

Service Quality and Guest Satisfaction in Egyptian Eco-lodge

Ahmed Ghaith Mohammed Abdel-Wahab Magdi Abdel-alim Abdel-ate Omar Qoura

Faculty of Tourism and Hotels - Fayoum University

Abstract

Eco-lodges are an increasingly popular accommodation form. This research aims to investigate the service quality perception of the Eco-tourists in Eco-lodge context by developing an adapted version of the SERVQUAL& SERPERF in general, traditional hotel and ecotourism scale named ECO-SERVQUAL. A self-administrated questionnaire was used to collect data from 202 Eco-guests in Eco-lodge on Fayoum and Dakhla Oasis. A random sample-sampling plan was used to collect samples. Regression Model and F tests were calculated to analyze data. The highest being assurance and the lowest Eco- activities and sustainable practices. Eco-lodge administrators should focus their efforts on specific areas of quality that had a greater influence in explaining the customer's intent to behave and their satisfaction. Results indicate that ECO- SERVQUAL dimensions had a positive and significant impact on Eco-guest service quality perception and satisfaction.

Key Words: Eco-lodge, Service Quality, Guest Satisfaction, ECO-SERVQUAL.

Introduction

The Hospitality industry is growing worldwide and becoming more fiercely competitive, understanding customer expectations, and delivering superior service is a prerequisite for a successful business (Said et al., 2013 and Zabkar et al., 2010). Hence, service quality in the hospitality industry is receiving increased attention from researchers and service providers alike. Service quality has always been considered crucial, not only for customer satisfaction and behavior intention but also for firms' competitive advantage (Perera and Vlosky, 2015 and Chen and Chen, 2010). Delivering high-quality service enhances customer satisfaction (Bhakar et al., 2015: Zabkar et al., 2010 and Hutchinson et al., 2009).

Ecotourism has become increasingly popular over the past 20 years and one of the fastest growing segments of the world's tourism (Weaver, 2007). It is important not only for economic benefits but also to support the conservation of natural ecosystems (Wearing.and.Neil, 2009). In view of the growing demand for ecotourism, many nature-dependent tourist lodges nowadays have a unique character and an activity and educational focus is now being planned and developed in order to meet the philosophy and principles of ecotourism. Ecotourism provides opportunities for relaxation, experiencing nature and culture, and it also allows tourists to learn about responsible traveling (Ecotourism Australia, 2015). In this vein, Eco-lodges have been considered a vital component of the ecotourism industry as Ecotourists' satisfaction is mainly affected by the Eco-lodges' overall service experience (Kwan et al., 2008). Understanding the service quality attributes of importance to Eco-lodge guests might be the first step in improving ecotourists' satisfaction with the ecotourism destination.

Unfortunately, the quality of services cannot be empirically measured since it remains a relatively elusive and abstract construct compared to the technical quality of manufactured products. (Khan, 2003). The evaluation of service quality has always been considered more complex than that of products due to their intrinsic nature such as heterogeneity, inseparability, intangibility, and perishability (Ladhari, 2009). Within the ecotourism field, service quality has been addressed by a few researchers and has attracted less attention than other services contexts. In fact, over the past decades, the scope of Eco-lodge studies has mainly focused on definitions, environmental sustainability, best practice evaluations, Eco-lodge patrons' characteristics and

motivations, social-ecological factors, lodge selection, and satisfaction (Jackson, 2010: Kwan et al., 2008: TDA, 2008: Mehta, 2000: 2005, Mackoy and Osland, 2004 and Wight, 1997). Thus, the researcher suggested that there is a need to develop new reliability and validity service quality scale, which can better explain the variation in service quality measures in the eco-lodge industry - by using the service quality perception-only indicators.

Eco- lodge Background

The term of Eco-lodge was formally launched in the marketplace at the First International Eco-lodge Forum and Field Seminar held in 1994 at Maho Bay Camps in the U.S. Virgin Islands and Maho Bay Camps was determined as the first Eco-lodge (Dizdarevic, 2010). As a follow-up of the 1994 forum, Eco-tourism international Society (TIES) published the first book for Eco-lodge industry named “The Eco-lodge Sourcebook for Planners and Developers” (Mehta, 2007) which contains information on site selection, finance, planning, design, alternative energy applications, conservation education, guidelines and an impressive set of resources including a variety of architectural plans for Eco-lodges (Eagles, 2001).

Later, “The First International Eco-lodge Guidelines” was published in 2002 after the Second International Conference held in 1995 in Costa Rica, which offered a definitive international definition of an Eco-lodge (Wood, 2002). According to the definition, Eco lodge conceptually is “an industry label used to identify a nature-dependent tourist lodge that meets the philosophy and principles of ecotourism” with an emphasis on ecological sensitivity and a focus on the delivery of educational or experiential concepts. Parallel to ecotourism principles and philosophy, Eco-lodges can play a role in contributing to enhanced tourist awareness of and support for, conservation and participation in environmental management practices. This is further supported by the need to improve sustainable management and operations for guest accommodation (EL Bary, 2011: Jackson, 2010: Chan, 2010: Kwan et al., 2008: Carmody, 2008: Black, and Crabtree, 2007: Fennell, 2007: TDA, 2004 and Weaver and Lawton, 2002). Eco-lodges are usually small-scale, individually and locally owned businesses. Also, the main attractions of an Eco-lodge are its natural setting and nature-based activities which allow a better appreciation and enjoyment of the ecological environment (El amine et al., 2015 Kwan et al., 2010 and Hawkins, et al., 1994). According to The international and local Eco-lodge Guidelines, an Eco-lodge should meet the following criteria, which are the key principles and characteristics of Eco-lodges: They are as follows: designed in harmony with the local natural and cultural environment, using the principles of sustainable architecture, maximize the use of renewable energy resources and the use of renewable materials for construction, where possible using recycled materials, work in harmony with communities offering jobs with a wide range of responsibilities and employment via contracts with other vendors, provide benefits to local conservation and research initiatives both public and private and offer excellent interpretative programs to educate the clients about the local environment and culture.(TDA, 2008:Mehta, 2005:IFC, 2004 and Hawkins et al., 1994).

Service Quality Measurement

The most popular definition of quality is the customer’s perception of service excellence (Zeithaml et al., 1990). SERVQUAL, developed by Parasuraman et al., (1985, 1988, 1991), is a multiple item instrument designed to measure customer expectations and perceptions concerning a service encounter. Due to the overlap found between dimensions during analysis, the original 10 dimensions were collapsed into five. The final SERVQUAL (Zeithaml et al., 1988) consists of 22 items pertaining to expectations and perceptions. They are tangibles (physical facilities,

equipment, and appearance of personnel); reliability (ability to perform the promised service dependably and accurately); responsiveness (willingness to help customers and provide prompt service); assurance (knowledge and courtesy of employees and their ability to convey trust and confidence); and empathy (caring, individualized attention the firm provides its customers).

SERVQUAL is a useful measurement tool that has made an important and valuable contribution in the area of perceived service quality measurement (Day 1992; Fick and Ritchie 1991). The original scale was revised and according to Parasuraman et al., (1991), it is a generic instrument with good reliability, validity, and broad applicability. However, questions about its validity, reliability, and generalizability have been raised.

The SERVQUAL measurement has been criticized for its conceptual foundation and empirical operationalization. Carman (1990) questioned its methodology and found a need to expand and add on certain dimensions that were important across different services. He further questioned the differences in perception and expectation items. Babakus and Boller (1992) agreed with Carman and suggested that the perception and expectation items should be combined into one scale. According to Cronin and Taylor (1992), SERVQUAL confounds service satisfaction with quality, which should be measured as an attitude, and developed the SERVPERF scale based on performance items instead of expectations. While acknowledging the contributions of Parasuraman et al, Cronin and Taylor (1994) emphasize the importance of service quality and its relationship with consumer satisfaction, service value, and purchase behavior/intentions.

Thus, the SERVPERF (performance-only measurement) may be preferred to SERVQUAL because it is a good predictor of service quality and a more user-friendly measurement tool (Buttle, 1996). Therefore, the SERVPERF measure has been successfully adapted for measuring service quality in different service industries and some studies have directly applied service quality paradigms within the context of the hospitality industry. Such as hotels (Al Khattab and Aldehayyat, 2011; Raspor, 2010; Karunaratne and Jayawardena, 2010; Yilmaz, 2009; Akbaba, 2006 and Nadiri and Hussain, 2005).

Dimension of Services Quality Scale in Traditional Hotel and Eco- lodge

In traditional hotel, in 1990, Knutson et al., developed LODGSERV, a 26-item scale to measure service quality in the lodging industry. LODGSERV utilizes each of the core five dimensions of SERVQUAL. Confirmatory analysis as developed by Hunter and Gerbing, (1982) was used to purify the scale and confirm the five dimensions of service quality (Knutson et al., 1990) tangibles (Neat Personnel), reliability (Equipment Works), responsiveness (Do Special Requests), assurance (Knowledgeable Staff) and empathy (Convenient Hours).

In addition to LODGSERV, HOLSERV was developed and tested for the hotel industry. Wong et al., (1999) determined that there are five dimensions in assessing service quality on the hotel industry. These five dimensions are: Tangibility (Equipment, fixtures and fittings are modern looking), Reliability (Performs the service right the first time) Responsiveness (Never too busy to respond to guests' requests), Assurance (Instills confidence in guests) and Empathy (Understands guests' specific needs). Also, Getty and Getty, (2003) conducted a study to the development of reliable and valid quantitative measuring tool that lodging practitioners can implement to measure their customer perception of delivered quality, which is called lodging quality index (LOI). LOI is content of five dimensions are tangibility (The outdoor surrounding were visually attractive), Reliability (I got what I paid for), responsiveness (Informative literature about the hotel was provided), and confidence and Communication (Chargers on my account were clearly explained). In 2014, Tefera and Govender developed a reliable and valid instrument to measure

customers' perceptions of hotel service quality called HOTSPERF. The HOTSPERF had 25 items with two dimensions named as Tangibles and Intangibles. HOTSPERF are the content of two dimensions are tangibles (Materials associated with the service are visually appealing in the hotel) and Intangibles (The hotel provides accurate information about their service).

In ecotourism and Eco-lodge, Khan, (2003) proposed ECOSERV; a scale comprising six dimensions to measure the service quality expectations of Eco-tourists. They are as follows: eco-tangibles (facilities appropriate to the environment) assurance (feel safe in their transaction), reliability (show sincere interest in solving a problem), responsiveness (employees always be willing to help), empathy (personal attention) and Eco- tangibles (Materials reflect local influence). This research inducted that the highest dimension on the hierarchy was Eco tangibles and the lowest was tangibles. Saez et al., (2007) proposed RE, a scale comprising five dimensions to measure the service quality expectations and perception in of Eco-tourists in rurally located tourism lodgings. They are as follows: personnel response (Any requests made to the staff are correctly and immediately dealt with), complementary offer (The RE provides traditional homemade cooking), tourist relations (staffs at our disposal know the traditions), tangible elements, (external decoration (facade, gardens, etc.) is attractive and in harmony with the rural surroundings and empathy (The RE attends to customers individually). This research reported that the highest construct was complementary and the lowest was empathy.

Chan and Baum, (2007) studied eco-tourists' perceptions of experiences that they value. These include ecotourism activities related to natural resources surrounding sites (e.g. wildlife observation, riverboat cruises and jungle walks), the natural environment in which they are located, and interactions with on-site service staff and socialization with other eco-tourists. Tourists also value learning through information provided about wildlife and local culture. This research concluded that eco-tourists emphasize ecotourism activities in which they have engaged physically at the sites and their natural environment, their interaction with the site service staff and group members as well as the learning and information acquired during the visit.

Bastic and Gojic, (2012) found that eco-components expected by consumers in a hotel include environmentally sound practices associated with hotel staff's ecological behavior, use of environmentally friendly and healthy equipment, energy- and water-saving measures, waste-minimization practices, and bio-food. Their researcher suggested a scale eco component, a scale comprising five dimensions to measure the service quality expectations in eco- hotels. They are as follows: environmentally friendly and healthy equipment (natural materials in hotel building), Eco-behavior of hotel staff (waste disposal into recycling cans), efficient use of energy and water (efficient use of energy) and Bio-food (meals made from organically produced components). This research explained that Tourists demonstrated a hierarchy of eco-dimensions, with the most important being hotel staff's eco-behavior and the least important being bio-food.

Said et al., (2013) conducted a study that assessed the quality of services in Niah National Park (NNP) located in Malaysia. The ECOSERV instrument developed by Khan in 2003 was modified to measure visitors' expectations and perceptions on services quality. A scale comprising five dimensions to measure the service quality expectations and perception. They are as follows: eco-tangibles (facilities environmentally safe), assurance (consistently courteous with the customers), reliability (Show sincere interest in solving a problem), responsiveness (employees tell exactly when service will be), empathy – (understand specific needs) and tangibles (Facilities to be kept in a clean setting). This research found that the height was eco-tangibles.

Yusof et al., (2014) study showed that a scale comprising seven dimensions to measure the service quality expectations and perception of Eco-tourists in lodging on ecotourism destination. They are as follows: sustainability (visual attraction and the appeal of natural attractions), sustainable practices (development integrated with local environment/ culture), tangibility, (physical facilities and natural resources), reliability (the staff provides on-time services), responsiveness (the staff is willing to assist tourists), assurance (the staff has the knowledge that is necessary to answer questions) and empathy (the staff understands the specific needs of tourists). The highest dimensions on ECOSERV were sustainable and Sustainable practices and the lowest was tangible.

Ban and Ramsaran, (2016) developed the ECOPERF a scale comprising eight dimensions to measure the service quality perception of Eco-tourists in eco-lodge on ecotourism destination. They are as follows: eco-friendly practices (sustainable means to reduce energy and water consumption), eco-activities (leisure and recreational and adventurous activities), eco-learning (ecological/ environmental knowledge and culture), tangibles (use of local traditional building materials), reliability (well-trained and knowledgeable staff), responsiveness (keeping customers informed about useful information), assurance (consistently courteous with customers) and empathy (customized individual tour programs). This research mentioned that the most important dimensions were eco-friendly practices, eco-activities, and eco-learning. According to Moore et al., (2015), service quality in ecotourism is judged based on the services and facilities available. The cited authors report that measurement issues continue to researchers in this sector. While service quality attributes have been examined in previous research, several authors suggest that specific scales still need to be developed for this subsector and validated in different settings (Moore et al., 2015 and O'Neil et al., 2010). The present research, therefore, targeted the eco-lodge in the Egyptian context.

Service Quality and Satisfaction

Both service quality and satisfaction are acknowledged as critical concepts concerning customers. The concepts of service quality, satisfaction, and its measurement have received much attention from researchers (Minh et al., 2015; Hassan and Shahnewaz, 2014; Groblna and Marciszewska, 2013; China and Tsai, 2013 and Boonitt and Rompho, 2012). Although, the concepts of service quality and customer satisfaction differed, several studies have indicated that both concepts are significantly correlated (Oh and Parks, 1996 and Tefera and Goevender, 2017). Parasuraman et al., (1985) defined service quality as the degree and direction of the discrepancy between customers' perception and expectation. Gronoos, (1982) suggested that perceived quality is the outcome of a comparative evaluation process as reflected in the differences between expected and perceived service. Meanwhile, satisfaction is defined as 'judgment a product, or service feature, or the product or service itself, provides a pleasurable level of consumption-related fulfillment, including levels of under or over fulfillment' (Meng et al., 2008).

Measuring customer satisfaction is an integral part of the effort to improve a product or service quality, resulting in a company's competitive advantages (Cravens et al., 1988). As supported by Kandampully, (2000), services are essentially an intangible experience and it is difficult for customers to evaluate the product prior to experience. Failure to pay attention to influential attributes in choice intention may result in a customer's negative evaluation and may lead to unfavorable word-of-mouth (Chon et al., 1995), and up to 60 percent of sales to new customers can be attributed to word-of-mouth referrals (Reichheld and Sasser, 1990). Hence, customer satisfaction potentially leads to purchases repetition and favorable word-of-mouth publicity In the

hospitality industry, service quality is acknowledged as essential in building competitive advantage and to achieve success (Fick and Ritchie, 1991; Augustyn and Ho, 1998; Atiligan et al., 2003; Hudson et al., 2004 and Tak et al., 2007). The service quality measurement in the hospitality sector has become a popular research subject. Among the research instruments developed and adapted to measure service quality and satisfaction in tourism industry include SERVQUAL (Mackay and Crompton, 1990; Fick and Ritchie, 1991; Lam and Zhang, 1999; Pawitra and Tan, 2003; Juwaheer, 2004), REQUAL (Crompton, et al., 1991), SERVPERF (Cronin and Taylor, 1994; Hudson et al., 2004), HOLSTAT (Tribe and Snaith, 1998), DINESERV (Stevens, et al., 1995); LODGESERV (Knutson et al., 1990) ECOSERV (Khan, 2003). In this research, the researchers intend to measure customer satisfaction in relation to Eco-lodge performance evaluated by Eco-guests' perceived service quality dimension.

ECO-SERVQUAL Scale Development Stages

In this study, the researcher conducted the hotel and Eco lodge model from the previous research of service quality to develop ECO-SERVQUAL model to measure the perceived quality of eco-guest in Egyptian ECO-lodge context. The process of developing the scale goes through four stages: The first stage explores the service quality model in general industry, hotel industry, and eco-lodge context and the researcher found that there are two original scales applied in general industry SERVQUAL (Parasuraman, et al., 1985, 1988) and SERVPERF (Cronin and Taylor 1992, 1994), In addition, there are ten developed model used to evaluated service quality in traditional hotel and eco lodge depend on the original scale that are fellow: ECOPERF (Ban and Ramsaran, 2016), HOTPERF (Tefera and Govender, 2014) ECOSERV (Yusof et al., 2014), MECOSER (Said et al., 2013), ECOCOM (Bastic and Gojcic, 2012), RE (Saez et al., 2007), ECOSER (Khan, 2003), LOI (Getty and Gettz, 2003), HOLSERV (Wong et al., 1999), LODSERV (Stevens et al., 1990).

The second stage comprising between the general scale, hotel and eco-lodge model in order to identify names of different dimensions of the scale developed for hotel industry in general and ecolodge in particular and determined number of frequencies dimensions are repeated in each scale separately for inference dimensions names of proposed scale in this study. In the previous stage, the researcher identified the dimensions of the proposed model in this study, which are as follows empathy, assurance, reliability, and responsiveness, tangibility and eco activities and sustainable practices. The third stage is matching between the scale dimension and statement in three different cases to develop a new one.

The final stage is producing the development ECO-SERVQUAL a scale comprising six dimensions and 41 statements to measure the service quality perception of Eco-guest in eco-lodge on ecotourism destination at Egypt. They are as follows: Empathy (gives guests individualize attention), Assurance (Eco-lodge staff have the knowledge to answer guest questions related to local natural and cultural history of surrounding areas), Responsiveness (staff give prompt service to guests), Reliability (guest got what guest paid for), Tangible (The Eco-lodge architecture (form, color, texture, ambiance...etc) matching with surrounding natural area), Eco activities and sustainable practices (provide natural based activities (e.g. Bird watching, Hiking, ...etc.).

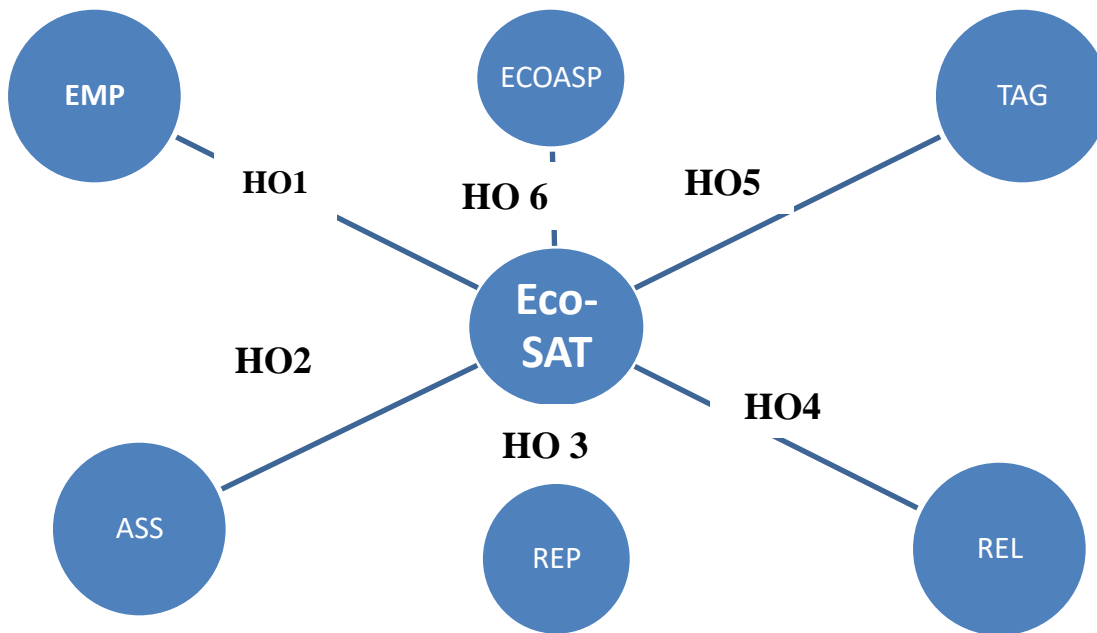
The Conceptual Framework and Hypotheses of ECO-SERVQUAL Scale Development for Eco-lodge

The researcher developed the conceptual framework depend on the literature review. The conceptual framework of this study content of the first is the perceived service quality dimension

as the main construct for this study, which is included on six dimensions: the empathy dimension, the assurance dimension, responsiveness dimension, reliability dimension, tangibility dimension, and eco - activities and sustainable practices. Also, the relation between the level of ECO-SERVQUAL dimensions and guest satisfaction (Figure: 2)

ECO-SERVQUAL: Perceived Service Quality in Eco-lodge	EMP Empathy	ASS: Assurance
ECOASP: Eco- activities and Sustainable Practices	TAG: Tangibility	REP: Responsiveness
REL: Reliability	Eco- SAT: Eco-guest satisfaction in Eco-lodge.	

Figure 1: The Research Conceptual Frame Work.



Methodology

The research method is quantitative. The study used a questionnaire to collect data from guests. The questionnaire comprised a series of Five-point Likert scales (1 for strongly disagree to 5 for strongly agree) statements adapted by the research based on the literature review. These are Khan, (2003), Bastic and Gojcic, (2012), Said et al., (2013) and Ban and Ramsaran, (2016),...etc, whose studies relate SQ development in Eco-lodge. The final form includes 41 items used to measure the six constructs of the developed model. The six constructs are, empathy “ (measured by 5 indicators), „ assurance “ (measured by 5 indicators), „ responsiveness “ (6 items), „ reliability “ (6 indicators), „ tangibility “ (15 indicators), „ Eco- activities and sustainable practices “ (6 indicators). Questionnaires were distributed and collected face to face by researcher for a two-month period employing random sampling technique. Surveyed Eco-lodges s is located in Fayoum governorate and Dakhla oasis, where most Eco-lodge exist (El bary, 2011). The researcher was staying in the selected Eco-lode three times per week and he chooses

randomly guests to complete the questionnaires. 385 questionnaires were sent out for data collection purposes from Eco-lodge" guests in Fayoum governorate and Dakhla oasis. 276 questionnaires were returned and were found usable, and the other 74 ones were not completed by respondents. Accordingly, the response rate was 71.6 % which is found sufficient.

Validity and Reliability

For validity concerns, the survey was piloted on a sample of 20 eco-guests to check its face and content validity. The comments of respondents related to language and design of questionnaire were considered in the final form. Furthermore, the rule used in this study to achieve construct validity is that item (i) should be retained if $0.35 < i < 0.80$ (Netemeyer et al., 2003). For reliability of constructs, Cronbach"s alpha coefficient was calculated and exceeded 0.70 for all constructs meaning that the questionnaire results are reliable (Hair et al., 2010).

Analysis Technique

All data were then analyzed utilizing procedures of the SPSS, 16 (Statistical Package for Social Science) for windows. Frequencies, means, standard deviation and percentages were calculated. Then, one-way analysis of variance (One-Way ANOVA) to determine which group differs significantly from each other and multiple regressions between variables. Thereafter, Reliability and validity analysis using was carried out to measure the reliability and validity of the results from the questionnaire.

Results

Descriptive Statistics

Table1: The Descriptive statistics of Eco-lodge Guests Demographic Characteristic

Variable		Frequency	Percentage
Gender	Male	81	40.1%
	Female	114	56.4%
Martial statue	Single	108	53.5%
	Married	78	38.6%
	Widowed	5	2.5%
	Divorced	5	2.5%
Education level	High school education	6	3.0%
	Bachelor degree	124	61.4%
	Master degree	51	25.2%
	Ph.D. degree	15	7.4%
Nationality	Egyptian	141	69.8%
	Canadian	4	2%
	Danish	4	2%
	French	11	5.4%
	English	4	2%
	German	15	7.4%
	Italian	4	2.0%
	Spanish	2	1%
	Swedish	4	2.0%
	Turkish	2	1%
	American	2	1%
Employment Status	Student	18	8.9%
	Unemployed	11	5.4%

Variable		Frequency	Percentage
	Self-employed	45	22.3%
	Full-time Employee	104	51.5%
	Part-time Employee	7	3.5%
	Retired	9	4.5%
Annual Income (USA)	Less than 3000 \$	49	24.3%
	3000:6000\$	35	17.3%
	6000:9000\$	24	11.9%
	9000:12000\$	4	2.0%
	More than 12000\$	60	29.7%

This research shows that 56.4% of Eco-lodge guests are female, while males guests 40.1 %. Additionally, the most frequent age group among the eco-lodge guests from the guests was 25 to less than 40 age group (58.4%), followed by the less than 25 age group (17.3%) and the 40 to less than 60 age group (14.9%). Also, the most of Eco-lodge guest are Single guests (53.5%). The second largest group of guests contained married guests (38.6%), and the third and four groups were those who were widowed and divorced (8.9%).

Furthermore, the majority of Eco-lodge guest are well educated: 61.4% had a Bachelor's degree. About 3.0% of the guest had in high school education. In addition to, the four most frequently visiting nationalities to the Eco-lodge are Egyptian (69.8 %), German (7.4%), France (5.4), Italian, Canadian, Danish, English and Swedish (2.0) respectively. In addition to, 51.5% of Eco-lodge guests are full-time Employee and the following are the remaining employment status: 22.3% Self-employed, 8.9 students, 5.4% Unemployed, 4.5% Retired 3.5% Part-time Employee. Finally, 29.7% of eco-guests had an annual income more than 12000\$. Followed by 24.3% from those less than 3000 \$, while 17.3% from the sample from US3000 to 6000\$.

Table 2: Results of Eco-guest' perceptions the services provided in Egyptian Eco-lodge.

Dimensions	M	SD	Attitude
Empathy Service Inductors			
The Eco-lodge gives guests individualize attention	3.96	.81	Agree
The Eco-lodge staffs give guests personal attention.	3.89	.84	Agree
The Eco-lodge staffs understand guests' specific needs	3.83	.88	Agree
The Eco-lodge has the guests' best interest at heart.	3.89	.85	Agree
The Eco-lodge has operating hours convenient to all its guests.	3.90	.88	Agree
Grand mean	3.89		
Assurance service inductors			
The Eco-lodge staff behavior instill confidence in guests	4.01	.75	Agree
Guests feel safe and secure in their stay at the Eco-lodge.	4.40	.63	Agree
The Eco-lodge staff is consistently courteous with the guests	4.22	.77	Agree
The Eco-lodge staff is consistently courteous with the guests	4.08	.81	Agree
The Eco-lodge staff have the knowledge to answer guest questions related to lodging services.	3.95	.88	Agree
Dimensions	M	SD	Attitude
Grand mean	4.13		Agree
Responsiveness Service Inductors			
The Eco-lodge staff give prompt service to guests	3.88	.88	Agree
The Eco-lodge staff are always willing to help guests	4.19	.74	Agree
The Eco-lodge staff never too busy to guest requests	4.00	.81	Agree

Dimensions	M	SD	Attitude
The Eco-lodge staff tell exactly when services will be	3.66	.94	Agree
Grand mean	3.93		Agree
Reliability Service Inductors			
When the Eco- lodge promise to do service it does so	3.94	.79	Agree
The Eco-lodge shows sincere interest in solving the guest problem	3.99	.78	Agree
The Eco-lodge staff performing services right the first time	3.79	.82	Agree
The Eco-lodge staff provide services at the promised time	3.76	.90	Agree
The Eco-lodge staff provides services at the promised time.	3.50	.88	Agree
I got what I paid for.	3.97	.83	Agree
Grand mean	3.83		Agree
Tangibility Service Inductors			
The Eco-lodge equipment is made from natural / local resources	3.94	2.29	Agree
The Eco-lodge equipment saves energy and water resources efficiently	3.32	1.08	Neutral
The Eco-lodge has recycling equipment	2.90	1.05	Neutral
The Eco-lodge are visually appealing (Front desk, restaurant, public area, shop.etc)	3.63	.95	Agree
The Eco-lodge architecture external and internal is harmony with the natural and cultural surrounding area.	4.13	.79	Agree
The Eco-lodge architecture (form, color, texture, ambiance.etc.) matching with surrounding natural area.	4.23	.82	Agree
The Eco-lodge architecture reflects the local culture style	3.94	1.11	Neutral
The Eco-lodge buildings and physical facilities made of local and natural materials.	3.12	1.11	Neutral
The Eco-lodge staff wear local attire.	3.12	.86	Agree
The Eco-lodge materials are reflecting surrounding cultural and natural environment (e.g. brochures, pamphlets, signposting...ETC).	3.55	.86	Agree
The Eco-lodge has attractive, clean, and spacious and comfortable rooms.	3.79	.81	Agree
The Eco-lodge provides quality food and beverage to guests.	3.99	.84	Agree
The Eco-lodge uses of fresh, local and organic food.	3.85	.88	Agree
The Eco-lodge menu provides guests with many choices and a vast variety of items.	3.56	.85	Agree
The Eco-lodge meals made through the local and traditional cooking method.	3.92	.82	Agree
Grand mean	3.66		Agree
Dimensions	M	SD	Attitude
Eco- activities and Sustainable Practices Service Inductors			
The Eco-lodge provides natural based activities (e.g. Bird watching, Hiking, etc.).	3.73	.93	Agree
The Eco-lodge provides culturally based activities (e.g. Barbecue, local festival, traditions, celebrations ...etc).	3.68	.95	Agree
The Eco-lodge applies sustainable practices to reduce energy and water consumption.	3.22	1.07	Neutral
The Eco-lodge applies sustainable practices to reduce waste.	3.12	1.07	Neutral
The Eco-lodge emphasis on the recycling waste.	2.99	1.03	Neutral
The Eco-lodge emphasis on the recycling waste.	3.30	.92	Neutral
Grand mean	3.34		Neutral

Results of empathy dimension indicate that variables' means range from 3.96 to 3.90; with a grand mean 3.89 which is close to the choice (ξ) "agree". This result indicates that the eco-lodge guests agree with the empathy dimension. Additionally, results of assurance dimension indicate that variables' means range from 3.95 to 4.01; with a grand mean 4.13 which is close to the choice (ξ) "agree". This result indicates that the eco-lodge guests agree with the assurance dimension. Furthermore, results of responsiveness dimension indicate that variables' means range from 3.66 to 4.00; with a grand mean 3.93 which is close to the choice (ξ) "agree". This result indicates that the eco-lodge guests agree with the responsiveness dimension.

Moreover, Results of reliability dimension indicate that variables' means range from 3.50 to 3.99; with a grand mean 3.83 which is close to the choice (ξ) "agree". This result indicates that the eco-lodge guests agree with the reliability dimension. In addition to, results of tangibility dimension indicate that variables' means range from 2.90 to 4.23; with a grand mean 3.66 which is close to the choice (ξ) "agree". This result indicates that the eco-lodge guests agree with the tangibility dimension. Finally, results of Eco- activities and sustainable practices indicate that variables' means range from 2.99 to 3.73; with a grand mean 3.34 which is close to the choice (3) "Neutral". This result indicates that the eco-lodge guests agree with the Eco- activities and Sustainable Practices dimension.

The standard deviation of all dimension in ECO-SERVQUAL model shows that the researcher can rely on the mean to give a meaningful representation of the data. As a standard deviation from 0.63 to 2.29 are not far off from the mean, indicating that a majority of data points are positioned close to the mean. The closer the standard deviation is to 0, the more reliable the mean is. More than that though, standard deviation values are close to 0 which tells that there is little volatility in the sample.

Testing Model of the research

Table 3: ECO-SERVQUAL and Eco-guest satisfaction (Co-efficient of Determination (R2 value))

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.752a	.565	.552	.49181	2.051

The previous table 3, the R and R-square values. The R value represents the correlation coefficient between the ECO-SERVQUAL dimensions and Eco-guest satisfaction. (R= 0. 752). It indicates a strong positive correlation between ECO-SERVQUAL dimensions and Eco-guest satisfaction.

The R2 value refers to the coefficient of determination which indicates how much of the total variation in the dependent variable (Eco-guest satisfaction can be explained by the independent variables (empathy, assurance, responsiveness, reliability, tangibility and Eco activities and sustainable practice). In this case, 56.5% of the Eco-guest satisfaction can be explained by the ECO-SERVQUAL dimensions. This result reflects the good influence of ECO-SERVQUAL dimensions on Eco-guest satisfaction and 43.5% is residual or unexplained. That leads to validate the assumption where satisfaction is changed/ affected by the level of changes in Eco-SERVQUAL dimensions as independent variables.

To test the significance of the (linear) relationship between Eco-SQ dimensions as independent variables and satisfaction as a dependent, F- test can be used as shown in table 4.

Table 4: Service Quality and Customer Satisfaction ANOVA

Model	Sum of Squares	DF	Mean Square	F	Sig.
Regression	61.373	6	10.229	42.289	.000 ^a

Model	Sum of Squares	DF	Mean Square	F	Sig.
Residual	47.166	195	.242		
Total	108.539	201			

The ANOVA shows whether the regression model significantly predicts Eco-guest satisfaction. From table 4, it is clear that $F_{6, 195} = 42.289$ and $P < 0.01$ and this means that there is a significant relationship between ECOSERQUAL dimensions and satisfaction.

Table 5: Multi-Regression analysis for all ECO-SERVQUAL Dimensions

Eco-SQ Dimensions	B	Std. Error	Beta	T	T-Sig.
Constant	-.792	.395		-2.005	.046
Empathy	.142	.043	.175	3.323	.001
Assurance	.198	.065	.182	3.026	.003
Responsiveness	.181	.073	.188	2.491	.014
Reliability	.336	.096	.295	3.509	.001
Tangibility	.370	.086	.290	4.300	.000
Eco activities and sustainable practice	.170	.058	.178	2.961	.003

From table 5, it is clear that all β coefficients are not equal to zero which means we still can reject the null hypothesis where t for $x_1 = 3.323$, $x_2 = 3.026$, $x_3 = 2.491$, $x_4 = 3.509$, $x_5 = 4.300$ and $x_6 = 2.961$ $P < 0.01$ for all x variables.

It is obvious also that $\alpha = -.792$ and $\beta_1 = .142$, $\beta_2 = .198$, $\beta_3 = .181$, $\beta_4 = .336$, $\beta_5 = .370$ and $\beta_6 = .170$ so:

$$\text{Eco-guest Satisfaction} = -.792 + .142 \text{ Empathy} + .198 \text{ Assurance} + .181 \text{ Responsiveness} + .336 \text{ Reliability} + .370 \text{ Tangibility} + .170 \text{ Eco activities and sustainable practice}$$

From the table 5 the regression model show that a is significant effect of all service quality preserved dimension (Empathy, Assurance, Responsiveness, Tangibility, Eco activities, and sustainable practice) by eco-guests in the eco-lodge, these variable as an independent variable on guest satisfaction as a dependent variable. Also, the table explains why and how the service quality dimensions had a positive effect on the guests' satisfaction in Egyptian Eco-lodge.

Results discussion

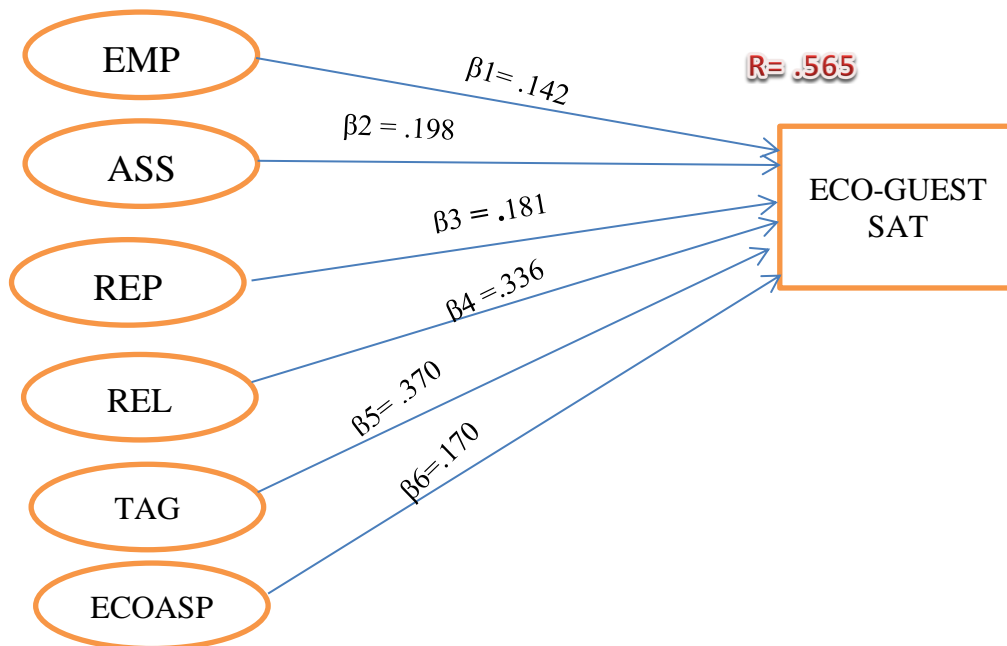
Many studies mentioned that the highest construct effect on all SQ construct and level of guest satisfaction from the viewpoint of guests in a traditional hotel in general and Eco-lodge practical. For example, in a traditional hotel, Groblna and Marciszewska, (2013) found that the lack of quality in such dimensions as reliability, responsiveness, and empathy. China and Tsai, (2013) found that reliability is the chief evaluation dimension, followed by empathy. Hassan and Shahnewaz, (2014) reported that the highest factor is empathy, followed by responsiveness, reliability, assurance, and tangibles. Al Khattab and Aldehayyat, (2011) indicated that the lowest perception scores on empathy and tangibles. Raspor, (2010) reported that the most important predictor of perceived service quality. Yilmaz, (2009) found that Hotel customers have the lowest perception scores on tangibles but, empathy is the most important dimension in predicting hotel customers' overall service quality evaluation. On the other hand, in Eco-lodge studies, Khan, (2003) found that the highest on the hierarchy of ECOSER was Eco-tangibleles and the

lowest was tangibles. Saez et al., (2007) reported that the highest is complementary and the lowest is empathy. Bastic and Gojcic, (2012) found that the most important being hotel staff's eco-behavior and the least important being bio-food. Ban and Ramsaran, (2016) concluded that the eco-guest view the service quality in eco-lodge including three dimensions are eco-friendly practices, eco-activities, and eco-learning.

In conclusion, This study can be classified as an extension to previous studies that attempted to explore the effect and relation between services quality, guests satisfaction and guest behavioral intentions in the Hotel industry, but this study development scale practical for new phoneme in hotel sector name is Eco-lodge to reported the different SQ dimension between the traditional hotel and Eco-lodge effect on Eco-guest satisfaction and guest behavioral intentions, a lot of authors around the world addressed this issue as Markovic et al., (2015), Phillips et al., (2013), Canny and Hidayat, (2012), Chen and Tsai, (2007), Tak et al., (2007), Hudson et al., , (2004), Juwaheer, (2004), Atiligan et al., Aksoy, (2003), Pawitra and Tan, (2003), Khan , (2003), Lam and Zhang, (1999), Augustyn and Ho, (1998), Cronin and Taylor, (1994) Fick and Ritchie, (1991), Crompton et al. (1991), Mackay and Crompton, (1990) and Mackay and Crompton, (1988).

The results of this study which reported the significant impact of perceived SQ dimensions empathy, assurance, responsiveness, reliability, tangibility and Eco activities and sustainable practice on customer satisfaction and have agreed with Tefera and Goevender, (2017), Ban and Ramsaran, (2016), Minh et al., (2015), Tefera and Govender, (2014), Hossain, (2012), Bastic and Gojcic, (2012), Karunaratne and Jayawardena, (2010), and Nadiri and Hussain, (2006). Then the theoretical model testing can be summarized in the following figure2:

Figure 2: Regression Model of the research



Hypothesis Validity

For testing the HO1, which is "There is a significant effect of empathy in eco-guest satisfaction." it indicates that the null hypothesis should be rejected, and then the alternative hypothesis is accepted. As the p-value is less than .01, which means there is a significant relationship between

empathy and customer satisfaction and an increase in the quality of empathy will lead to more customer satisfaction. Therefore, the hypotheses will be accepted.

For testing the hypothesis HO2, which is "There is a significant effect of assurance on eco-guest satisfaction", it indicates that the null hypothesis is rejected, and then the alternative hypothesis is accepted. As the p-value is less than .01, which means there is a significant relationship between assurance and customer satisfaction and any differences in the quality of the assurance will lead to a difference in customer satisfaction. Therefore, the hypotheses will be accepted.

After testing the hypothesis HO3, which is "There is a significant effect of responsiveness on eco-guest satisfaction", it indicates that the null hypothesis should be rejected, and then the alternative hypothesis is accepted. As the p-value is less than .01, which means there is a significant relationship between responsiveness and customer satisfaction and any increase in the quality of the responsiveness will lead to more customer satisfaction. Therefore, the hypotheses will be accepted.

After testing the hypothesis HO.4, which is "There is a significant effect of reliability on eco-guest satisfaction", it indicates that the null hypothesis should be rejected, and then the alternative hypothesis is accepted. As the p-value is less than .01 which means there is a significant relationship between reliability and customer satisfaction and an increase in the quality of the reliability will lead to more customer satisfaction. Therefore, the hypotheses will be accepted.

After testing the hypothesis HO.5, which is "There is a significant effect of tangibility on eco-guest satisfaction" it indicates that the null hypothesis should be rejected, and then the alternative hypothesis is accepted. As the p-value is less than .01 which means there is a significant relationship between tangibility and customer satisfaction and an increase in the quality of the reliability will lead to more customer satisfaction. Therefore, the hypotheses will be accepted.

After testing the hypothesis HO6, which is "There is a significant effect of Eco- activities and sustainable practices on eco-guest satisfaction." it indicates that the null hypothesis should be rejected, and then the alternative hypothesis is accepted. As the p-value is less than .01 which means there is a significant relationship between Eco- activities and sustainable practices and customer satisfaction and an increase of the quality of the Eco- activities and sustainable practices will lead to more customer satisfaction. Therefore, the hypotheses will be accepted.

Conclusion

To develop a better understanding of the relationship between the quality of Eco-lodge services and Eco-guest satisfaction an empirical investigation of Egyptian Eco-lodge guests was conducted. This study was carried out using the survey questionnaire, which was distributed to 250 Eco-guests. From the original sample, 202 questionnaires were used, representing a 70.1% response rate. The major purpose of this study was to identify service quality dimensions and customer satisfaction levels in the Eco-lodge industry and also to define the most significant factors of the Eco-guest satisfaction and Eco-guest behavioral intentions.

Furthermore, in this study, the researcher development a valid and reliability ECO-SERVQUAL scale to assess the eco-guest services quality perception of Eco-lodge in the Egyptian context from eco-guest viewpoints. Also, the result of the survey in this research indicated that the highest ECO-SERVQUAL dimensions positive effect in the customer satisfaction and are rank as fellow: assurance, followed by responsiveness, empathy, reliability, tangibles, Eco-activities and sustainable practices. In addition to, the highest dimension is assurance and the lowest dimension is Eco-activities and sustainable practices, therefore the eco-lodge manager should take in

consideration improve dimension Eco - activities and sustainable practices to be as a sustainable model and matching with the concept of ecotourism.

Future Direction

This study found that the total variation in the dependent variable (Eco-guest satisfaction can be explained by the independent variables empathy, assurance, responsiveness, reliability, tangibility and Eco activities, and sustainable practice) as 56.5% of the Eco-guest satisfaction can be explained by the ECO-SERQUAL dimensions proposed in this study; so 43.5 % need to be investigated.

References

English references

- Akbaba, A. (2006). Measuring service quality in the hotel industry: A study in a business hotel in Turkey. *International journal of hospitality management*, 25(2), 170-192.
- Augustyn, M., & Ho, S. K. (1998). Service quality and tourism. *Journal of Travel Research*, 37 (1), 71-75.
- Babakus, E., & Boller, G. W. (1992). An empirical assessment of the SERVQUAL scale. *Journal of Business research*, 24(3), 253-268.
- Ban, J., & Ramsaran, R. R. (2016). An exploratory examination of service quality attributes in the ecotourism industry. *Journal of Travel & Tourism Marketing*, 34(1), 132-148.
- Bastic, M., & Gojcic, S. (2012). Measurement scale for eco-component of hotel service quality. *International Journal of Hospitality Management*, 31(3), 1012-1020.
- Bhakar, S. S., Bhakar, S., & Bhakar, M. S. (2015). Customer Satisfaction or Service Quality— Identifying Mediating Variable and Evaluating Behavioral Intention Model in Hotel Industry: An SEM Approach. *Research Journal of Social Science and Management*, 5(2), 111-124.
- Bigne, J. E., Martinez, C., Miquel, M. J., & Andreu, L. (2003). SERVQUAL reliability and validity in travel agencies. *Annals of Tourism Research*, 30(1), 258-262.
- Black, R., & Crabtree, A. (Eds.). (2007). *Quality assurance and certification in ecotourism*, 5. CABI.
- Carman, J. M. (1990). Consumer perceptions of service quality: an assessment of the SERVQUAL dimensions. *Journal of retailing*, 66(1), 33-56.
- Carmody, J. (2008). Profiling specialist accommodation operators in the nature-based tourism sector of North Queensland. *CAUTHE 2008: Tourism and Hospitality Research, Training and Practice*; 847.
- Chen, C. F., & Chen, F. S. (2010). Experience quality, perceived value, satisfaction and behavioral intentions for heritage tourists. *Tourism management*, 31(1), 29-35.
- Davis, B. and Stone, S. (1985), *Food and Beverage Management*, 2nd ed., Butterworth-Heinemann, Oxford.
- Devi Juwaheer, T. (2004). Exploring international tourists' perceptions of hotel operations by using a modified SERVQUAL approach a case study of Mauritius. *Managing Service Quality: An International Journal*, 14(5), 350-364.
- Eagles, P.J.F. (2001), Information sources for planning and management. In Weaver, D.B. (Ed.). *Encyclopedia of ecotourism*. CABI Publishing, USA, 611-626.
- Fennell, D. (2007). *Ecotourism Third Edition*. Routledge.
- Fick, G. R., & Brent Ritchie, J. R. (1991). Measuring service quality in the travel and tourism industry. *Journal of travel research*, 30(2), 2-9.

- Getty, J. M., & Getty, R. L. (2003). Lodging quality index (LQI): assessing customers' perceptions of quality delivery. *International Journal of Contemporary Hospitality Management*, 15(2), 94-104.
- Gronroos, C. (1982). An applied service marketing theory. *European journal of marketing*, 16(7), 30-41.
- Hawkins, D. (1994). The ecolodge sourcebook for planners & developers. International Ecotourism Society.
- Hudson, S., Hudson, P., & Miller, G. A. (2004). The measurement of service quality in the tour operating sector: A methodological comparison. *Journal of travel Research*, 42(3), 305-312.
- Hutchinson, J., Lai, F., & Wang, Y. (2009). Understanding the relationships of quality, value, equity, satisfaction, and behavioral intentions among golf travelers. *Tourism Management*, 30(2), 298–308.
- Jackson, L. A. (2010). Toward a framework for the components of green lodging. *Journal of Retail & Leisure Property*, 9(3), 211-230.
- Kandampully, J. (2000). The Impact of Demand Fluctuation on the Quality of Service: a Tourism Industry Example. *Managing Service Quality*, 10(1), 10-18.
- Karunaratne, W., & Jayawardena, L., (2010). Karunaratne, W., & Jayawardena, L., (2010). Assessment of customer satisfaction in a five star hotel-A case study. *Tropical Agricultural Research*, 21(3): 258 - 265
- Khan, M. (2003). ECOSERV: Ecotourists' quality expectations. *Annals of tourism research*, 30(1), 109-124.
- Knutson, B., Stevens, P., Wullaert, C., Patton, M., & Yokoyama, F. (1990). LODGSERV: A service quality index for the lodging industry. *Hospitality Research Journal*, 14(2), 277-284.
- Kwan, P., Eagles, P. F., & Gebhardt, A. (2008). A comparison of ecolodge patrons' characteristics and motivations based on price levels: A case study of Belize. *Journal of Sustainable Tourism*, 16(6), 698-718.
- Ladhari, R. (2009). A review of twenty years of SERVQUAL research. *International journal of quality and service sciences*, 1(2), 172-198.
- Lam, A. Y., Lau, M. M., & Cheung, R. (2016). Modelling the relationship among green perceived value, green trust, satisfaction, and repurchase intention of green products. *Contemporary Management Research*, 12(1).47-59.
- Lam, T., & Zhang, H. Q. (1999). Service quality of travel agents: the case of travel agents in Hong Kong. *Tourism management*, 20(3), 341-349.
- Lian Chan, J. K., & Baum, T. (2007). Ecotourists' perception of ecotourism experience in lower Kinabatangan, Sabah, Malaysia. *Journal of sustainable tourism*, 15(5), 574-590.
- MacKay, K. J., & Crompton, J. L. (1990). Measuring the quality of recreation services. *Journal of Park and Recreation Administration*, 8(3), 47-56.
- Mackoy, R. D., & Osland, G. E. (2004). Lodge selection and satisfaction: attributes valued by ecotourists. *Journal of Tourism Studies*, 15(2), 13-25.
- Mehta, H. (2000). Best Practices in Ecolodge Planning, Design and Guidelines. In *Ecolodge Forum–Red Sea Sustainable Tourism Initiative*. Cairo.
- Mehta, H. (2005). *Planning, Design and Construction Guidelines for Desert Ecolodges*. Kingdom of Saudi Arabia.
- Meng, F., Tepanon, Y., & Uysal, M. (2008). Measuring tourist satisfaction by attribute and motivation: The case of a nature-based resort. *Journal of vacation marketing*, 14(1), 41-56.

- Millan, A., & Esteban, A. (2004). Development of a multiple-item scale for measuring customer satisfaction in travel agencies services. *Tourism management*, 25(5), 533-546.
- Moore, S. A., Rodger, K., & Taplin, R. (2015). Moving beyond visitor satisfaction to loyalty in nature-based tourism: A review and research agenda. *Current Issues in Tourism*, 18(7), 667-683.
- Nadiri, H., & Hussain, K. (2005). Perceptions of service quality in North Cyprus hotels. *International Journal of Contemporary Hospitality Management*, 17(6), 469-480.
- O'Neill, M. A., Riscinto-Kozub, K. A., & Van Hyfte, M. (2010). Defining visitor satisfaction in the context of camping oriented nature-based tourism — the driving force of quality. *Journal of Vacation Marketing*, 16(2), 141–156.
- Parasuraman, A., Berry, L. L., & Zeithaml, V. A. (1991). Refinement and reassessment of the SERVQUAL scale. *Journal of retailing*, 67, 420-450.
- Parasuraman, A., Zeithaml, V. A., & Berry, L. L. (1985). A conceptual model of service quality and its implications for future research. *Journal of marketing*, 49(4), 41-50.
- Parasuraman, A., Zeithaml, V. A., & Berry, L. L. (1988). Servqual: A multiple-item scale for measuring consumer perc. *Journal of retailing*, 64(1), 12-40.
- Parasuraman, A., Zeithaml, V. A., & Berry, L. L. (1994). Reassessment of expectations as a comparison standard in measuring service quality: implications for further research. *Journal of marketing*, 58(1), 111-124.
- Pawitra, T. A., & Tan, K. C. (2003). Tourist satisfaction in Singapore—a perspective from Indonesian tourists. *Managing Service Quality: An International Journal*, 13(5), 399-411.
- Perera, P., & Vlosky, R. (2015). How Previous Visits Shape Trip Quality, Perceived Value, Satisfaction, and Future Behavioral Intentions: The Case of ForestBased Ecotourism in Sri Lanka. *International Journal of Sport Management, Recreation & Tourism*, 11, 1–24.
- Raspor, S. (2010). Measuring Perceived Service Quality Using SERVQUAL: A Case Study of the Croatian Hotel Industry. *Management University of Primorska, Faculty of Management Koper*, 5(3), 195-209.
- Reichheld, F. F., & Sasser, W. E. (1990). Zero defeofions: Quality comes to services. *Harvard business review*, 68(5), 105-111.
- Saez, C. A., Fuentes-Fuentes, M. M., & Lloréns-Montes, F. J. (2007). Service quality measurement in rural accommodation. *Annals of Tourism Research*, 34(1), 45-65.
- Stevens, P., Knutson, B., & Patton, M. (1995). DINESERV: A tool for measuring service quality in restaurants. *The Cornell Hotel and Restaurant Administration Quarterly*, 36(2), 5-60.
- Tefera, O., & Govender, K. (2014). From SERVQUAL to HOTSPERF: Towards the Development and Validation of an alternate Hotel Service Quality Measurement Instrument. *African Journal of Hospitality, Tourism and Leisure*, 5(4).1-16.
- Tefera, O., & Migiro, S. (2017). The relationship between demographic and tripographic factors and customers' expectation, perception, and service quality: A case of star rated hotel guests in Ethiopia. *African Journal of Hospitality. Tourism and Leisure*. 6 (4), 1-20.
- Tourism development Authority, (2004) General Guide lines to Develop Eco-Lodge. Cairo, Egypt.
- Tourism development Authority, (2008) Ecolodge Planning, Design and operation Manual Handbook.Cairo, Egypt.
- Tribe, J., & Snaith, T. (1998). From SERVQUAL to HOLSAT: holiday satisfaction in Varadero, Cuba. *Tourism management*, 19(1), 25-34.

- Wearing, S., & Neil, J. (2009). Ecotourism: Impacts, potentials and possibilities. Burlington: Taylor & Francis
- Weaver, D. B., & Lawton, L. J. (2002). Overnight ecotourist market segmentation in the Gold Coast hinterland of Australia. *Journal of Travel Research*, 40(3), 270-280.
- Wight, P. A. (1997). Ecotourism accommodation spectrum: Does supply match the demand? *Tourism Management*, 18(4), 209-220.
- Wong Ooi Mei, A., Dean, A. M., & White, C. J. (1999). Analysing service quality in the hospitality industry. *Managing Service Quality: An International Journal*, 9(2), 136-143.
- Wood, M.E. (2002), Ecotourism: principles, practises & policies for sustainability. United Nations Publication, France.
- World Travel and Tourism Council. (2015). Economic Impact Analysis. Retrieved from <http://www.wttc.org/research/economic-research/economic-impact-analysis/>
- Yilmaz, I. (2009). Measurement of service quality in the hotel industry. *Anatolia*, 20(2), 375-386.9(3), 520-529.
- Yusof, N.'A., Rahman, F. A., Jamil, M. F. C., & Iranmanesh, M. (2014). Measuring the quality of ecotourism services: Case study-based model validation. *SAGE Open*, 4(2).
- Zabkar, V., Brencic, M. M., & Dmitrovic, T. (2010). Modelling perceived quality, visitor satisfaction and behavioural intentions at the destination level. *Tourism Management*, 31(4), 537-546.

Arabic references

- الأمين، فيلافي محمد (٢٠١٦): واقع الممارسات البيئية ضمن خدمات الفنادق المصنفة لولاية قسنطينية، مجلة دفاتر البحوث العلمية، ع٣٦٢، ٦-٣٧٧.
- البري، أمل السيد (٢٠١١): الفنادق البيئية مقوم سياحي جديد بالواحات الدخلة، مجلة إتحاد الجامعات العربية للسياحة والضيافة، كلية السياحة والفنادق، جامعة قناة السويس، مج٨، ع خاص، ١٣٧-١٤٨.
- مقابلة شخصية للباحث مع أ. محمد مصلحي، موظف التقييم البيئي للمشروعات السياحية بجهاز شؤون البيئة بالقاهرة، ٢٠١٨.
- نيفين، شريف عبد الحليم (٢٠١٢): تأثير خصائص الخدمة على رضا العملاء في بعض الفنادق بالإسكندرية، مجلة إتحاد الجامعات العربية للسياحة والضيافة، كلية السياحة والفنادق، جامعة قناة السويس، مج٩، ع٢، ٩٧-١٠٥.
- هيئة التنمية السياحية (٢٠٠٤): السياحة البيئية والسياق المصري، القاهرة.
- هيئة التنمية السياحية (٢٠٠٤): الشروط الواجب توافرها في تصميم وتنفيذ الفندق البيئي في مصر، القاهرة.
- هيئة التنمية السياحية (٢٠٠٤): الفندق البيئي في إطار مصرى طبيعى، القاهرة.