

ASSESSING INDICATORS RELATING TO OVERALL TOURIST SATISFACTION OF ECOTOURISM DEVELOPMENTS IN EASTERN NORTH CAROLINA

Christopher L. Ellis

Ph.D. Candidate in Coastal Resources Management
Program, East Carolina University, 207 Ragsdale Building,
Greenville, NC 27858-4353

Hans Vogelsong, Ph.D.

Department of Recreation and Leisure Studies, East
Carolina University, 174 Minges Coliseum, Greenville, NC
27858

Abstract: The Partnership for the Sounds is a non-profit organization based in eastern North Carolina and is in charge of operating a collection of museums and cultural sites including the North Carolina Estuarium in Washington, The Mattamuskeet Lodge in Swan Quarter, and the Columbia Theater Cultural Resource Center in Columbia. A recent survey was conducted at these areas by the Department of Recreation & Leisure Studies at East Carolina University. This survey addressed issues such as personal expenditures, perceptions and satisfaction rankings of various aspects of the facility, demographic information, and finally, a numeric overall rating of the site by the individual. An attempt is made to identify satisfaction indicators in relation to reported satisfaction levels of eco-tourism site visitors. More specifically, there is a need to deconstruct the visitor's overall experience and focus on individual factors that might influence satisfaction, or adversely, have little bearing on overall satisfaction. Three primary relationships will be examined. The first of these will be overall satisfaction in relation to personal expenditures. These expenditures include admission fees, food and lodging, transportation, and other activities and entertainment engaged in while in the immediate area. The second area focuses on specific activity at the site such as how much time was spent at the location, quality of the facility, opportunities to learn new information, and perceptions of safety issues and facility staff. Finally, personal demographic information will be observed to indicate whether overall visitor satisfaction at these areas directly correlates to age, education, race or annual household income.

Introduction

This paper is part of a larger study funded by the Economic Development Administration under the United States Department of Commerce. The initial purpose of this study was to assess the economic impact of ecotourism developments on the Albemarle/Pamlico region of North Carolina. Additional information concerning visitor demographics and satisfaction levels was recorded during the data collection phase of this project. The primary purpose of this study was to explore satisfaction indicators relating to ecotourism sites in eastern North Carolina.

Tourism in the United States is continually rising. The World Resources Institute reports that the tourism industry as a whole is roughly increasing at four percent per year (Amaro, 1999). The fastest growing segment of tourism, at ten percent, is nature travel. Nature travel could also be referred to as ecotourism. Several attempts have been made to create a clear and accurate definition of ecotourism. One such definition states that ecotourism is "travel to fragile, pristine, and usually protected areas that strives to be low impact and usually small scale" (Honey, 1999, p. 25). The definition continues by including aspects of travel education, economic development of local communities, and increasing respect for cultural diversity. A simplified definition is offered by the Ecotourism Society as "responsible travel to natural areas which conserves the environment and sustains the well-being of local people" (Amaro, 1999, p. 16).

With tourism come certain negative attributes of a host community such as increased litter and pollution, increased seasonal employment, inflated local economy, and exploitation of natural resources. Positive outcomes could also result from these recreational outlets with proper guidance and direction (Henderson, 1991). The benefits of ecotourism have the potential to reduce these negative consequences through an environmentally educated and enlightened public with the ability to make informed decisions concerning local natural resources, as well as contributing to local economies through lodging, food, or shopping (Anonymous, 2001; Heung & Cheng, 2000).

A primary recreational interest within the baby-boomer population is ecotourism (Lindberg, Wood, & Engeldrum, 1998). With the baby-boomer population nearing retirement, a major influx in the ecotourism segment over the next twenty years could be expected if current trends continue. A present challenge for leisure researchers is how to accurately measure the social experience within ecotourists (Lindberg, Wood, & Engeldrum, 1998). Though the primary goals of ecotourism focus on environmental protection, awareness, and local economic development, the creation of positive social experiences within visitors is also imperative to the longevity of the ecotourism industry. Related to any tourism experience is the level of visitor (customer) satisfaction.

Review of Literature

A study conducted by Kerkvliet and Nowell (1999) focuses on visitor experience in relation to distance traveled and effort required to access a specific location. Time, effort and money required to access a particular location are identified as particularly important by the authors. The allocation time and monetary costs are measured by the travel cost model. Complications have been found with this model relating to the researcher being unable to accurately measure and weigh the costs that are most important to the customer. By identifying indicators relating to overall satisfaction, a specific population segment, such as ecotourists, can be better understood from a social perspective.

Related to travel cost is the variable of site preference. Specific attributes relating to setting have the ability to constrain individuals and thereby influence their destination preferences (Siderelis & Moore, 1998). While recreational sites are selected according to related costs to accessibility, it is questionable as to what level that satisfaction is based on expenditures incurred during participation. Ultimately, Siderelis and Moore conclude that recreational trip planning is a two-part process involving the number of recreational trips to be taken per season, followed by identification of potential substitute sites if unfavorable conditions such as crowding become present. Visitor satisfaction levels could possibly be contingent upon these pre-trip decisions relating to destination.

Another important area to tourism service providers is customer loyalty and repeat visitation. Repeat visitation displays a certain level of individual satisfaction and attachment to particular location and/or activity. Tourist attractions have been found to rely heavily on loyal, repeat visitors (Gitelson & Crompton, 1984). A study by Laverie and Arnett (2000) examines recreational attachment and satisfaction in the context of devoted sports fan behavior. Similarities in the population segments of sports fans and ecotourists can be observed through the understanding and utilization of the social identity theory. This theory, similar to the symbolic interaction theory, states that certain groups within society are important to the individual because one's social networks are formed based on their social identity (Laverie & Arnett, 2000). According to Stryker (1980), the primary purpose of the social identity theory is to determine why an individual selects certain activities over others when given a diversity of available options. This theory could in part explain why some individuals express higher levels of satisfaction than others in an ecotourism setting. While those who seek out ecotourism activities may be highly satisfied, those who are simply accompanying their friends / family in such an activity may display lower satisfaction levels due to a lack of social identity with the present scenario.

Another study concerning tourism destination loyalty was conducted by Opperman (2000) on the lifelong travel patterns of New Zealand residents. Three primary areas were observed by means of a mail-back questionnaire: visitation frequency between 1985 and 1995, past visitation behavior, and predicted visitation rates. By associating sociodemographic, lifestyle, and tourist loyalty variables, specific population segments were identified as having specific desired loyalty types. Ultimately, the study findings suggest that past travel experiences significantly influence future destination selection.

Certain sociodemographic characteristics of recreational and tourism participants have been suggested to have an effect on leisure expenditures. A study by Dardis, Soberon-Ferrer, and Patro (1994) analyzed such leisure expenditures of a sample population by means of data acquired through the U.S. 1988-89 Consumer Expenditure Surveys. A sample of 2,088 households was subjected to a series of interviews regarding a range of personal demographic and expenditure variables. The findings of

their study suggest in terms of expenditures, the salary of the head of household and those households who received non-salaried (waged) income had the greatest negative impact on leisure spending (Dardis, Soberon-Ferrer, & Patro, 1994). Demographic variables found to have a significant impact on such expenditures were age, race, and education of the head of household. In terms of age, the older the household, the less money spent on leisure pursuits. Referring to the category of race, an African-American head of household spent significantly less than other races and nationalities. Finally, education was found to be positively influenced with increased leisure spending with higher education levels. While less affluent households were found to participate in leisure spending as well, these households were much more likely to spend money on passive types of leisure activities or social entertainment instead of physically active leisure pursuits. These findings support the previous study of Dardis, Derrick, Lehfeld, and Wolfe (1981) in that expenditures increased with increasing levels of income and education and decreased with older aged households.

Tourist satisfaction is significantly related to customer loyalty, repeat visitation, and positive social communications (Beeho & Prentice, 1997). A difficult question to answer is what exactly constitutes a satisfactory leisure or ecotourism-based experience. Dorfman (1979) attempts to solidify the meaning of satisfaction in the context of recreational camping. He states that satisfaction levels are "maximized when aspiration (desirability) equals perception but only when the desirability is high for that condition" (Dorfman, 1979, p. 486). Desirability for conditions could directly relate back to the social identity theory and the need for personal distinctiveness.

When a tourist is satisfied, the agency is then credited with providing an effective service opportunity (Noe 1999). Customer satisfaction is often contingent upon levels of individual effort and expectations. Customer effort is any physical, mental, or monetary resource expended by the consumer in the acquisition of a service or product (Cardozo, 1965). Customer effort plays a secondary role to customer expectations. Tourists have certain preconceived notions and mental images of a location before they ever visit. Expectations are one of the driving forces for the initial desire to visit a particular location. If customer effort is high and high expectations are met, high customer satisfaction is likely. Adversely, an individual with high expectations who receives a low-value experience will likely report low customer satisfaction, regardless of level of customer effort. This high-value expectation, low-value product is known as the dissonance theory (Cardozo, 1965). To reduce dissonance levels in tourists, it is important as a service provider to offer accurate, realistic information to the public, as to not create heightened expectations that are not likely to be met. It is important to remember that quality tourist experiences result from businesses that know their product, their customers, and their employees (Hayes, 1997).

Study Methods

Study Area

The Partnership for the Sounds (PFS) founded in 1993, is a nonprofit organization that promotes nature-based, ecotourism activities in the Albemarle-Pamlico region of eastern North Carolina. Sites owned and operated by PFS possess a range of natural, cultural, and state historical values. The mission of PFS is to "stimulate sustainable community-driven economic well-being within the Albemarle-Pamlico region through the promotion of responsible eco/heritage tourism, environmental stewardship, and education." Three PFS establishments were the focus of this study, encompassing five coastal counties: Beaufort, Washington, Bertie, Tyrrell, and Hyde. In creating an overall experience within visitors, two primary themes guide their efforts. The first of these is to create environmental awareness. All PFS establishments have education centers that offer displays, hands-on exhibits, and various individual and group activities relating to the value of local wildlife and resource conservation. Their second primary theme is the promotion of ecotourism activities. These site-specific activities include canoeing, birdwatching, fishing, regional arts and craft tours, and nature hikes.

The first site of observation is the North Carolina Estuarium, located in Washington, NC. This establishment is a nature center/aquarium on the Tar-Pamlico Estuary, which gives it its name. Second, is the Columbia Theater Cultural Resources Center, located in Columbia, NC. This historical structure, originally built in 1938, was converted by the PFS into a cultural history museum in 1995. The establishment directs their displays, exhibits, and excursions toward farming, fishing, and forestry subject matter, which have historically remained the primary industries of the region. The final area of interest is the Mattamuskeet lodge which is located on Lake Mattamuskeet, North Carolina's largest natural lake. The lodge possesses great historical value to the state, originally constructed in the early 1900's as a pump house in attempts to drain the lake to use the land for agricultural purposes.

The PFS establishments have greatly contributed to the local economies of many less affluent communities in eastern North Carolina. The five counties under observation all place in the bottom third of North Carolina counties for mean household income, and two of the three poorest counties in the state are within the study region (Vogelsong & Ellis, 2001). Additionally, four of the five counties have household incomes 20 percent below the state median of \$42,400.

Visitor Survey

Data was collected by means of a combination of brief, on-site interviews followed by mail-back questionnaires, which were given to the participant following the on-site portion. The on-site portion focused on certain demographic information (gender, state and county of residence) and a limited number of core, central question

relating to the overall study objective such as primary purpose of visit, distance traveled, and if it was the respondent's first visit to the area. The mail-back questionnaire addressed more in-depth information on visitor experience and satisfaction. Expenditure and satisfaction variables were measured through fill-in-the-blank questions, as well as five-point Likert scale responses.

Research assistants and PFS personnel approached potential respondents, and briefly introduced themselves and gave a brief synopsis of the project. Permission was then requested to administer a brief 1-2 minute survey to them. At the closing of the on-site portion of the questionnaire, the respondents were asked to participate in a second, mail-back portion of the questionnaire. If the individual complied, they were given the survey in a pre-addressed, stamped envelope. Finally, the respondent's name and address was recorded, with their permission, for follow-up purposes in the event that their questionnaire was not returned. If their questionnaire had not been returned within 7-10 days, a reminder postcard was sent to all participants who agreed to take part in the mail-back questionnaire. If there was still no response, an additional survey was mailed after a two-week period, followed by a final survey mailing after an additional two weeks. This follow-up methodology is based on the Dillman (1978) Total Design Method. The survey yielded an overall response rate of 74 percent.

Data collection for this project was conducted from June through August, 2000 over a period of ten weeks. The data collection process resulted in a total of 338 completed on-site surveys and 251 completed mail-back questionnaires. Sampling by each research assistant was conducted at two sites each weekend and one site during each week. Varying times and days of the week were also incorporated in attempts to gain a more representative population and minimize sample bias.

Study Findings

A profile of the sample population, including age, gender, group size, distance traveled, and first-time visitor status is shown in Table 1. Though gender was evenly proportional, there was marked variance in nearly all demographic categories observed. The overall mean age of sampled visitors was found to be 48.6 years; however, there was less than ten percent of visitors under the age of thirty. Group size ranged from single individuals to elementary school groups with as many as 88 people and had a mean of just fewer than four people (3.98).

Table 1. Visitor Sample Profile

Age	People Surveyed	%
18-22	9	4
23-30	17	4
31-40	38	18
41-50	54	23
51-60	69	29
>50	46	19

Mean age = 48.60

Gender	People Surveyed	%
Male	157	50
Female	158	50

Group Size	People Surveyed	%
By Self	23	7
2 people	120	37
3-4 people	126	39
5-6 people	34	10
>6 people	22	7

Mean Group Size = 3.98

Travel Distance in Miles	People Surveyed	%
>20	99	31
20-60	134	42
61-120	39	12
121-180	16	5
181-240	9	3
241-300	13	4
301-360	4	1
>360	11	3

Mean Travel Distance = 76

Median Travel Distance = 30

First Time Visitor	People Surveyed	%
Yes	244	78
No	81	22

The primary concern of this paper is to determine overall satisfaction levels in PFS visitors and determine specific attributes that contribute to their level of satisfaction. The survey asked the question: on a scale of 1 – 10, how would you rate your overall trip to the site (ten being the best possible trip imaginable and one being the worst possible experience you can imagine)? The mean response was found to be very high at 8.39. Differences in satisfaction between categories of different visitor groups were explored using t-tests and analysis of variance. The results of these tests are summarized in Table 2. The only significant differences found between these groups were for repeat visitation ($t = -2.89$). As expected, repeat visitors were significantly more satisfied than first-time visitors. No significant differences were found between genders, education levels, or income categories.

Relationships between satisfaction and interval-scaled visitor characteristics were measured through Pearson correlation. Table 3 summarizes the relationship of satisfaction to these characteristics. Not surprisingly, age was positively correlated with satisfaction ($r = .193$). As visitor age increases, so do levels of reported satisfaction.

The intervallic variables of expenditures, distance traveled, duration of visit, and group size displayed no significant relationships.

Table 2. Differences in Satisfaction Between Groups

Variable	Satisfaction Scores			
	Mean	sd	t or F	Sig.
<u>Gender</u>				
Male	8.29	1.615	-1.053	.294
Female	8.50	1.483		
<u>Education Level</u>				
11 th grade or less	3	.577	1.675	.156
High School grad.	29	1.412		
Some college	68	1.511		
College grad.	65	1.368		
Post graduate	77	1.749		
<u>Repeat Visitor</u>				
Yes	8.79	1.130	-2.886	.005
No	8.23	1.653		
<u>Household Income</u>				
< \$10,000	9.00	1.069	1.347	.238
\$10,000-\$19,999	8.33	1.118		
\$20,000-\$29,999	7.81	1.223		
\$30,000-\$39,999	8.77	.884		
\$40,000-\$49,999	7.95	2.126		
\$50,000-\$75,000	8.14	1.658		
> \$75,000	8.40	1.604		

Table 3. Relationship Between Satisfaction and Interval-Scaled Visitor Characteristics

	Mean	sd	r	Sig.
Expenditures	\$171.2	455.46	-.114	.075
Age	48.6	13.261	.193	.003
Distance Traveled	76 miles	129.447	-.045	.497
Duration of Visit	1:36	0:55	.113	.078
Group Size	3.98	6.063	.001	.983

The relationship between satisfaction and site-specific characteristics were explored by Pearson correlations. A summary of responses relating to these specific-site attributes can be found in Table 4. All twelve of the identified attributes were significantly related to satisfaction levels. Quality of exhibits ($r = .545$), opportunity to learn something new ($r = .447$), and facility condition ($r = .474$) displayed especially high levels of importance. These relationships seem to suggest the value that visitors place on overall product/service quality. These customer values are consistent across nearly all demographic groups under observation.

Conclusions

Overall, PFS visitors exhibited relatively high satisfaction levels with a mean score of 8.39 out of 10. This may suggest that the PFS is effectively serving their diverse population of visitors. With the exception of age, observed levels of satisfaction remained consistent across different demographic groups. Not surprising, repeat visitors ($t = -2.89$) were found to display significantly higher satisfaction

levels than first-time visitors. Both group size and distance traveled, displayed no significance in relation to overall satisfaction. Site-specific variables (cleanliness, safety, etc.) displayed a much higher role in overall satisfaction than other variables. PFS visitors seemed especially responsive to these basic service attributes above all other variables in the study.

Table 4. Relationship Between Satisfaction and Site-Specific Characteristics

	Mean	r	Sig.
Quality of Exhibits	4.47	.545	.000
Opp. to Learn Something New	4.56	.447	.000
Opp. To Relax	4.52	.407	.000
Facility Cleanliness	4.76	.379	.000
Facility Condition	4.66	.474	.000
Availability of Space	4.68	.362	.000
Personnel Helpfulness	4.76	.416	.000
Safety	4.67	.344	.000
Other Visitors Behavior	4.61	.285	.000
Visitor Information Quality	4.56	.371	.000
Other Local Opps.	3.80	.315	.000
Shopping and Dining Opps.	3.59	.320	.000

Implications for Application

Although demographic variables were not found to be related to overall satisfaction in this study, they should not be discounted due to the multi-faceted nature of tourist behavior. The overall response rate of the mail-back portion of the project was somewhat low, though initial sample numbers were met and adequate for statistical analysis. It is important for tourism service providers to understand the diversity of their potential customers and attempt to cater to the needs of all population segments. Site-specific variables such as everyday maintenance, cleanliness, safety, and employee friendliness and professionalism are of tremendous value in creating visitor satisfaction. Quality services and employees leave a positive impression on visitors regardless of their overall experience. Quality service delivery also possesses the ability to increase monetary profits. The premise of service quality meanders within all aspects of the tourism experience from promotional materials, on-site personnel, cleanliness of facilities, accessibility, and employee knowledge and courtesy. This should be consistently emphasized to staff and personnel in order to maintain high standards. It is fortunate that these sites have satisfied repeat visitors. However, a creative approach should be taken in the frequent changing of exhibits, programs, and outdoor excursions to offer more reasons for repeat visitation.

References

- Amaro, B. (1999). Ecotourism and ethics. *Earth Island Journal*, 14, 16-17.
- Anonymous. (2001). Ecotourism in New Caledonia. *Parks & Recreation*, 36, 120-127.

- Beeho, A. J. & Prentice, R. C. (1997). Conceptualizing the experiences of heritage tourists: A case study of New Lanark World Heritage Village. *Tourism Management*, 18 (2), 75-87.

- Cardozo, R. N. (1965). An experimental study of customer effort, expectation, and satisfaction. *Journal of Marketing Research*, 2, 244-249.

- Dardis, R., Soberon-Ferrer, H., & Patro, D. (1994). Analysis of leisure expenditures in the United States. *Journal of Leisure research*, 26 (4), 309-314.

- Dardis, R., Derrick, F., Lehfeld, A., & Wolfe, E. K. (1981). Cross section studies of recreation expenditures in the United States. *Journal of Leisure Research*, 13 (3), 181-194.

- Dillman, D. (1978). *Mail and telephone surveys: The total design method*. New York: Wiley.

- Dorfman, P. W. (1979). Measurement and meaning of recreation satisfaction: A case study in camping. *Environment and Behavior*, 11 (4), 483-510.

- Gitelson, R. J., & Crompton, J. L. (1984). Insights into the repeat vacation phenomenon. *Annals of Tourism Research*, 11, 199-217.

- Hayes, B. E. (1997). *Measuring customer satisfaction: Survey design, use, and statistical analysis methods*. Milwaukee, WI: ASQC Quality Press.

- Heung, V. C. S., & Cheng, E. (2000). Assessing tourists' satisfaction with shopping in the Hong Kong special administrative region of China. *Journal of Travel Research*, 38 (4), 396-404.

- Henderson, K. H. (1991). *Dimensions of choice: A qualitative approach to recreation, parks, and leisure research*. State College, PA: Venture Publishing, Inc.

- Honey, M. (1999). *Ecotourism and sustainable development: Who owns paradise?*. Washington, DC: Island Press.

- Kerkvliet, J., & Nowell, C. (1999). Heterogeneous visitors and the spatial limits of the travel cost model. *Journal of Leisure Research*, 31 (4), 404-419.

- Laverie, D. A., & Arnett, D. B. (2000). Factors affecting fan attendance: The influence of identity salience and satisfaction. *Journal of Leisure Research*, 32 (2), 225-246.

- Lindberg, K., Wood, M. E., & Engeldrum (Eds.) (2000). *Ecotourism: A guide for planners and managers*. Vermont: Ecotourism Society.

- Noe, F. P. (1999). *Tourist service satisfaction: Hotel, transportation, and recreation*. Champaign, IL: Sagamore Publishing.

Oppermann, M. (2000). Tourism destination loyalty. Journal of Travel Research, 39, 78-84.

Siderelis, C. & Moore, R. L. (1998). Recreation demand and the influence of site preference variables. Journal of Leisure Research, 30 (3), 301-318.

Stryker, S. (1980). Symbolic interactionism: A socio-structural version. Menlo Park, CA: Benjamin/Cummings.

Vogelsong, H. & Ellis, C. (2001) Assessing the economic impact of ecotourism developments on the Albemarle/Pamlico region. Economic Development Administration. U.S. Department of Commerce.