress-free. By designing and creating the service environment and leisure activities, products and services that are based on the environment but reduce or eliminate any degradation and harmful impact, managers will be able to meet these needs.

On the other hand, it appears that there is a strong attention drawn to the agreement between price and quality, as well as the presence and behavior of other eco-tourists during the eco-trip. Therefore, a trip organized in small groups with members sharing the same interests and behavior is recommended.

This study still has a number of issues hindering the generalizability of its findings, which suggests areas for further research. The sample size is adequate, but it should extend the sample to be generalizable to the whole population. The empirical study has been conducted only with Vietnamese tourists, particularly focused on eco-tourists experiencing at national forests or park areas. As culture may create significant differences in terms of tourists' behavior and perception, it is recommended that the study be replicated for international ecotourism contexts in order to identify sources of satisfaction for tourists of different countries and cultures, draw a distinction between the different types of tourists and provide consequent managerial implications. Future research may also focus on the classification of service attributes according to other criteria such as gender, age, purpose of the trip.

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