VISITORS' SATISFACTION TOWARDS SERVICE AND FACILITIES IN KILIM KARST GEOFOREST PARK, LANGKAWI

Mohamad Safee Sapari[1], Ahmad Shuib[2*], Sridar Ramachandran[3],

Syamsul Herman Mohammad Afandi[4]

[1,3,4]Institute of Tropical Forestry and Forest Products, University Putra Malaysia, Serdang, Selangor, Malaysia

[2]Institute of Agricultural and Food Policy Studies, University Putra Malaysia, Serdang, Selangor, Malaysia

*mad.shuib@gmail.com

Abstract

Kilim Karst Geoforest Park (KKGP) is one of the three world heritage sites in Langkawi Island that recognized by UNESCO since 2007. It provides nature-based attraction for instance wildlife watching, karst landscape, mangrove river, and karst caves. Last a few years, visitors arrival in KKGP has increased dramatically from 78,145 to 273,450 between 2006 and 2012. This influx has spurred substantial increases in the demand for facilities and services. However, in terms of ecotourism destination, some visitors may not like the changes in the environment and the landscape of the park because of the development. The main objective of this study is to measure the level of visitors' satisfaction towards quality of services and facilities at KKGP. This study uses the ECOSERV dimension that has been adapted from SERVQUAL for accessing the quality of environment, services, and facilities provided in ecotourism site. In additional, the study uses the expectation-performance analysis that has been adapted from Importance Performance Analysis (IPA) to identify the attributes in services, facilities and environment that are need priority for improvement. The result of the study found the level of visitors' satisfaction towards quality of environment, services and facilities in the park is low. Of the 27 attributes, the study found 17 items indicates visitors are less satisfied and only 6 items really need for urgent action. The results also suggest that there are some opportunities for improving the services and facilities in KKGP especially for management, planner and service provider.

INTRODUCTION

Ecotourism sector in Malaysia has the potential due to its natural attractions and unique geographical landscape. According to Tourism Malaysia (2008), Malaysia is one of the 12 mega-biologically diverse countries in the world and large numbers of flora and fauna. As many as 15,000 species of flowering plants, 286 species of mammals, 150,000 species of invertebrates and 4,000 species of fishes. Ecotourism in Malaysia has become one of the growing industries and important investments for the growth of the economy. Malaysian government has invested a huge sum of money to develop the ecotourism sectors and one of the spot is Kilim Karst Geoforest Park (KKGP.) KKGP is one of the three Langkawi's Geoparks that is located in the northeast corner of Langkawi Island (FIG. 1). It is recognized as one of the three world heritage sites in Langkawi Island by United Nations Educational, Scientific, and Cultural Organization (UNESCO) since 2007.
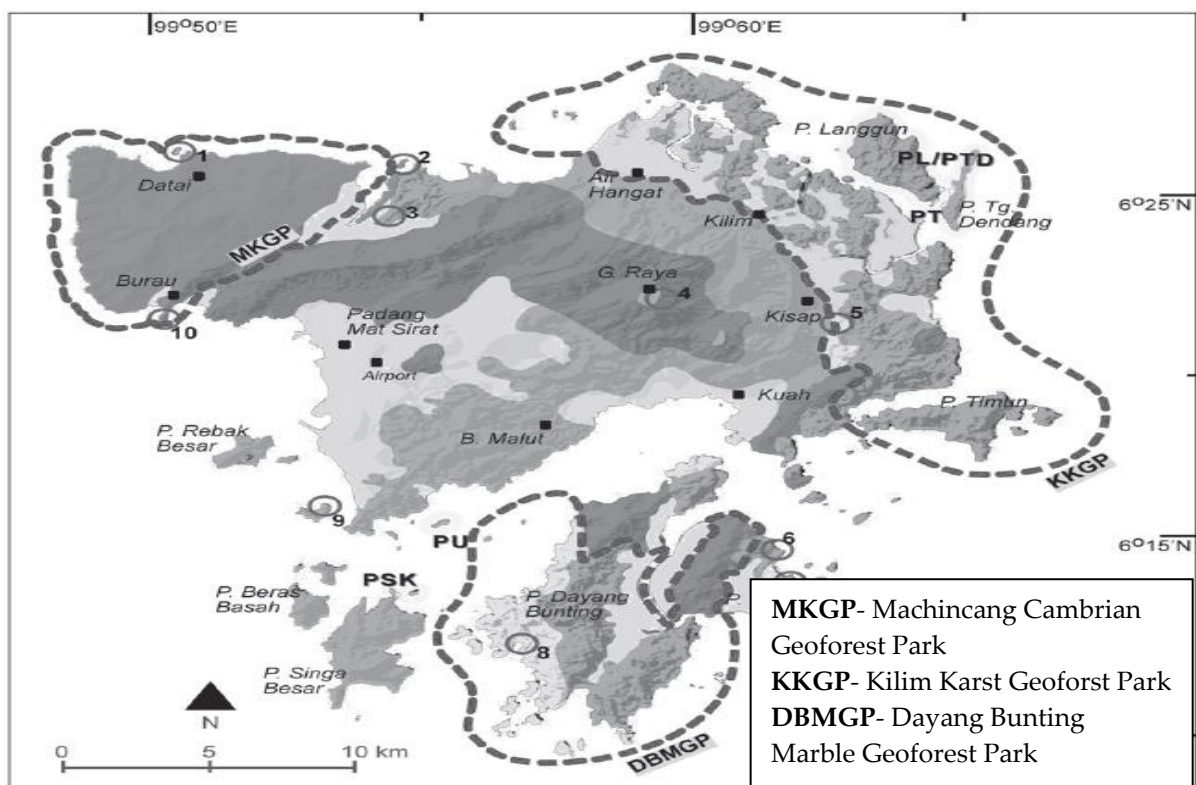

FIG 1. MAP OF LANGKAWI ISLAND
Source: Mohd Shafeea Leman (2010)

The main attraction in KKGP is the nature-based whereas the unique coastal tropical landscape or 'topography coast' which was formed about 490 million years ago. It also conserves the mangrove swamp forest where almost 40% of different mangrove species in the world can be found there. Others KKGP' attractions are the karst landscape, mangrove river, fish farm, karst cave, fish feeding, eagle watching, and the Bat Cave. Furthermore, many ecotourism activities can be done in KKGP for instance kayaking down to the mangrove river, camping, jungle tracking and so forth. As an ecotourism destination, KKGP meet the ecotourism criterion with

involvement of local community into tourism sector. The recognition of the KKGP as a geo-park provides a plenty of job opportunities to local community for instance the participating of fisherman into tourism industry as nature guides and boatman.

Every year, the numbers of visitors visiting the park are constantly increases. Therefore, the authority has taken an immediate action to develop infrastructure, attractions, facilities, businesses and services to satisfy the visitors. However, several issues have risen from the implementation of development in the park; for instance, declining the quality of the environment, congestion and interference to local communities. In addition, increasing the numbers of boat tour in the park has caused some degradation of habitat due to the unregulated speed of tour boats that can cause the erosion of riverbanks. The continuous increase of visitors per day has caused the boat tour to rushing and increase the speed of the boat to be punctual to servicing other passengers. Furthermore, visitors have to bear the negative impact of the development, such as increase in prices as more tourists come to the park. Thus, in term of ecotourism destination, some visitors may not like the changes in the environment and the landscape of KKGP because of the development. Therefore, the visitors' feedback and complained about the park should be given serious attention. Any feedback and complained from visitors indicated that whether are they satisfied or unsatisfied towards development that has been implemented especially in terms of services, facilities and environment. Hence, the satisfaction of visitors should be examined so that future planning and development can be undertaken properly. The objectives of this study are:

- To determine the socio-demographics of visitors at KKGP
- To measure the level of visitors' satisfaction towards the quality of environment, services and facilities provided in KKGP.
- To identify the attributes of environment, services and facilities that needs priority for improvement.

Related Literature

Visitor Satisfaction

Satisfaction is a most important issue in tourism business as it can determine successes and failures in a business organization. According to Yooshik and Muzaffer (2003) satisfaction plays an important role in the planning of marketable tourism products and services. It also influences choice of destination, consumption of products and services, and decision to return by visitors (Kozak and Rimmington, 2000). Moreover, Yu and Goulden (2006) suggest that understanding the tourists' satisfaction in a tourism destination is necessary for improving products and services provided and also to effectively promote the products and services to target

markets. There are many definitions of satisfaction. According to Oliver (1980); Churchill and Surprenant, (1982); Bearden et al, (1983); Oliver and DeSarbo (1988), satisfaction can be defined as a post-choice evaluative judgment concerning a specific purchase decision. Meanwhile, Fah and Kandasamy (2011) state that satisfaction can be determined by subjective (e.g. customer needs, emotions) and objective factors (e.g. products and service features). In addition, according to Zeithaml and Bitner (2000), satisfaction is defined as after-purchase evaluation and emotional recognition of the completed purchasing process.

One of the theories of satisfaction process is the expectancy disconfirmation theory (EDT). The EDT has been proposed by Oliver (1980) (FIG. 2) and it is widely used in business and tourism research. The EDT could be conceptualized in four stages. The first stage is the expectation of the product. In the expectation stage, each consumer has a different knowledge level about a product, which leads to a different estimation of the product performance. The second stage is perceived performance in which each consumer develops certain attributions on the product performance. The third stage is disconfirmation, where the perceived product performance is compared with their initial expectations. Disconfirmation happens when there are discrepancies between initial expectations and actual performance that lead to satisfaction or dissatisfaction among consumers. The final stage is satisfaction where the measurement of perceived product performance by individual consumers determines whether it is up to the expectation (Reising and Chandek, 2001 in Mohd. Ariffin et al, 2011).
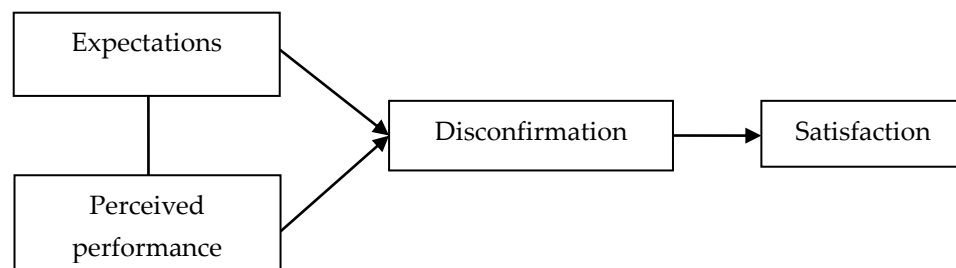

FIG. 2: THE EXPECTANCY DISCONFIRMATION THEORY
Sources: Oliver (1980)

MODEL FOR MEASURING SERVICE QUALITY

This study applies the gap analysis model to measure the level of satisfaction. The most popular research instrument to measure the service quality is the gap analysis model that has been proposed by Parasuraman et al (1985). Since the introduction of the gap analysis model, it has been widely utilized in industries as an effective tool for measuring the quality of service in the various contexts of services setting for instance: hospitality (Crompton and MacKay, 1988; Hamilton et al, 1991); health care service (Wisniewski and Wisniewski, 2005; Rohini and Mahadevappa, 2006),

banking (Wang Lo and Hui, 2003; Kaur et al, 2012), transportation (Bouman and van der Wiele, 1992), educational institute services (McDougall and Levesque, 1994), telecommunication service (van der Wal et al, 2002).

Since the theoretical basis of this study is expectation disconfirmation theory, the gap analysis model is most acceptable to measure visitors' satisfaction towards quality of service. The model proposes that the service quality is a function of the differences between expectation and perceived performance along the quality dimension. The gap of service quality score is calculated as service quality equals perceived performance minus expectation. Service quality can be defined as the difference between customer expectation of service and perceived performance. If the expectation is greater than performance, then perceived quality is less than satisfactory and hence customer dissatisfaction occurs. Based on this model, service quality is a function of perception and expectations and can be modeled as:

$$SQ = \sum_{j=1}^{k} (P_{ij} - E_{ij})$$

Where: SQ = overall service quality;

k = number of attributes / items.

P_{ij} = Performance perception of stimulus i with respect to attribute j.

E_{ij} = Service quality expectation for attribute j that is the relevant norm for stimulus i.

Eco-tourist Service Quality (ECOSERV)

In order to measure the quality of service, the study uses the eco-tourist service quality (ECOSERVE) dimension to identify the attributes of services, facilities, and environment in the ecotourism destination. Essentially, most of the attributes in the ECOSERVE dimensions are composed from SERVQUAL dimensions. However, some adjustment has been done so as to apply it into the ecotourism field by breaking up the tangible dimension into two (tangible and eco-tangible) sub dimensions and defining it as ECOSERV as proposed by Khan (2003). The dimensions of eco-tangible encompass the attributes of environment, (for instance, cleanliness of the river), facilities are appropriate to the environment, non-crowded park and so forth. Practically, the ECOSERV model can be used to determine the service quality of ecotourism destinations. Past researchers who have used the ECOSERV approach in ecotourism studies include Shuib et al, (2012) and Razali et al, (2012).

Expectation-Performance Analysis

The expectation-performance analysis (EPA) is a simple and useful technique to identify the attributes of services and facilities that are most in need of improvement and to avoid wastage of resources. It has been adapted from perception-performance analysis by Johnston and Heineke (1998) and the importance performance analysis (IPA) by Martilla and James (1977). The grid from the expectation-performance analysis would provide the service managers with valuable information for both satisfaction measurement and efficient allocation of resources. Therefore, the results from this EPA can help managers of KKGP to identify areas of strategic focus improving and developing services and facilities. The expectation-performance grid is represented in a 2x2 grid, in which each quadrant can be summarized into a specific suggestion for the management. Interpretation of the expectation-performance grid is illustrated by quadrants whereby:

- Quadrant I (excellent area) means excellent performance on high expectation features, implying opportunities to gain or maintain the competitive advantage;
- Quadrant II (urgent action area) means poor performance on extreme expectation dimensions indicating high priority for immediate action;
- Quadrant III (care free area) means low expectation and low performance, suggesting that it may not be necessary to focus additional effort on these attributes; and
- Quadrant IV (surplus area) means its low expectation on high performance implying that resources would be better off to be employed elsewhere.

METHODOLOGY AND RESEARCH DESIGN

Questionnaire Design and Data Collection

The questionnaire is divided into three sections. The first section obtains information of visitors' socio-demographic. The second and third sections are designed to capture the information on visitor expectations and perceived performances towards quality of services, facilities, and environment by using 27 statements in the ECOSERV dimensions. To determine the level of visitor' satisfaction, respondents are requested to give a score for each question by using a five-point Likert-scale, ranging from 1 to 5, respectively denoting "very disagree", "disagree", "neutral", "agree" and "very agree". The field surveys are conducted in March 2013. A total of 410 structured questionnaires have been handed out to respondents at the Kilim's jetty who visited the park. The respondents were selected by convenient sampling. The questionnaire is designed in two languages: the English version and Malay version (Bahasa Malaysia). This is done because the target respondents consists of both local and international visitors. In order to capture detail information, the

translation of the questionnaire into Bahasa Malaysia has been carefully done so that the terms and meaning remain the same.

DATA ANALYSIS

Descriptive Statistical Analysis

The descriptive statistical analysis describes the respondents' socio-demographic characteristics (gender, age, income, level of education, occupation and nationality). It is a command analysis in the quantitative research.

Reliability Test

Before proceeding with the analysis, a reliability test (Cronbach's Alpha) for each attribute is conducted to test the reliability and internal consistency of all items and dimensions used. This study has included all of the 27 items of the statement from the questionnaire to conduct the reliability test on the two sections, which are expectation and perceived performance.

Expectation-Performance Analysis Grid

In order to accomplish the expectation-performance grid, the Microsoft Excel spreadsheet is used to plot the expectation and performance scores. The average means for expectation and perceived performance for all attributes of services and facilities are calculated in which the median values for perceived performance is located on the X-axis while the mean for expectation located on Y-axis and it is represented in a 2x2 grid.

Result and Discussion

Socio-demographic Profile of Visitors

Identification of socio-demographic profile of visitors is very useful for marketing purposes in order to serve the visitors better. Specifically, understanding the socio demographic profiles of visitors simplify the marketing planning, especially in terms of market segmentation. As Petrick (2004) claims, the patterns of behavior of tourists enable marketers to create informal channels of relationships thus, ensuring future sources of income. The informal channels of relationships will help in identifying the repetitive patterns of behaviors that attract the visitors to a specific destination. By understandings the visitor profiles and characteristics it would help in creating niche market in the sector. Therefore, information on the visitors' profile is one of the key elements to market the products in the tourism industry.

Of the 410 questionnaires distributed only 400 are useable. Unusable questionnaires included missing and ambiguous answers given by the respondents. Therefore, the data from 400 respondents are used in the analysis in this study. The socio-

demographics of visitors are shown in Table 1. The results show that the majority of the respondents (52.2%) are females. In terms of age, the study has found that the highest percentages of visitors are between 21-30 years (36%). The majority of visitors (74.9%) to the park are counted in the middle age group of between 21 and 50 years of age and only about 7% of visitors are more than 51 years old. This result shows that the visitors to KKGP are mainly young adults. This information helps the management and service providers in designing activities and providing facilities suitable for young adult visitors. Generally, participation in outdoor activities relates inversely with age. It means that the level of participation in outdoor activities especially in adventure or energetic activities decreases with age. As the visitors are mainly middle-aged group, adventure or energetic activities for instance trekking, rock climbing, and water rafting, could be provided. However, it should also consider the reflexive activities that are preferred by older visitors; they prefer activities such as relaxing, wildlife watching and enjoying the scenery. Thus, park management should provide the appropriate facilities by considering requirements of different age groups.

The personal gross monthly income is measured in Ringgit Malaysia. From the 400 respondents, about 55.8% of the samples however, do not report income. This is because the question about income is very personal and the majority of respondents prefer not to answer this question. Thus, only 177 respondents have answered the question on income in which from these total, most respondents (33.9%) are having a monthly personal income of more than RM 5,000. The result has also found that the majority (59.9%) of the respondents have a medium income level (between RM 1,000 to 4,999). While, only 6.2% of the respondent's gross monthly income is less than RM 900. In general, as income increases, the purchasing power becomes higher which enables individuals to participate in more recreational activities; also people may shift their choice to better destinations. Thus, having such this information helps the management of park to identify the ability of visitors to pay for recreational fees that could be used for maintenance and conservation purpose.

In terms of education level, a total of 67.5% of the respondents have attended higher education (first degree or higher degree). Categorization of the higher degree refers to the graduate degrees such as PhD and masters while the first degree refers to the undergraduate and diploma. This means that most of the respondents have a university level educational background. There are two possible explanations for this result. Firstly, the visitors in KKGP are well educated. Secondly, during the survey, many groups from academic institutions are visiting the park. Additionally, the majority of the respondents consist of friends who have a similar level of age and level of education. Meanwhile, 28.5% and 1.2% of respondents have secondary and primary education respectively. The rest of 2.8% of respondents have no formal education.

With regards to the visitors' occupation, the largest group (29.5%) is dominated by students followed by private sector employees (27.2%) and public sector employees (21.3%). The finding indicates that the KKGP is a good source of educational information on the environment and natural sources. During the survey, also many organized groups from the government sector and private companies are visiting KKGP. However, the results also show that the majority of visitors (63.5%) to KKGP consist of people that have stable incomes implying that visitors in KKGP have a good purchasing power. Therefore, the management and service providers should take this opportunity to encourage members of local community to be involved in businesses in KKGP to generate income as visitors to KKGP have the ability to pay.

TABLE 1. VISITORS PROFILE IN KKGP (N=400)

Characteristic		Frequency	Percentage (%)
Gender	Male	191	47.8
	Female	209	52.2
Age	18 - 20	63	15.8
	21 – 30	144	36.0
	31 – 40	85	21.1
	41-50	71	17.8
	51-60	27	6.8
	61 or above	10	2.5
Income	RM999 or less	11	2.8
	RM1000 -RM 1999	25	6.2
	RM2000 - RM2999	32	8.0
	RM3000 – RM3999	32	8.0
	RM4000 – RM4999	17	4.2
	RM5000 or above	60	15.0
	Not answer	223	55.8
Education levels	No formal education	11	2.8
	Primary school	5	1.2
	Secondary school	114	28.5
	First degree	241	60.2
	Higher degree	29	7.3
Occupation	Government servant	85	21.3
	Self employed	60	15
	Private employed	109	27.2
	Unemployed	18	4.5
	Student	118	29.5
	Retired	10	2.5
Nationality	Malaysia	252	63
	Asia	78	19.5
	America	12	3
	Europe	33	8.3
	Africa	16	4
	Australasia	9	2.2

Lastly, the result indicates the percentage of respondents according to their nationality; Malaysian visitors form about 63% while the remaining are non-Malaysian visitors. It is common knowledge that KKGP is a popular destination among Malaysians since the Langkawi Island offers many types of tourism attractions from shopping to adventure and historical attractions. Coincidently, the survey is done during the Malaysia's public and school holidays. Hence, it is not surprising that the majority of visitors in the park are Malaysians. The non-Malaysian visitors are mainly from Asia, America, Europe, Africa and Australasia, with Asia chalking up the highest number of visitors (19.5% compared to the other continents). One possible explanation is that there are many tourism promotions and offers made to Asian countries by the Malaysian Ministry of Tourism. Meanwhile, the lowest percentage of visitors are from Australasia (2.2%), followed by America (3%) and Africa (4%). Thus, the tourism Malaysia should consider promoting Malaysia as a tourism destination to the American and African markets.

Data Reliability

The results of Cronbach's alpha value (Table 2) for expectation dimensions are 0.923. It means that 92% (0.924) of the variability by combining 27 items of the statement are considered true score variance, in other words, they are reliable. Meanwhile, the Cronbach's alpha for standardized item (0.923) shows not much different because all of 27 items are using the same scale of measurement which using the Likert-scale measurement (interval scale item). In addition, the Cronbach's alpha coefficient estimate for the instrument and subscale was acceptable and reached the target reliability of at least 0.7 (Garson, 2012; Lewicki and Hill, 2006).

TABLE 2. RELIABILITY TEST FOR EXPECTATION AND PERCEIVED PERFORMANCE OF VISITORS

Reliability of expectation			Reliability of perceived performance		
CA	CA (Stand. items)	No. of items	CA	CA (Stand. items)	No. of items
0.924	0.923	27	0.719	0.734	27

Evaluation of the Quality of Environment, Services and Facilities

In this study, satisfaction is measured by the mean difference in the score (mean score for perceived performance minus the mean score for expectation). The gap value indicates the level of satisfaction, where a positive gap value indicates satisfaction and the negative gap value indicates dissatisfaction. Table 3 shows the results of means of visitors' expectation and perceived performance for each of the 27 items. Table 3 also shows the negative value (-0.17) as perceived performance (3.60) minus expectation (3.77). Thus, this result indicates that visitors are not satisfied with the services and facilities provided in KKGP. However, in terms of the level of satisfaction, visitors are still satisfied but the level of satisfaction is low

because the mean value for both expectation and perceived performance exceed than 3. Based on the Likert-scale in the questionnaire, the "3" point scale represent as "neutral" meanwhile "1" and "2" point represent as "very poor" and "poor" respectively. Two more scores are "4" for "good" and "5" for "very good".

TABLE 3. MEAN FOR EXPECTATION AND PERCEIVED PERFORMANCE OF VISITORS

Dimensions	Mean Expectation	Mean Performance	Gap
1. Cleanliness of river	3.73	3.89	+0.16
2. Attractiveness of mangrove swamps	3.69	3.85	+0.16
3. Equipment that minimizes degradation	3.43	3.08	-0.35
4. Facilities are appropriate to the environment	3.66	3.23	-0.43
5. Facilities that are environmentally safe	3.63	3.33	+0.03
6. Variety of wildlife	3.41	3.16	-0.25
7. Minimal disturbance to wildlife	3.69	3.39	-0.30
8. Non-crowded park	3.86	3.25	-0.61
9. Nature-based activities	3.91	3.38	-0.53
10. Staff have the knowledge to answer questions	3.41	3.24	-0.71
11. Staff and boatmen are consistently courteous	3.95	4.15	+0.20
12. Staff provided the necessary information	4.28	4.37	+0.09
13. Feel safe in their transaction	3.92	3.59	-0.33
14. Safety condition at the point of attractions	3.59	3.36	-0.23
15. The condition of Kilim jetty	3.72	3.98	+0.26
16. Staffs are able communicate	3.87	3.65	-0.22
17. The service is worth money paid for	3.85	3.28	-0.57
18. Staff provided services at the promised time	3.54	3.89	**+0.35**
19. Staff provided accurate and correct information	3.66	3.35	-0.31
20. Staffs and boatmen are helpful	4.26	4.50	+0.24
21. Staff understand the specific needs	3.92	4.14	+0.22
22. Comfortableness of the facilities	4.21	4.35	+0.14
23. Condition of prayer room	3.45	3.15	-0.30
24. Condition of food court	3.71	3.37	-0.34
25. Cleanliness of the toilet	3.89	3.52	-0.37
26. Adequate parking spaces	3.91	3.05	**-0.86**
27. Adequate signage's around the site	3.85	3.72	-0.13
Overall mean	3.77	3.60	-0.17

Based on Table 3, the biggest gap (-0.86) is related to the adequacy of the parking space. Most of visitors are less satisfied with the adequacy of parking space hence, they had to park far away from the jetty point. Another important finding is that the visitors also are less satisfied with the statement "staff and boatmen have the knowledge to answer questions", with a gap value of -0.71. In the other hand, most of visitors are satisfied with item 18 (staff provided services at the promised time)

with the gap value of +0.35 and followed by item 15 (the condition of Kilim jetty) with a positive gap value of +0.26. One of the services that are provided in KKGP is a mangrove tour boat service. Normally, visitors do not need to wait for the mangrove tour boat because there are many boats available in KKGP. Nowadays, the total numbers of boats operating in the park are more than 70. Since 2012, approximately 82 boats are available operated by 29 tour operators, and each boat could load 12 passengers. Thus, with the big number of the boats and the capability of carrying capacity of the boat, visitors are no need to wait for mangrove tour boat at the park.

Theoretically, the attributes that show the negative gap value would require improvement. However, it may not be necessary to improve all attributes that show negative gaps because that could lead to waste the resources (effort, money and time) if the improvement works do not take into account the importance of the attributes from the visitors' perspective. Thus, in order to address the strategy of improvement, the expectation-performance grid will have to be analyzed to prioritize tasks to optimize the utilization of the limited resources.

Expectation-Performance Analysis (EPA): Priorities for Action

The next objective of this study is to identify which attributes ought to be prioritized for action based on the expectation-performance grid analysis. In order to accomplish the expectation-performance grid, the Microsoft Excel spreadsheet is conducted to plot the expectation and performance score. The average mean scores for expectation and perceived performance for the 27 attributes of services and facilities are shown in Figure 3 in which the median values for perceived performance are located on the X-axis (3.60) while the means for expectation are located on Y-axis (3.77).
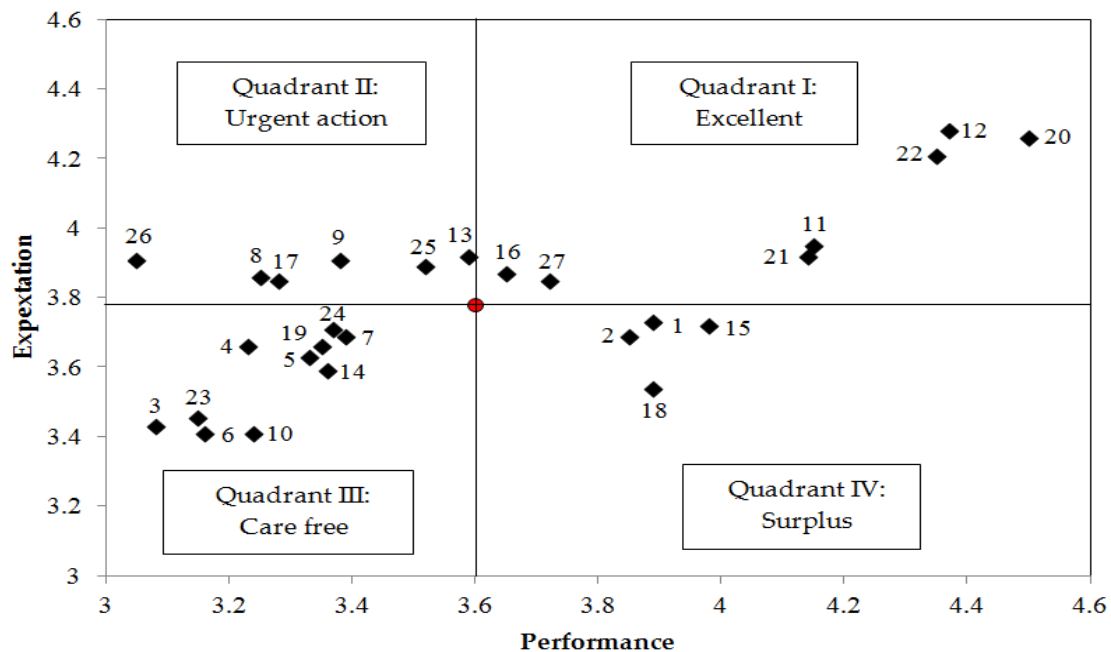

FIG 3. THE GRID OF EXPECTATION-PERFORMANCE ANALYSIS

As shown in Figure3, there are 27 attributes for environment, services, and facilities scattered into different quadrants. The result of EPA for overall service and facilities in KKGP have found that there are 7 items that fall into Quadrant I, 6 items into Quadrant II, 10 items into Quadrant III and 4 items into Quadrant IV.

Quadrant I (excellent area)

Among the 27 attributes relating to environment, services, and facilities, seven are identified to fall into the quadrant I (excellent area). The attributes that fall into this quadrant are considered to have high expectation on excellent performance representing a possible competitive advantage. As can be seen, the most excellent indicator of service provided in KKGP is 'staff and boatmen are helpful' (Item 20), followed by 'staff provided the necessary information' (Item 12), and 'comfortableness of the facilities' (Item 22). The result indicates the items that fell into this quadrant are mainly related to the attitude of staff in KKGP. Thus, the results of this analysis shows that the staff in KKGP performs their duties with an excellent attitude towards visitors, for example, the willingness to help, consistently courteous, understanding the specific needs of the visitors and so forth. The park management or service provides have to maintain the performance for all of these attributes to kept visitors satisfy.

Quadrant II (urgent action)

The results from the EPA grid indicate that six items fall into quadrant II (urgent action). The 6 items are: 8 (non-crowded park); 9 (nature-based activities); 13 (feel safe in their transaction); 17 (the service is worth money spent); 25 (cleanliness of the toilet); and 26 (adequate parking spaces). All of these attributes are indicating high priority for intervention and improvement. However in detail, the most critical attribute that needs to be given serious consideration is item 27 (adequacy of parking spaces) with the high expectation (3.91) but very low performance (only 3.05). This result indicates that the parking spaces for visitors are not adequate especially during the peak season because most of the visitors prefer going to the park using their own cars. It is also obvious that there is insufficient public transportation system to KKGP. Therefore, to increase the performance for this attribute it is necessary to provide more public transport to visitors like buses, shuttle vans, and taxis. Have more public transportation, the number of vehicles in the park could be reduced and the parking spaces could cater for the lesser number of private vehicles.

Another attribute that need to be focused for improvement is nature-based activities (item no 9) with the high score for expectation (3.91) but low performance (3.38). This indicates that most of visitors expect that the packaged boat tour to offer a variety of activities. However, during the boat tour trip, visitors have spent most of

the time just sitting in the boat with no other activities to do. Visitors are taken to visit two places, the fish cage and the Bat Cave. Visitors who have come to KKGP will spread by word of mouth the excitement or boredom on the boat trip. Therefore, the park management should consider about having the activities that can be provided for visitors in KKGP for instance jungle tracking, climbing for visitors who love the adventure activities; nature conservation activities for instance mangrove re-plantation and mangrove swamps cleaning for those who love the nature or conservationist.

Meanwhile, in term of safety many of visitors complained that safety during their visitation was not guaranteed at all. As shows in Quadrant II, item 13 (feel safe in their transaction) indicates having the highest score for expectation (3.92) but low performance (3.59). One possible explanation for the gap is that most visitors to KKGP come with family members including young children. Unfortunately, there is no life jacket provided for kids; most parents who bring their kids along have made complaints of this lack of safety precautions.

Other service that should be paid attention is the price of services with the high mean score for expectation (3.85) but lower performance score (3.28). Base on the statement in the questionnaire, most of visitors infer that the money that they have spent for services especially for boat tour is not worth it with the services provided. The rate of boat service charged is RM250 for an hour tour package, RM350 for two hours, and RM450 for three hours and RM500 for five hours. The study has found that most of respondents (37.8%) spend about two hours for boat tour service in KKGP and almost 22.8% of respondents spend about one hour and the rest of 12.5% and 15.8% are three and four hours respectively. Based upon the result of this study, several recommendations can be made to increase the performance for this attribute. The boat rental for more than two hours could adding the value for tour services, for instance, the 2 hour or above of boat tour package should include service of tourist guides, food and drink. In addition, non-crowded park also indicated the high expectation score (3.86) and low performance (3.25). One possible explanation is that the research is conducted during the peak season, which falls during the school holidays and the Langkawi International Maritime and Aerospace Exhibition (LIMA). Therefore, many visitors, especially local visitors, come to Langkawi Island and to KKGP. These results make it obvious that there is a need for KKGP's management to concentrate on improving the areas with the most number of complains.

Quadrant III (care free area)

Another important finding in the EPA is in the quadrant III (care free area), where there are low expectation as well as low performance features suggesting that it may not be necessary to focus additional effort on these attributes. There are 10 items

falling into this quadrant as shown in Quadrant III. The analysis shows that there are five elements related to the environmental aspects that are included into this quadrant. It indicates that nowadays, the visitors are more aware about the environment and nature. Even though this quadrant means there is no necessity to undertake improvement efforts, the park management should pay as much attention to ensure environment is properly cared because the core business of the park is based on its natural surroundings. Hence, the 'environmental need' aspect should be continuously guarded and given more attention for future utilization. For instance, visitors are not too happy with the equipment used in KKGP (Item 3) and variety of wildlife (Item 6); it is noticeable that the equipment (boat) used are quite old and there is degradation of the environment, for example, erosion of river bank, water pollution, and the roaring sound of the engine of the boats may have caused disturbance to the wildlife. Therefore, by decreasing the speed of the boats, it would minimize erosion of river bank. Using the electric boats also could minimize the oil spill in the river, air pollution, and it also minimize disturbs to wildlife because more quiet.

Quadrant IV (surplus area)

Meanwhile, there are four items included into the quadrant IV (surplus area), which are cleanliness of the river, attractiveness of the mangrove swamps, condition of the jetty and staff providing service on time. Here, visitors have obtained good performance with all of four items, continuous efforts in delivering these facilities and services satisfactorily will encourage visitors to revisit and promote the park further. The existing condition can be handy since the management does need to use resources for the attributes located in this area since visitors are contented with them. Therefore, the park planners should consider allocating resources (i.e., money, time and effort) especially in the 'urgent action' quadrant to yield a high return. As can be seen in Quadrant IV, the attributes that fall into this quadrant cover the elements of service, facilities, and environment. The condition of Kilim jetty, cleanliness of the river, attractiveness of the mangrove swamps and staff provide service on time as indicated by 'high performance on low expectation'. The result suggests that allocating resources on these attributes are enough.

CONTRIBUTIONS OF THE STUDY

The study has come out with the method of determining visitor satisfaction in ecotourism destination. The study is based on the theory of satisfaction namely, expectancy disconfirmation theory. Based on this study, the theory of satisfaction is proved acceptable to determine visitor satisfaction at an ecotourism site. According to this theory, measuring the satisfaction level should include the expectation of the

visitors and their perceived performance for the attributes of services and products. By looking at the gap value between perceived performance and expectation, the satisfaction of the visitors could be determined. In addition, the theory is also applied to the other business sectors.

The study uses the ECOSERV model to determine the attributes of services, facilities, and environment that should be measuring in a nature-based or ecotourism destination. The dimensions in the ECOSERV model are more appropriate because the satisfaction of visitors towards the attributes in the nature-based destination could be identified. In addition, the study uses the EPA to identify the attributes at the ecotourism destination that should be prioritized for improvement. The EPA allows the management to prioritize directions to make strategic marketing decisions as well as management plans without wasting the resources (i.e., money, time and effort).

CONCLUSION

The results provided greater insight into the key dimensions, which suggest overall that good service quality does bring about visitor satisfaction. The quality of a park is an importance aspect for site managers especially for LADA and Kilim Village Community Cooperative. In the study, the site quality aspect measured in terms of visitors' satisfaction towards quality of environment, services, and facilities provided in the park. The Gap analysis shows the negative value, which implies visitors not satisfied. However, in terms of the level of satisfaction, visitors are still satisfied but the level of satisfaction is low. In addition, base upon the result of the expectation-performance analysis, there is six attributes that encompasses the services, facilities and environment element are need to immediate action for improvement in order to satisfy the visitors because all of these attributes are very importance from their perspective. The quality of environment, services and facilities at the ecotourism destination is important from visitors' perspective and further, the resources at the park could be sustainably used and manage and at the same time give benefit to the local communities.

ACKNOWLEDGMENT

REFERENCES

Bearden, W. O. and Teel, J. E. (1983). Selected Determinants of Consumer Satisfaction and Complaint Reports. Journal of Marketing Research, 20(1), 21-28.

Bouman, M. and van der Wiele, T. (1992). Measuring service quality in the car service industry: Building and testing an instrument. International Journal of Service

Industry Management, 3(4), 4-16.

Buttle, F. (1996). SERVQUAL: Review, critique, research agenda. European Journal of Marketing, 30(1), 8-32.

Churchill, G. Jr. and Surprenant, C. (1982). An investigation into the determinants of customer satisfaction. Journal of Marketing Research, 19, 491-504.

Crompton, J. and MacKay, K. J. (1988). A conceptual model of consumer evaluation of recreation service quality. Leisure Studies, 7, 41-49.

David, G. (2012). Testing Statistical Assumptions. USA, North Carolina State University, School of Public and International Affairs.

Fah, L. K. and Kandasamy, S. (2011). An investigation of service quality and customer satisfaction among hotels in langkawi. Paper presented at the International Conference on Management. Hydro Hotel, Penang Malaysia: 13-14 June 2011.

Hamilton, J. A., Crompton, J. and More, T. A. (1991). Identifying dimensions of service quality in a park context. Journal of Environmental Management, 32, 211-220.

Hill, T. and Lewicki, P. (2006). Statistics Methods and Applications. Tulsa: StatSoft.

Johnston, R. and Heineke, J. (1998). Exploring the relationship between perception and performance: Priorities for action. The Service Industries Journal, 18(1), 101-112

Kaur, M., Sharma, N. and Kapoor, S. (2012). Customer satisfaction in banking industry: A gap analysis approach. Asia-Pacific Journal of Management Research and Innovation, 8(4), 399-406.

Khan, M. (2003). ECOSERV: Ecotourist's quality expectation. Annals of tourism Research, 30(1), 109-124.

Kozak, M. and Rimmington, M. (2000). Tourist satisfaction with Mallorca, Spain, as an off-season holiday destination. Journal of Travel Research, 38(3), 260-269.

Martilla, J. A. and James, J.C. (1977). Importance–performance analysis. Journal of Marketing, 41(1), 13–17.

McDougall, G. and Levesque, T. (1994). A revised view of service quality dimensions: An empirical investigation. Journal of Professional Services Marketing, 11(1), 189-209.

Mohd, S. L. (2010). Pemuliharran Geowarisan di Langkawi Geopark, Malaysia. Bangi: LESTARI UKM, Universiti Kebangsaan Malaysia, 80, 19-30.

Mohd Ariffin, A. A., Maghzi, A. and Aziz, A. N. (2011). Understanding hotel hospitality and differences between local and foreign guests. International Review of Business Research Papers, 7(1), 340-349.

Oliver, R. L. (1980). A cognitive model for the antecedents and consequences of satisfaction. Journal of Marketing Research, 17, 460-469.

Oliver, R. L. and De Sarbo, W. S. (1988). Response determinants in satisfaction judgments. Journal of Consumer Research, 14, 495-507.

Parasuraman, A., Berry, L. L. and Zeithmal, V. A. (1985). A conceptual model of service quality and its implications for future research. Journal of Marketing, 49, 41-50.

Petrick, J. F. (2004). The roles of quality, value, and satisfaction in predicting cruise passengers' behavioral intentions. Journal of Travel Research, 42, 397-407.

Razali, M. K. and Khalifah, Z. (2012). Tourists' perception of service quality at Nature Park: A Case Study of Kuala Selangor Nature Park, Malaysia. Lap Lambert Academic Publishing.

Rohini, R. and Mahadevappa, B. (2006). Service quality in Bangalore hospitals: An empirical study. Journal of Services Research, 6(1), 59-84.

Shuib, A., Yaakub, F. and Said, A. (2012). Visitors' satisfaction of services provided in Bako National Park, Sarawak. Paper presented at the 5th International Colloquium on Tourism and Leisure, Bangkok, Thailand: 9-12 July 2012.

Tourism Malaysia. (2008). Media Info: Ecotourism in Malaysia. Communications and Publicity Division, Tourism Malaysia. http://corporate.tourism.gov.my/ Accessed the 13th of November 2013, at 15:30.

Van der Wal, R. W. E., Pampallis, A. and Bond, C. (2002). Service quality in a cellular telecommunications company: A South African experience. Managing Service Quality, 12(5), 233-236.

Wang, Y., Lo, H. and Hui, Y.V. (2003). The antecedents of service quality and product quality and their influences on bank reputation: Evidence from the banking industry in China. Managing Service Quality, 13(1), 72-83.

Wisniewski, M. and Wisniewski, H. (2005). Measuring service quality in a hospital colposcopy clinic. Int. J. Health Care Qual. 18(2/3), 217-229.

Yooshik, Y. A. and Muzaffer, U. B. (2003). An examination of the effects of motivation and satisfaction on destination loyalty: a structural model. Tourism Management, 26, 45–56.

Yu, L. and Goulden, M. (2006). A comparative analysis of international tourists' satisfaction in Mongolia. Tourism Management, 27(6), 1331-1342.

Zeithaml, V. A. and Bitner, M. J. (2000). Services Marketing: Integrating Customer Focus across the Firm (Eds). Boston: McGraw-Hill.