Enlightening Tourism. A Pathmaking Journal
Universidad de Huelva

VISITOR PERCEPTION, INTERPRETATION NEEDS, AND SATISFACTION OF ECO-TOURISM: THE CASE OF TAIJIANG NATIONAL PARK, TAIWAN

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ABSTRACT

Although eco-tourism have been discussed a lot from the viewpoints by communities and residents (Beeton, 2006; Jamal and Stronza, 2009; Ryan, 2002), the relationship among perception of eco-tourism, interpretation needs and satisfaction from the perspective of visitors remained unclear. Thus, the current study aimed at eco-tourism visitors to the Taijiang National Park in Taiwan, examining their eco-tourism perception, level of satisfaction, and interpretation needs. This study used convenience sampling, with questionnaires distributed at Taijiang National Park to visitors to the park. A total of 400 questionnaires were distributed, and 356 valid questionnaires were returned, giving a response rate of 89%. SPSS12.0 statistical software was used to carry out descriptive statistics analysis, factor analysis, reliability analysis, t-tests, and analysis of variance on the data collected to show the sample distribution, the reliability and validity of the scale, and the differences in the perception of, and level of satisfaction toward, eco-tourism among visitors from different backgrounds or with different interpretation needs. The results showed that most eco-tourism visitors believe that interpretation by tour guides is necessary. At the same time, visitors who express a greater need for interpretation services had a more comprehensive understanding of eco-tourism. The results of the regression analysis showed that visitors who supported "giving back to the community" had higher levels of eco-tourism satisfaction. Managerial and academic applications were suggested based on the research results.

KEYWORDS

Eco-tourism; Perception; Interpretation; Satisfaction; National Park.

ECONLIT KEYS

Z320; Z300; Q010.

1. INTRODUCTION

Although the primary goal of eco-tourism is not to satisfy visitors, the response of visitors toward eco-tourism, for instance the content of eco-tourism and the satisfaction with guided tours and other related services, is also an area that promoters of eco-tourism would like to learn more about. In a study on Australia's Great Barrier Reef, Coghlan (2012) points out that it is possible to conserve natural resources at the same time as creating tourist satisfaction through providing experiences of the natural environment and provision of high quality services. On the other hand, previous researches have also suggested that as eco-tourism is concerned with environmental education, tourism education, and respect for local communities, interpretation seems to be an important strategy to achieve sustainable tourism development (Moscardó, 1996; Yamada, 2011). Although eco-tourism have been discussed a lot from the viewpoints by communities and residents (Beeton, 2006; Jamal and Stronza, 2009; Ryan, 2002), the relationships among perception of eco-tourism, interpretation needs and satisfaction from the perspective of visitors remained unclear. Specifically, the main research objectives are as follows:

1. Understand visitors' perception of, and level of satisfaction toward, eco-tourism.
2. Understand the interpretation needs of visitors.
3. Examine differences in the perception of, and level of satisfaction toward, eco-tourism among visitors from different backgrounds or with different interpretation needs.
4. Examine the influence on perception of eco-tourism on level of satisfaction toward eco-tourism.

In the next section, previous studies on perception, interpretation needs and visitors' satisfaction of eco-tourism were reviewed to get an overall look of the issue.

2. LITERATURE REVIEW

2.1) *DEFINITION AND PERCEPTION OF ECO-TOURISM*

The contribution of eco-tourism is well-known about its conservation in natural areas (Diamantis, 1999; Fennell, 2008; Goodwin, 1996; Kelkit et al., 2010; Weaver, 2005). For example, Salum (2009) has stated that eco-tourism can slow the degradation or weakening of ecosystems and biodiversity. The International Eco-tourism Society (TIES) also defines eco-tourism as “responsible travel to natural areas that conserves the environment and improves the well-being of local people” (TIES, 2007).

More particularly, Powell & Ham (2008) have argued that sustainable eco-tourism is contingent on the 4Es: environmental conservation, equity, education, and economic benefits. In other words, eco-tourism is a type of tourism activity that reduces environmental degradation in the process of economic development, and supports environmental conservation, social justice, and environmental education as its major principles. To implement these principles, perception of eco-tourism should be developed first, not only for the local residents, but also tourists participating in eco-tourism. A study regarding the determinant strategies for eco-tourism in Turkey has pointed out that one of the most important strategies to advocate eco-tourism is to organize training programs to develop eco-tourism perception (Akbulak and Cengiz, 2014). Another example considering Canadian and German by Görnert (2004) have found that both German and Canadian tourists are interested in nature protection and they think nature protection and conservation is as more important than leisure activities. However, concerning the perception of eco-tourism, fewer Canadians are able to define the term eco-tourism than Germans. More recently, Chan and Baum (2007) have revealed that eco-tourists’ perception is multidimensional in nature and consists of participation in eco-activities, interaction with service staff, socialization with other eco-tourists and acquiring information. Therefore, as eco-tourists perception is multidimensional and determinant to eco-tourism, it seems necessary to understand the perception of eco-tourists first.

2.2) *INTERPRETATION IN ECO-TOURISM*

Although most of the literature has pointed out the importance of sustainability in eco-tourism (for instance educating tourists, providing financial assistance for the conservation, and giving back to local communities) (Edwards et al., 2003; Welford, Ytterhus and Eligh, 1999), actually achieving these goals in practice has proved to be

much more challenging than imagined (Doan, 2000; Kiss, 2004). To promote and implement eco-tourism, interpretation is often taken as an effective way to advocate eco-tourism, as Ferdinand and Jamarber (2011) have suggested that well-planned forms of tourism can provide a motivation for management and conservation, and can even bring a variety of benefits to local areas at both the economic and political levels. Early in 2003, Tubb has found that if properly designed and utilized, interpretation can impart knowledge and change the behavioral intentions of visitors, thereby achieving sustainable tourism. Powell and Ham (2008) also argue that during the eco-tourism experience, well-designed interpretation can strengthen the knowledge of visitors towards local areas and engender greater support for issues related to the management of local resources, and even produce environmental behavioral intentions and support for conservation. A study of wildlife tourism also highlights that as wildlife tourism and eco-tourism share many of the same concepts, incorporating eco-tourism's focus on education into wildlife tourism will have a positive impact on sustainable tourism (Rodger et al., 2007).

For national parks, which are set up for the conservation of natural and cultural resources, interpretation seems particularly important. In fact, the preciousness and vulnerability of national parks and conservation areas makes them more susceptible to serious impact from human activities (Weaver, 2000). As a result, interpretation education is even more important to strengthen the knowledge of visitors and improve their behavior. As Goh and Rosilawati (2014) explain, while there are concerns about potential threats to nature conservation, eco-tourism has a positive impact on local economies. For visitors, their affective image and perceived value are key effecting factors that might enhance their specific concern for and environmentally responsible behavior at the ecological environment of the eco-site (Chiu et al., 2014).

2.3) *SATISFACTION OF ECO-TOURISM*

Satisfaction about visitors participating in eco-tourism has been discussed in some previous studies. For example, a study of eco-tourism in a Nepalese conservation area by Barala, Sterna, and Hammett (2012) have found that the evaluation and level of satisfaction toward eco-tourism was related to whether a local guide was used. Chan and Baum (2007) have discussed about the various wants of potential

customers for eco-tourism. It was suggested that more attention should be given to eco-tourism sites and activities, site service staff and the quality of information for wildlife and local culture. Another study concerning visitors from different countries who visited a natural park reported that the majority of both Canadian and German groups were satisfied with the nature, recreation and infrastructure of the park (Görnert, 2007). In Romão, Neuts, Nijkamp, and Shikida's (2014) study about eco-tourism in Shiretoko Peninsula, it was revealed that satisfaction with the landscape and wildlife and boating experiences are important elements influencing the decision to repeat a visit or to recommend to friends and family. Moreover, it was also found that to observe wildlife during an eco-tour, using a small boat or a kayak increases the satisfaction of visitors. It implies that these boats with small size are more suitable for wildlife observation. Some other predeterminants of satisfaction for eco-tourism could also be seen in some studies, such as: image of the destination, the assimilation effect of the experience, and emotional connections. (Chen & Tsai , 2007), Cognitive (Oliver, 1993), cognition and affect (Chen, Lehto, & Choi, S., 2009).

As more and more population get involved in eco-tourism, numbers of tourists who visit eco-tourism settings or protected areas increased sharply in recent decades. Thus, it is necessary to understand more about eco-tourism perception, satisfaction, and interpretation needs from the perspective of eco-tourists. Therefore, the main purpose of this study is to explore the eco-tourism perception, level of satisfaction, and interpretation needs of visitors.

2.4) *RESEARCH SITE*

Taiwan is located to the southeastern edge of the Asian mainland, and is orogenically active, producing many mountains and complex topography. The climate shows oceanic subtropical features. As mountain ranges stretch across the entire island and are crossed by valleys, there are large differences in elevation, producing complex climatic factors. Together with the characteristics of the subtropical climate, this has produced a large variety of species, reflecting a rich ecological diversity. Therefore, in 1961, work was begun on promoting national parks and conservation work. Following the passage of the National Parks Law in 1972, a total of nine national parks have been established, including Taijiang National Park. Natural environmental features, such as mountains, forests, wetlands, and oceans, together

with rich biodiversity, provide an excellent opportunity for developing eco-tourism. Due to the rich ecological resources, in 2005 the National Sustainable Development Network of the Executive Yuan issued the Eco-tourism White Paper, describing the principles and strategies to promote eco-tourism development in Taiwan, hoping to use eco-tourism to achieve the following: 1. Sustainable land conservation, increased social well-being; 2. Encourage the experience of nature, provide a health tourism environment; 3. Strengthen community cultural economy, promote the eco-tourism industry; 4. Implement policy objectives, shape citizens with sound personalities.

The research site of the current study, Taijiang National Park, is located in the southwest of the island of Taiwan, and includes tidal land, sandbanks, and wetlands. The topographical and geological landscape and rich marine and terrestrial biological resources, in particular its well-known black-faced spoonbills (platalea minor), have also led to the rise of eco-tourism in the area. Within the national park, one can find interpretation services, such as signage boards displaying information about the environment, ecological classrooms, an interpretation center, and dedicated tour guides providing visitors with an enlightening eco-tourism experience. This study is therefore focused on eco-tourism visitors to the Taijiang National Park, examining the eco-tourism perception, level of satisfaction, and interpretation needs of visitors. According to the survey of Taijiang National Park (2015), the overall number of people who visit Taijiang with interpretation is 2,000 to 16,000 per month, depending on the season.

3. METHODOLOGY

3.1) *RESEARCH SUBJECTS AND SAMPLING METHOD*

Data were collected between February to March in 2015. Questionnaires were distributed on-site on both weekdays and weekends to visitors who were willing to fill the questionnaires via convenience sampling. A pilot study was taken in January, 2015 to exam the reliability and validity of scales in prior. Finally, a total of 400 questionnaires were distributed with 356 valid questionnaires returned, giving a response rate of 89%.

3.2) *QUESTIONNAIRE DESIGN*

The questionnaire is divided into three parts. The first part is concerned with the perception of eco-tourism, the second part is concerned with the level of satisfaction toward eco-tourism, and the third part is concerned with the characteristics of respondents and interpretation needs. In terms of questionnaire design, demographic data uses a nominal scale, while the perception of eco-tourism as well as satisfaction toward eco-tourism and willingness to make a return visit use a Likert 5-point scale, with scores from one to five indicating “strongly disagree,” “disagree,” “neither agree nor disagree,” “agree,” and “strongly agree.”

The eco-tourism perception scale items are revised from the items measuring the evaluation of eco-tourism developed by Barala et al. (2012), and the related literature on the content and definition of eco-tourism, producing a total of twenty-four items, including: eco-tourism as primarily encouraging residents and visitors to play a more active role in conservation, eco-tourism should implement interpretation and education programs for visitors, and minimizing the environmental, economic, and social damage of recreational activities through eco-tourism.

The eco-tourism satisfaction scale is based on studies by Goh and Rosilawati (2014) and Coghlan (2012), as well as the actual situation in Taijiang National Park. The scale contains seventeen items, including the content of tours provided by guides, the convenience of the facilities, and the adequacy of tourism information services.

Background characteristic items include gender, age, education, average income, place of residence and frequency of visits. Interpretation needs were also measured in this part with one overall item “Do you think that interpretation is needed for visitors of eco-tourism?” Five choices were provided for respondents to choose: (1)I think it is highly unnecessary; (2)I think it is unnecessary; (3)It is no difference for me concerning interpretation; (4)I think it is necessary; (5)I think it is highly necessary.

3.3) *DATA ANALYSIS*

In this study, we use SPSS12.0 statistical software and carry out descriptive statistics analysis, factor analysis, reliability analysis, t-tests, and analysis of variance on the data collected to show the sample distribution, the reliability and validity of the

scale, and the differences in the perception of, and level of satisfaction toward, eco-tourism among visitors from different backgrounds or with different interpretation needs.

3.4) *SCALE RELIABILITY AND VALIDITY*

In this study, the construct validity of the scale is tested with exploratory factor analysis (EFA), using the maximum variation method. Extracted factors with an eigenvalue of greater than 1.0 are named.

The validity and factor structure of the eco-tourism perception scale is as follows. Items 1-5 of the scale belong to factor 1, items 6-11 belong to factor 2, items 12-16 belong to factor 3, items 17-20 belong to factor 4, and items 21-24 belong to factor 5. These five dimensions were named “resources and content,” “environmental education and interpretation,” “giving back to the community,” “public-private partnership,” and “the concept of sustainable development.” The factor loadings for the five dimensions are in the range 0.66~0.75, 0.47~ 0.79, 0.62~0.85, 0.76~0.80, and 0.40~0.80, respectively. The eigenvalues are 11.61, 1.88, 1.80, 1.21, and 1.13, respectively. The total explained variation is 73.42%.

No	Items	Mean	SD	Factor Loading				
				F1	F2	F3	F4	F5
1	Eco-tourism includes appreciate the local natural landscape	4.20	.76	.67				
2	Eco-tourism includes experiencing local history and culture	4.08	.88	.66				
3	Eco-tourism can do a better job of ecological conservation	4.01	.95	.68				
4	Eco-tourism contains both the meaning of education and travel experience	4.20	.76	.75				
5	Eco-tourism contains issues of conservation and environment protection	4.08	.75	.74				
6	Increases the awareness of the area’s natural and cultural systems	3.91	.93		.67			
7	The expenses of eco-tourism visitors shall be given back to the local residents	3.60	.85		.79			

8	The revenue from eco-tourism shall be provided to local residents and preservers of culture and nature	3.96	.84	.71			
9	Promotes participation and empowerment of local people	3.69	.73	.47			
10	Contributes to the conservation and management of legally protected area	3.96	.90	.76			
11	Directs economic and other benefits to local people	4.01	.75	.51			
12	Education and interpretation programs should be implemented to tourists involving in Eco-tourism	3.89	.83		.62		
13	Provides adequate information to visitors before and during visits	3.98	.75		.72		
14	Satisfies visitors' expectation toward successful eco-tourism project	3.99	.74		.82		
15	Visitors should accept stricter restrictions in protected areas	3.96	.81		.85		
16	There should be leading of professional guide for tourists in order to reduce inadequate behavior	3.98	.77		.83		
17	In the process of the tour, lifestyle of local residents should be respected	4.20	.67			.80	
18	Management style of eco-tourism should be in congruence with environmental protection	4.18	.71			.76	
19	Government should formulate relevant laws and regulations to implement eco-tourism.	4.12	.76			.76	
20	Both government and private organizations should play the role of strict supervision	4.16	.71			.76	
21	Eco-tourism should aim at groups with small numbers of tourists	3.98	.90				.80
22	Revenue of eco-tourism is regarded as a source of funding for conservation	4.24	.82				.40
23	Minimizes negative impacts to the environment and to local people	4.20	.78				.77
24	Numbers of tourists should be limited in protected areas	4.13	.80				.71

Eigen value	11.61	1.88	1.80	1.21	1.13
Explained variance (%)	17.02	15.47	15.27	14.81	10.86
Cumulative explained variance(%)	17.02	38.48	47.75	62.56	73.42
Cr0nbach's alpha	.90	.87	.92	.90	.83

Table 1: EFA Summary of Eco-tourism Perception Scale.

The results of the factor analysis for the eco-tourism satisfaction scale show items 1-7 of the scale belong to factor 1, items 8-11 belong to factor 2, and items 12-17 belong to factor 3. These three dimensions are named "visitor services and interpretation," "leisure facilities," and "environmental content." The factor loadings for the three dimensions are in the range 0.45~0.81, 0.69~0.84, and 0.57~0.79, respectively. The eigenvalues are 8.20, 1.56, and 1.23, respectively. The total explained variation is 64.72%.

No	Items	Mean	SD	Factor Loading		
				F1	F2	F3
1	Service of Staff	3.74	0.66	.81		
2	Feedback	3.42	0.69	.76		
3	Overall quality of Interpretation	3.75	0.75	.81		
4	Content of Interpretation	3.63	0.73	.45		
5	Information	3.62	0.71	.51		
6	Facility	3.47	0.71	.50		
7	Route Design	3.60	0.69	.58		
8	Destination board	3.52	0.73		.70	
9	Recreation area	3.42	0.69		.70	
10	public convenience	3.39	0.80		.84	
11	Cleanliness	3.46	0.73		.69	
12	Accessibility	3.48	0.69			.78
13	Scenery Uniqueness	3.67	0.76			.64
14	Attractiveness	3.42	0.71			.75
15	Destination Design	3.49	0.71			.79
16	Activity	3.49	0.74			.72
17	Interpretation board	3.43	0.68			.57
	Eigen value			8.20	1.56	1.23
	Explained variance (%)			22.94	21.88	19.90
	Cumulative explained variance(%)			22.94	44.82	64.72
	Cronbach's alpha			.88	.82	.89

Table 2: EFA Summary of Eco-tourism Satisfaction Scale.

4. RESULTS

4.1) *SAMPLE PROFILE*

Of the 356 effective samples collected, males and females both accounted for 50% of the total, with the largest group of respondents being in the 21-30 age range, accounting for 168 respondents (47.2% of the total). Respondents with a university / college education made up the largest group, accounting for 248 respondents (69.7% of the total). In terms of place of residence, southern Taiwan made up the largest group, accounting for 240 respondents (67.4% of the total), followed by northern Taiwan with 50 respondents (14.0% of the total). In terms of frequency of visits, the largest group of respondents had visited Taijiang National Park only once, accounting for 258 respondents (72.5% of the total). The next largest group had visited twice, accounting for 70 respondents (19.7% of the total), while those who had visited three times or more accounted for the smallest group, with 28 respondents (7.9% of the total). In terms of the need for interpretation by a professional tour guide, 44 respondents stated that it was highly necessary (12.4% of the total), 190 respondents stated it was necessary (53.4% of the total), 118 respondents were not concerned either way (33.1% of the total), while only 1.2% of respondents thought that this service was unnecessary or highly unnecessary, indicating that a majority of visitors to the Taijiang National Park found a need for interpretation services by a professional guide.

4.2) *ANALYSIS OF VARIANCE IN ECO-TOURISM PERCEPTION FOR BACKGROUND CHARACTERISTICS AND INTERPRETATION METHOD*

The comparison of variance in eco-tourism perception show that there are significant differences in terms of gender, age, level of education, frequency of visits, and interpretation needs, with female visitors and visitors in the 41 to 50 age range, visitors with a graduate school education, and visitors that had visited three times or more showing higher levels of perception when compared to other groups. Furthermore, visitors who stated that interpretation services were “highly necessary” had higher levels of perception than visitors who thought such services were only “necessary” or who did not express a preference.

Variable	Gender	Number of people	Mean	Standard deviation	t/F value	Post hoc comparisons
Gender	Male	178	3.91	.54	-4.23*	
	Female	178	4.15	.54		
Age	Under 20 (1)	66	3.77	.56	8.62*	2,3,4>1 3,4>5
	21-30 (2)	168	4.10	.53		
	31-40 (3)	50	4.19	.52		
	41-50 (4)	26	4.27	.53		
	Over 50 (5)	46	3.85	.49		
Level of education	Elementary school or lower (1)	4	3.08	.00	9.27*	4,5>1 4>1,2,3
	Junior high school (2)	28	3.68	.34		
	Senior high school and vocational (3)	52	3.86	.49		
	College and university (4)	248	4.11	.57		
	Graduate school or higher (5)	24	4.13	.35		
Place of residence	North	50	4.06	.58	.69	Not significant
	Central	44	3.93	.50		
	South	240	4.05	.57		
	East	20	4.02	.41		
	Outlying islands	0	0	.00		
	Other	2	3.63	.00		
Frequency of visits	First visit (1)	258	3.97	.55	6.01*	3>1
	Second visit (2)	70	4.15	.59		
	Third visit or more (3)	28	4.28	.36		
Interpretation needs	Highly unnecessary (1)	2	3.75	.00	9.72*	5>3,4
	Unnecessary (2)	2	4.96	.00		
	Not concerned either way (3)	118	3.88	.55		
	Necessary (4)	190	4.03	.52		
	Highly necessary (5)	44	4.41	.53		

*p<.05

Table 3: Comparison of Difference of background characteristics on Eco-tourism Perception.

4.3) *ANALYSIS OF VARIANCE IN ECO-TOURISM SATISFACTION FOR BACKGROUND CHARACTERISTICS AND INTERPRETATION METHOD*

The comparison of variance in eco-tourism satisfaction shows that there are significant differences in terms of gender, age, frequency of visits, and interpretation needs, with female visitors showing greater satisfaction than male visitors, while visitors in the 31-40 age range show greater satisfaction than those aged 21-30.

Visitors that had visited two times or more showed higher levels of satisfaction than first time visitors, and visitors who stated that interpretation services were “highly necessary” or “necessary” had higher levels of satisfaction than visitors who did not express a preference.

Variable	Gender	Number of people	Mean	Standard deviation	t/F value	Post hoc compare-sons
Gender	Male	178	3.46	.50	-3.54*	
	Female	178	3.63	.47		
Age	Under 20 (1)	66	3.49	.49	3.87*	3>2
	21-30 (2)	168	3.48	.52		
	31-40 (3)	50	3.54	.52		
	41-50 (4)	26	3.61	.24		
	Over 50 (5)	46	3.55	.41		
Level of education	Elementary school or lower	4	4.00	.00	1.37	Not significant
	Junior high school	28	3.53	.46		
	Senior high school and vocational	52	3.60	.60		
	College and university	248	3.52	.49		
	Graduate school or higher	24	3.64	.26		
Place of residence	North	50	3.48	.66	1.04	Not significant
	Central	44	3.60	.59		
	South	240	3.56	.45		
	East	20	3.51	.21		
	Outlying islands	0	.00	.00		
	Other	2	3.00	.00		
Frequency of visits	First visit (1)	258	3.49	.50	6.68*	2,3>1
	Second visit (2)	70	3.69	.48		
	Third visit or more (3)	28	3.73	.41		
Interpretation needs	Highly unnecessary (1)	2	3.00	.00	13.61*	2,4,5>3 2>1,3,4
	Unnecessary (2)	2	4.82	.00		
	Not concerned either way (3)	118	3.36	.52		
	Necessary (4)	190	3.59	.43		
	Highly necessary (5)	44	3.82	.43		

*p<.05

Table 4: Comparison of Difference of background characteristics on Eco-tourism Satisfaction.

4.4) *REGRESSION ANALYSIS FOR RELATIONSHIP BETWEEN ECO-TOURISM PERCEPTION AND SATISFACTION*

In order to understand whether the eco-tourism perception of visitors influences their level of satisfaction toward eco-tourism, this study carries out multiple regression analysis. The results show that the five dimensions of eco-tourism perception have a significant influence on eco-tourism satisfaction (F=34.11, p<.05), which can explain 32% of the total variance in eco-tourism satisfaction. Of the five dimensions, the "giving back to the community" dimension reaches a significance level (t=6.33), indicating that when visitors show greater identification with eco-tourism giving back to local communities, they have higher levels of satisfaction with eco-tourism. This dimension includes items measuring eco-tourism as primarily encouraging residents and visitors to play a more active role in conservation, eco-tourism spending should benefit residents themselves, revenue should be given to community residents, and individuals involved in cultural and natural conservation, residents should have decision-making power over eco-tourism development, a form of tourism that is responsible to the local community and protects the natural environment and the well-being of local residents, and generates economic and employment opportunities for local residents.

Variable	βvalue	Standard error	t value
Dimension1:Resources and content	.09	.05	1.22
Dimension2:Giving back to the community	.45	.05	6.33*
Dimension3:Environmental education and interpretation	-0.01	.05	-0.11
Dimension4:Public-private partnership	.01	.05	.14
Dimension5:Concept of sustainable development	.09	.05	1.40
F = 34.11* R = .57 R^2 = .33 Adj.R^2 = .32			

*p<.05

Table 5: Relationship between Eco-tourism Perception and Satisfaction.

5. DISCUSSION

This study investigated visitors' perception, level of satisfaction, and interpretation needs towards eco-tourism, examining the difference in eco-tourism perception and satisfaction between visitors with different background characteristics and

interpretation needs, and the influence of perception of eco-tourism on the level of satisfaction toward eco-tourism.

The results show that most eco-tourism visitors believe that interpretation by tour guides is necessary. At the same time, visitors who express a greater need for interpretation services have a more comprehensive understanding of eco-tourism. In terms of the background characteristics of visitors, it was found that visitors that were more educated, in a younger age group, and had visited the national park more frequently had a better perception of eco-tourism as well as a higher level of eco-tourism satisfaction. The finding is congruent with Tubb (2003), Powell and Ham (2008) and Rodger et al (2007) which recognized the function and benefits of interpretation within the eco-tourism setting. It is believed that in order to understand the special ecology of the national park and the local culture, interpretation by professional tour guides is a viable approach. Typically speaking, the basic perception of eco-tourism is higher among visitors who expressed interpretation needs. These individuals are also more likely to support the concept of eco-tourism and hope to use interpretation to gain a better understanding and make a fuller contribution to the local community. In addition, higher levels of education and more frequent participation in eco-tourism both produce higher levels of support for the concept of eco-tourism, demonstrating that the concept of eco-tourism and related knowledge can be obtained through education combined with actual experience. When promoting eco-tourism, if this concept can be incorporated into interpretation education in national parks or conservation areas, this will help generate a deeper understanding of the concept. The development of eco-tourism in an ideal; it faces many difficulties in practice. If visitors are not able to appreciate the reasons for the protection of resources, based on the concept of consumer behavior, their level of satisfaction and willingness to make a return visit is likely to be low.

The results of the regression analysis showed that visitors who supported “giving back to the community” had higher levels of eco-tourism satisfaction. The above research results show that in recent years there has been a continued focus on eco-tourism, with an increasing numbers of visitors accepting the eco-tourism principles of low-impact tourism and giving back to the community. Based on the research results, visitors with a greater perception of eco-tourism are likely to experience greater satisfaction, especially in the area of giving back to the community. If visitors can support the principle of returning the income generated from eco-tourism for the

development of local communities, and recognize the culture and well-being of residents, their understanding of the local area can be converted into satisfaction with their visit to the area. Although the finding is somewhat different with the results from Barala et al. (2012) in which no significant relationship was found between visitors' perceptions of eco-tourism and their satisfaction, Coghlan (2012) explained that the weak links might be derived from the complex system of cause and effect, and hence to become "messy" as noted by McCool (2009).

6. RECOMMENDATIONS

According to research findings, some managerial implications were proposed. First, some visitors may believe that any tourism related to nature is eco-tourism. However, eco-tourism also encompasses the concepts of responsible tourism, low-impact tourism, giving back to the community, and interpretation education. Therefore, it is recommended that national parks, conservation areas, and places that are interested in developing eco-tourism employ professional guides to provide interpretation. Such guides can both provide interpretation for visitors, and can also act as the first line of defense for the local environment. At the same time, education in schools is also a crucial part of environmental education. Promoters of eco-tourism or managers of conservation areas can make use of formal classes or advocacy campaigns in schools. Even if students do not actually visit the eco-tourism area, it is possible to use advocacy of the principle of eco-tourism to strengthen students' knowledge, meaning that when they have a similar travel experience or come into contact with natural and cultural resources in the future, they would already have a basic understanding of conservation.

Although this study provides some starting points for thinking about eco-tourism, limitations remain that should be noted. The study site is limited to the Taijiang National Park in Taiwan, which is known for black-faced spoonbills. The questionnaire was distributed at the very time that the spoonbills were passing through Taiwan. Most tourists visit Taijiang National Park specifically to see the black-faced spoonbill. Therefore, the question of whether the findings can be applied to other types of conservation areas cannot be answered without further research. For future research, there were also some theoretical implications. First, the current

study focuses on the perspective of visitors to exam their perception towards eco-tourism, however, both the viewpoints of local residents in the host community and the government are crucial when developing eco-tourism. It is suggested for future researchers to conduct an overall research from various perspectives is needed for understanding the operation and development of the entire system in eco-tourism. Furthermore, the types and quality of interpretation might also a key component in eco-tourism. The effects of interpretational signage, brochure, video show might be different with guiding, and guiding with a tour guide or a well-trained local interpreter might also be different. It needs further research to figure out the role of interpretation in eco-tourism.

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