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Preliminary Re- adjusting Local Ecotourists' Perception on Outdoor Recreation Service Quality Instrumentation

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Abstract

This study aimed was to re - adjusting the validity and reliability dimensions of ECOSERV towards outdoor recreation service quality especially at Sungai Itek, Gopeng, Perak, Malaysia. ECOSERV instrument was developed by Khan in 2003 and it was used to measure ecotourists' expectation and perceptions on service quality of localization. This instrument consists of 30 items and grouped into six (6) service dimensions. All the six (6) dimensions are Ecotangible, Assurance, Reliability, Responsiveness, Empathy, and Tangible. Each dimension had a different aspect of criteria that has been measured. Ecotangibles referring to physical facilities and equipment that were safe and appropriate to the environment. Hundred (n = 100) of respondents were involved in this study. Content validity and face validity were employed to measure the appropriateness and meaningfulness of each item in every dimension regarding the contents and constructs. Hence, Cronbach's alpha coefficient values used to determine the internal consistency. Based on findings, Cronbach's alpha coefficient values was questionable where there are three items out of 30 items in the 3 dimensions were obtained an alpha value < .7. The items and dimensions as followed; "materials reflect local influence" which in the dimension of Tangible, "provide local entertainment" which in the Assurance, and "facilities reflect local influence" in the dimension of Empathy were α =.66, α =.57 and α = .67. Therefore, the study advised to delete one or two items in each of these 3 dimensions to ensure the higher reliability

of each dimension concerned in actual measuring construct. Hence, as these 3 items from suggested in each dimension were deleted, the alpha values showed higher internal consistency for Tangible, Assurance and Empathy dimension. Results of alpha values for the both perception of expectation scores α=.89, α=.80, α=.83 and perception of performance, α=.93, α=.94, α=.93. These indicated that each item that was fit by this re-justifying ECOSERV of this study and available to be used locally or abroad.

***Keywords**: ECOSERV, Validity, Reliability, Ecotourist, Service Quality.*

Introduction

Tourism has been identified by the Malaysian government as one of the 12 potential areas to generate income in the National Key Economic Areas through the Economic Transformation Program. About RM 103.6 billion has been targeted by the government to be contributed by this industry toward the Gross National Income (GNI) by year 2020 (Harun., & Hanafiah, 2010). Realizing the essential of tourism sector that contributed to the Malaysian economy and local community development, ecotourism has been acknowledged as an important niche area for tourism industry in Malaysia (Badaruddin, 2012).

Ecotourism products in Malaysia are normally associated with outdoor recreation activities which are based on the existing cultural, historical and natural resources. However, there are concerns raised by the outdoor recreation industry itself on the sustainability of the natural resources. Similarly, there are also concerns on how excellent of service quality has been practiced in outdoor recreation activity to satisfy the clients (tourist or ecotourist). Moreover, it was undeniable that doing this commercialized outdoor recreation activities would lead to the issues of service quality since the nature of business are servicing. A poor quality of service would lead to the dissatisfaction of clients (tourist or ecotourist).

Therefore, this study has been conducted to identify the service quality level of outdoor recreation activities with Sungai Itek, Gopeng, Perak as an venue that evaluated by local ecotourists. This study has employed the Ecotourists Service Quality (ECOSERV) model to assess the perceived service quality level of both tangible and intangible aspects such as service quality and conservation of natural resources.

Background of the Study

This study was conducted at Sungai Itek, Gopeng, Perak, Malaysia. The rationale of selecting this study site is upon the consideration of resources that located here which integrated the outdoor recreation activities and service quality being offered by several outdoor recreation operators here.

Geographically, at Sungai Itek, Gopeng, Perak was surrounded with several of natural resources such as caves, forests, hills, mountains and streams. Due to these resources, outdoor recreation activities are categorised into land based, water based and cultural and historical based. These categorical of activities would be easier for ecotourists to identify their interests and provided to them with necessary information.

In this study site, there were several outdoor recreation activities that had been identified based on the natural resources such as; 1) Land based: abseiling, caving, climbing, jungle trekking and wilderness experiences. 2) Water based: tubing, white water kayaking, white water rafting and waterfalls abseiling. 3) Cultural and historical based: Gopeng heritage house and tin mining activity.

These outdoor recreation activities were the main ecotourism products at Sungai Itek, Gopeng, Perak. Mostly foreign and local tourists would hire private outdoor recreation operators to guide them. In addition, several of outdoor recreation operators at Sungai Itek, Gopeng, Perak was operated by private operators. Among others operators were Adelines Resort House, My Gopeng Resort, Nomad Adventure Earth Camp, Radak Adventure, River Bug, Kem Murni, Hijau, Kuala Razila, Gopeng Rainforest Resort, Rock Garden Resort, The Hideout, De' River, Ulu Village, Gopeng Glamping Park and Outworld.

Service quality was a crucial factor as gave impact that would influence the percentage of ecotourists to revisit Sungai Itek, Gopeng, Perak. The impact of service quality could determine the result on ecotourists satisfaction. The levels of satisfaction among ecotourists were different based on the perceptions of expectation that they hope to receive. Therefore, this study was important to look into the perceived service quality questionnaire for outdoor recreation activities as ecotourism products in the way to obtain highly recommended revenue after the intention of study.

Empirical Findings

Reliability analysis on each variable was conducted using Statistical Package for Social Science (SPSS) to determine the internal consistency. As referred to Rovai, Baker and Ponton (2013) which was cited from George and Mallery (2003), the coefficient of Cronbach's alpha (α) is ranging from 0 to 1 as presented in Table 1.

Table 1: Cronbach Alpha Coefficient Range

Range	Strength of Association
<.5	Unacceptable
≥.5	Poor
≥.6	Questionable
≥.7	Acceptable
≥.8	Good
≥.9	Excellent

(Source: George & Mallery, 2003)

The Cronbach alpha coefficients of the pilot study and the final used instrument for all the dimensions were presented in the Table 2 to provide information about the alpha values if item deleted and corrected item total correlation. Comparison between the tested final stage and original studies was made to reveal the consistency of the alpha values between studies conducted.

Based on findings revealed the Cronbach's alpha coefficient values was questionable where there are 3 items in the 3 dimensions were obtained an alpha value <.7. The items and dimensions as followed; "materials reflect local influence" which in the dimension of Tangible, "provide local entertainment" which in the dimension of Assurance, and "facilities reflect local influence" which in the dimension of Empathy were α=.66, α=.57 and α=67. Therefore, the study has to delete one or two items in each of these 3 dimensions to ensure the higher reliability of each item used in measuring the same construct. Hence, these three items mentioned in the dimension of Tangible, Assurance and Empathy were deleted. As these 3 items in each dimension were deleted, the alpha values have increased and showed a high internal consistency for Tangible, Assurance and Empathy dimension. Results of alpha values for the both perception of expectation scores α=.89, α=.80, α=.83 and perception of performance, α=.93, α=.94, α=.93. These indicated that each item that were used were a good measuring fit in measuring the same construct and reported that critical items of each dimensions are reliable to the content.

Therefore, this study had deleted one or two items in each of these three dimensions to ensure the higher reliability of each item used in measuring the same construct. Hence, these three items mentioned in the dimension of Tangible, Assurance and Empathy were deleted. As these three items in each dimension were deleted, the alpha values had increased and showed a high internal consistency for Tangible, Assurance and Empathy dimension. Results of alpha values for both perception of expectation scores α=.89, α=.80, α=.83 and perception of performance, α=.93, α=.94, α=.93 respectively was presented in the Table 2. These indicated that each item that were used were a good measuring fit in measuring the same construct.

Table 2: Cronbach's Alpha for Internal Consistency Coefficients during the Pilot Study and Final.

Dimensions of ECOSERV	No of item (Pilot)	n = 100 α	No of item (Final used)	Final stage of Dimensions N= 100 α	
				Perception of expectation	Perception of performance
ASSURANCE	6	.67	5	.80	.94
EMPATHY	6	.57	5	.83	.93
RELIABILITY	5	.83	5	.83	.93
TANGIBLE	6	.66	5	.89	.93
RESPONSIVENESS	5	.79	5	.79	.92
ECOTANGIBLE	3	.79	3	.79	.90

Internal consistency analysis was employed to each dimension of ECOSERV to test the internal consistency of the questionnaire and the direction of the study. Results obtained from cronbach alpha coefficient helps the researcher to determine conformity for each dimension critical items (Tzeng and Chang, 2011). According to Byrne (1994), stated that the value of alpha coefficient above 0.7 showed a valid reliability. On the other hand, Piaw (2013) suggested 0.7 is the minimum standard alpha coefficient that is of satisfactory value. For the internal consistency analysis of the instrument conducted (see Table 3(a), 3(b), 3(c), 3(d), 3(e), and 3(f)), the value of cronbach's alpha coefficient is all above 0.7. Therefore, this analysis reported that critical items of each dimensions are reliable to the content.

Table 3(a): Item Measuring Assurance for the Study

Item	Items measuring Assurance	α	
		Perception of expectation	Perception of performance
8.	I feel safe in performing these activities.	.80	.94
9.	Instructors provide the necessary information.		
13.	The behaviour of instructors of outdoor recreation operator should instil confidence in participants.		
15.	Instructors have knowledge to answer questions.		
30.	Instructor consistently courteous toward the participants.		

Table 3(b): Item Measuring Empathy for the Study

Item	Items measuring Empathy	α	
		Perception of expectation	Perception of performance
3.	Convenient operating hours.	.83	.93
7.	Instructors give personal attention to each participant.		
16.	Instructors provide demonstration of the activities.		
18.	Outdoor operator should give participants individualized attention.		
21.	Instructors in proper outdoor activity.		

Table 3(c): Item Measuring Reliability for the Study

Item	Items measuring Reliability	α	
		Perception of expectation	Perception of performance
10.	When outdoor recreation operators promise to do activity by certain time, they should do so.	.83	.93
19.	Instructor focus on error-free service.		
23.	Instructors provide service at promised time.		
25.	Instructors tell exactly when service will be given.		
29.	Instructor show sincere interest in solving a problem.		

Table 3(d): Item Measuring Tangible for the Study

Item	Items measuring Tangible	α	
		Perception of expectation	Perception of performance
2.	Outdoor recreation operators should have up to date equipment.	.89	.93
5.	Facilities well maintained.		
11.	Facilities visually appealing.		
17.	Facilities in unpolluted setting.		
27.	Equipment instil of participant confident.		

Table 3(e): Item Measuring Responsiveness for the Study

Item	Items measuring Responsiveness	α	
		Perception of expectation	Perception of performance
4.	Instructors never too busy to help.		
12.	Instructors of outdoor recreation operators should always be willing to help potential participants.	.79	.92
14.	Instructors give prompt service to the participants.		
24.	Instructors perform the activity right the first time.		
26.	Instructors tell exactly when service will be given.		

Table 3(f): Items Measuring Ecotangible for the Study

Item	Items measuring Ecotangible	α	
		Perception of expectation	Perception of performance
1.	Facilities environmentally safe.		
20.	Equipment that minimize degradation to environment.	.79	.90
22.	Facilities appropriate to the environment.		

Sampling Technique

A field survey of this study was conducted by using purposive sampling. The sampling was based on who would be appropriate for the study. In this case, the researcher can examine a selective group of subjects that the researcher believes can be the representative of a given population (Parmjit Singh, 2006). The sampling was chosen because the respondents for this study come from domestic and foreign tourists who visited recreational sites. Based on the study and information gained, there are 50000 of tourists who came to Gopeng, Perak has been recorded in 2013. This figure has been provided by Tourism Perak based on the reported Statistic of Tourists Arrival to Perak in the year of 2013.

The survey was conducted over two months from September – November 2014. Sungai Itek, Gopeng, Perak was selected to conduct the survey upon consideration of outdoor recreation resources at this study area. As mentioned in the background of study area, Sungai Itek, Gopeng, Perak was selected because of there are land based, water based and cultural and historical activities in the outdoor setting. Table 4 (p.8) explained the classification of outdoor recreation activities emphasised in this study area when the study was conducted.

Table 4: Outdoor Recreation Activities that were participated by Ecotourists at Sungai Itek, Gopeng, Perak.

Month	Types of Outdoor Recreation Activities		
	Land Based	Water Based	Cultural and Historical
September- November 2014	Abseiling Caving Climbing Jungle Exploring Wilderness Experiences	Tubing White Water Kayaking White Water Rafting Waterfall Abseiling	Gopeng Heritage House Tin Mining Activity

Sample Size

The samples for this study were collected using purposive sampling method from visitors who came to the study area. The population of visitors was derived from visitors' records which came to Gopeng, Perak in the year of 2013. Based on the number of visitors, there are about 50000 visitors. As quoted by Chi and Qu (2008) many researchers have used the Burns and Bush (1995) formula of confidence interval which has three main important elements in sample size calculation;

1) The amount of variability believed to be in the population,
2) The desired accuracy, and
3) The level of confidence required in the estimates of the population values.

The formula for calculating the proper sample size is:

$$\text{n} = \frac{z^2(pq)}{e^2}$$

where,
n= the sample size
Z= standard error associated with a chosen level of confidence (95%)
p= estimated variability in the population 50/50
q= (100-p)
e= acceptable error +5%

Based on this formula, for instance, in order to obtain +5% accuracy at 95% confidence interval, the sample size will be:

$$\text{n} = \frac{1.96^2(0.5 \times 0.5)}{0.05^2}$$

$$= 385$$

New sample size based on the population:

$$\text{new n} = \frac{n}{\frac{1+n-1}{n}}$$

$$\text{new n} = \frac{385}{\frac{1+385-1}{50000}}$$

$$= 382$$

In general, there is no fix sample size in the absolute would make sense, and larger samples are always preferable. However, it is suggested to be acceptable if a minimum ratio of at least five respondents for each estimated parameter can be achieved it would be even more appropriate if a ratio of 10 respondents per parameter could be obtained (Hair, Anderson, Tatham and Black, 1995; Hair et al., 2002). Therefore, the reasonable sample size is 382.

A total of 400 questionnaires were distributed during the period of data collection within the two months from 23 September to 24 November 2014. When the data collection process was conducted, researcher always mentioned the purpose of the study to the respondents and asked if they liked to volunteer to take part in the survey. Overall, the researcher received a positive response. At the end of the data collection duration, from 400 questionnaires distributed, a total of 376 completed questionnaires were obtained, indicating a response rate of 94% from sample size.Table 5 showed total numbers and percentage of the response rate during the survey distribution based on the types of outdoor recreation resources.

Based on Table 5 showed 94% response rate of the study was contributed by the total sum of these three samples collected at the different outdoor recreation resources. With reference from the table, the highest percentage and number of respondents collected was led by water - based activities which is 46.81% where there were hundred and seventy six (176) respondents involved in these activities. The second highest is 33.24% where hundred and twenty five (125) respondents did the land based activities. The lowest percentage of the respondents gained from cultural and historical based activities with 19.95% contributed from seventy five (75) respondents.

Table 5: Response Rate of Respondents

Types of Outdoor Recreation Resources	No. of respondents (n= 376)	Percentage (%)
Land Based	125	33.24
Water Based	176	46.81
Cultural & Historical based	75	19.95

Conclusion

Although several previous researchers had attempted to focus on service quality at recreational areas in Malaysia, lack of those researches had tried to examine the perceived service quality in outdoor recreation activities. This study was readjusting validity and reliability of ECOSERV compared to the previous researchers as this study highlighted how ecotourists perceived service quality in outdoor recreation programmes as they participated and experienced the outdoor recreation activities with outdoor recreation operators that they hired during their trips at Sungai Itek, Gopeng, Perak.

In contrast, many previous studies only focused on tourists' or visitors' visit at caves, mountains and national parks in Malaysia. The current research was built to align with the tour operators' roles and activities as highlighted in by Government of Malaysia as a way to encourage private enterprises to play their parts to develop and promote ecotourism destinations in the country.

This study was also designed based on the understanding that currently, Malaysia recreational sites were really in risks as the impact of illegal activities and the extreme use of natural resources to cater the local market in ecotourism industry by certain outdoor recreation operators. Therefore, it is vital to take note that the study believed that by conducting this study using ECOSERV instrument, it would be beneficial to provide a significant result regarding the conservation and preservation elements practised by an operator. Moreover, this study would also provide some information about the service quality level practised by those outdoor recreation operators at the sites studies with outdoor recreation activities.

The main expected output from the study other than identifying and re- adjust the perceived service quality towards outdoor recreation activities at Sungai Itek, Gopeng, was revealing the conditions of natural resources of the study sites as well as reflecting to the sustainability nature based resources in ecotourism concept. Perhaps, the finding from this study could help future researchers especially Forest Department and any other responsible departments to identify and gazette certain areas that are prohibited from having any commercial outdoor recreation activities as the impact would degrade the natural areas.

Reference

Badaruddin, M. The Development of Ecotourism in Malaysia- Is It Really Sustainable? Paper Presented at International Year of Ecotourism 2012, Thailand.

Burn, A. C., & Bush, R. F. (1995). *Basic marketing research:* Prentice Hall.

Byrne, B., M. (1994). Structural Equation Modeling with EQS/ Windows. Newbury Park: Sage.

Chi, C. G.-Q., & Qu, H. (2008). Examining the structural relationships of destination image, tourist satisfaction and destination loyalty: An intergrated approach.*Tourism Management, 29(4),* 642-636.doi: 10.1016/j.tourism.2007.06.007

Ching Fei Ern & Goh Hong Ching (2015). Intangible values and tourists‟ motivations: The case of the Pahang National Park. Malaysian Journal of Society and Space 11 issue 3 (10-20).

Chua, Y. P. (2013). Mastering Research Statistics. McGraw- Hill Education (Malaysia) Sdn. Bhd, pp 147-154.

English, T., & Keeley, J. W. (2014). Internal Consistency Approach to Test Construction. In *The Encyclopedia of Clinical Psychology.* John Wiley & Sons, Inc. doi:10.1002/9781118625392.wbecp156.

George, D & Mallery, P. (2003). SPSS for windows step by step: *A simple guide and reference 11.0 update (4th ed.).* Boston: Allyn & Bacon.

Hair, J., Anderson, R., Tatham, R., & Black, W. (1995). *Multivariate Data Analysis with Readings.*

Hair, J., Tatham, R., & Anderson, R. (2002). *Multivariate Data Analysis.*

Harun, M. F. M & Hanafiah, M. H. M, (2010). Tourism Demand in Malaysia: A cross-Sectional Pool Time-Series Analysis. *International Journal of Trade, Economics and Finance,* 1(1).

Khan, M. (2003). Ecotourists' quality expectations. *Annals of Tourism Research,* 30 (1): 109- 124.

Khan, M. M. and Su, K. D. (2003). Service Quality Expectation of Travellers Visiting Cheju Island in Korea. *Journal of Ecotourism*, Vol. 2, No. 2, pp. 114-125.

Lim Khong Chiu, Radzliyana Radzuwan & Cheah Swee Ting (2014). Assessing Sport and Recreation Programmes‟ Service Quality at Hotels and Resorts: Towards Enhancing Customer Participation. *Journal of Tourism and Hospitality Management,* ISSN 2328-2169. January 2014, Vol. 2, No 1, 6-17.

MOTAC. (2014). *Officially Portal of Ministry of Tourism and Culture Malaysia.* Retrieved from http://www.motac.gov.my/.

Rovai, A. P., Baker, J.D., & Ponton, M.K. (2013). Social science research design and statistic: A practitioner's guide to research methods and IBM SPSS. Chesapeake: Watertree Press LLC.

Singh, P., Fook C.Y., & Sidhu G.K. (2006).*Acomprehensive guide to writing a research proposal.* Venton Professional, 132.

The National Ecotourism Plan, (1992). Ministry of Culture, Art and Tourism, Malaysia.

Tourism Malaysia (n.d.). Tourists arrivals and receipt to Malaysia. Retrieved on 17 August 2014, from http://corporate.tourism.gov.my/research.asp?page=facts_figures.

Tourism Malaysia, Ministry of Tourism and Culture, Malaysia. Malaysia Travel Guide: *Year of Festival* April 2015 (0415).

Tzeng, G.H. and Chang, H.F. (2011). Applying Importance-Performance Analysis as a Service Quality Measure in Food Service Industry. *Journal of Technology Management & Innovation*. 6(3): 106-115.