

# Segmenting visitors to the Addo Elephant National Park in South Africa based on educational level

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## Abstract

The aim of this research is to profile visitors to one of South Africa's most well-known and popular national parks, the Addo Elephant National Park (AENP) using an alternative segmentation approach, that of the visitors' level of education. When dealing with ecotourism and nature-based products, such as national parks, the level of education is a particularly useful basis for segmentation, as nature tourists are well-educated. A visitor survey was conducted at the AENP in 2010 and a total of 131 questionnaires were administered among all overnight visitors. Visitors were divided into four groups based on the level of their education: *Matric*, *Diploma*, *Degree*, *Post-graduate* and *Professional*. Two-way frequency tables and Chi-square tests as well as ANOVAs and Tukey's multiple comparisons were used to identify the differences between the segments based on socio-demographics, behavioural characteristics and travel motivations. The results revealed that visitors to the AENP are a homogeneous market.

**Key words:** level of education; market segmentation; nature tourists; Addo Elephant National Park; national parks



Source: [www.addoadventure.com](http://www.addoadventure.com)

## Introduction

The Addo Elephant National Park (AENP) is one of the best-known national parks in South Africa. Located near the village of Addo in the Eastern Cape, the Park was proclaimed in '1931' to protect the remaining 11 Eastern Cape elephants and a few free-roaming buffalo in the area. Today, besides elephants, the Park hosts a variety of game species, including more than 160 bird species and the infamous flightless dung beetle (Hayward *et al.*, 2007). However, what makes this Park unique is the fact that it is one of the few parks in the world to offer the 'Big 7' (elephant, lion, black rhino, buffalo and leopard on land, and the great white shark and seasonal southern right whale in the marine section), which implies that the Park is also a marine reserve and includes a few islands (SANParks, 2009). The park also recently opened an Education and Interpretation Centre for children and for adults. The Park plays a significant role in employment, production and general income creation in the region, with 35% of businesses in the region being established directly as a result of the park (Saayman & Saayman, 2006).

National parks such as the AENP are important components of the ecotourism sector and are regarded as symbols of a high-quality, natural environment with well-designed tourist infrastructure (Eagles, 2002; Walker & Walker, 2011). The number of national parks is growing worldwide and becoming more competitive (Khan, 2003), and South Africa is no exception. The country has more than 20 national parks, numerous local and provincial parks and 9000 privately owned game reserves competing for nature or ecotourists. Neighbouring countries such as Namibia, Zimbabwe and Botswana are also becoming more competitive (Saayman & Van der Merwe, 2004). To gain a competitive advantage, the AENP must keep up with the trends and the needs of nature tourists in order to streamline future marketing strategies (Kruger, 2009).

Furthermore, all nature tourists who visit the AENP have needs that they want fulfilled, and preferably exceeded, by the activities and facilities offered by the Park. In order to

ensure continuity and growth, a destination (attraction) such as the AENP that depends on nature tourists, must understand and satisfy their needs. As attracting the right market and developing the right products and services will have a direct impact on the AENP's competitiveness and long-term sustainability, marketers must identify the profile and understand the behaviour and preferences of visitors to the Park. This can be achieved through the process of market segmentation. The aim of this research is to segment and profile visitors to the AENP using an alternative segmentation approach, that of their education level. When dealing with ecotourism and nature-based products, such as national parks, the level of education is a particularly useful basis for segmentation, as nature tourists are well-educated. (Hvenegaard, 2002). According to the literature review, the level of education has not been used as a dependent variable for the segmentation of nature-based tourists.

## Literature review

The AENP, along with the other national parks in South Africa, have three fundamental spheres: firstly, to conserve the biodiversity of the country; secondly, to maintain a relationship of community upliftment and capacity building with people living in the areas in and around the parks; and, lastly, to provide a recreational outlet for people to experience and enjoy the wonders of the parks (Saayman & Saayman, 2006). National parks furthermore have numerous benefits that include the following (Holden, 2008):

- Protects landscapes, wildlife and ecological communities;
- Provides a place for people to have access to and experience nature;
- Tourists can also provide revenues for park management, scientific research and conservation projects; and
- Offers employment opportunities for local people to become involved in conservation of the environment rather than destructive practices such as clearing natural vegetation for agriculture and poaching.

To capitalise on these benefits, national parks need to know their visitors. However, little is known about the profile of individuals who are

either interested in such experiences, or currently driving this apparently lucrative market (Blamey & Braithwaite, 1997). The frequently asked question is: 'Who are the tourists that visit nature-based attractions?' A clear answer is not yet available due to many reasons, which include a lack of research, poor definitional understanding, and the fact that nature tourist markets are generally not homogeneous (Wight, 2001; Bricker & Kerstetter, 2000). Furthermore, studies tend to discuss the general growth in interest or markets to particular destinations, rather than identify characteristics, preferences and motivations of broad 'origin' populations (Wight, 2001). According to Hvenegaard (2002), research to identify nature tourists or segment nature tourists from other types of tourists has not occurred in a consistent manner, and given the lack of consistency in identifying nature tourists, it is unknown whether nature tourists identified in one study would also be identified in another study using different methods. The activities, motivations and characteristics of the nature-tourism market are as varied as the spectrum of products/experiences that may be termed nature tourism (Wight, 1993). Furthermore, markets today reflect greater sophistication, changing lifestyles, attitudes, values and interest, while nature tourism attracts specialised niche markets that share many characteristics, preferences and motivations (Wight, 2001).

To identify the right target market, marketing strategists divide the heterogeneous market into fairly homogeneous groups of tourists, a process that is referred to as market segmentation. Market segmentation is the process of dividing the market into segments, profiling and analysing the segments, and formulating a strategy for each segment (Walker & Walker, 2011). Using market segmentation, a tourist profile can be developed that will enable the AENP to target the right markets and focus its resources and efforts, in order to achieve maximum penetration of those market. Added benefits of market segmentation include the ability to predict visitor behaviour, to identify and exploit new market opportunities for commercial benefit, and more focused ideas for product development (Heok *et al.*, 1996; Jang *et al.*, 2004). Furthermore,

segmentation enables marketers to avoid direct competition in an increasingly crowded marketplace by providing them with opportunities to distinguish their particular product, perhaps on the basis of price, but more often through styling, promotional appeal and park activities and amenities (Morgan & Pritchard, 2001; Cook *et al.*, 2010). The process therefore allows for easier choices about the most appropriate visitors to serve and makes the best of limited resources (Dibb & Simkin, 2001).

The profiling of a nature tourist typically involves five components or segmentation bases: demographic (age, language, family size, family life cycle, gender, religion, race, generation and nationality); geographic (nations, states, provinces, regions, counties, cities or neighbourhoods); socio-economic (income, education, occupation and social class); psychographic (psychological/personality traits, lifestyle, travel motivation or values); and behavioural characteristics (occasions, benefits, user status, usage rate, loyalty status, buyer readiness stage, attitude and visitor expenditure) (Kruger, 2009). Different techniques are used to segment and identify nature tourists, or to distinguish nature tourists from other types (Blamey, 1997; Bottrill & Pearce, 1995). Boo (1990) classified nature tourists based on how important (primary, important, somewhat or not) protected areas were when choosing a country as a destination. Other researchers segment nature tourists using travel benefits (Palacio & McCool, 1997), social values (Blamey & Braithwaite, 1997), travel motives (Hvenegaard, 2002; Ballantine & Eagles, 1994), intention to learn about nature (Ballantine & Eagles, 1994) or the new environmental paradigm (Luzar *et al.*, 1998).

Some researchers go further and distinguish sub-types of nature tourists (Hvenegaard, 2002). For example Laarman and Durst (1987) used interest level and the degree of physical rigour to distinguish between 'hard' and 'soft' nature tourists. Palacio and McCool (1997) found that distinct segments of nature-based travellers seek different benefits from nature-based experiences. These segments were based on a variety of factors, including socio-demographic, travel behaviour and trip

characteristics, satisfaction with the tour, and their motivations for engaging in an ecotourism experience. Lindberg (1991) suggested four types of nature tourists based on their motives or interest levels: hard-core (scientific researchers or members of educational or conservation tours, tolerant of limited amenities), dedicated (people who visit protected areas to learn about local history, tolerant of limited amenities), mainstream (people who visit unique natural destinations just to take an annual trip), and casual (people who partake of nature incidentally or as part of a broader trip).

Initial studies also found that nature tourists tend to be middle aged, have relatively high incomes, are well educated (usually college educated), stay for long periods and are interested in learning about the environment (Fennel, 2008; Fennel & Smale, 1992; Reingold, 1993; Holden & Sparrowhawk, 2002; Ballantine & Eagles, 1994; Kerstetter *et al.*, 2004; Wight, 2001; Chipkin, 1994). Lindberg (2003) examined the characteristics of South Africa's internal market for nature tourism and found a clear relationship between income, education and participation in nature tourism: visitors have higher levels of both. When analysing ecotourist profiles, a common characteristic is their high level of education. However, although the education level usually forms part of the socio-demographic segmentation base (Armstrong & Kotler, 2005; Bennett & Strydom, 2001; Bothma & Burgess, 2007; Burke & Resnick, 2000; Fill, 2007; Getz, 1997; Horner & Swarbrooke, 2001; Keller & Kotler, 2006; Moutinho & Witt, 1994; Van der Wagen, 2005), it has never been used as a dependent variable to segment and profile nature tourists.

Fennel (2003) indicates that in order to effectively profile nature tourists, specific variables should be isolated which can best be used to represent the target market. Level of education may provide opportunity for learning and the ability to earn a higher income, which involves more and more expensive leisure pursuits. The level of education can also be a major determinant for both employment type and income-earning potential and, therefore, the type of tourism experience sought (Page & Connell,

2009). Page and Connell (2009) found that professional occupations enjoy a more active and varied range of leisure activities, while Bhatia (2006) observed that better educated people in society have a stronger will to travel, thus increasing the demand for travel. Based on this information, it can be assumed that visitors with a higher level of education will travel more frequently, spend more money, partake in a variety of activities and be open to new learning experiences.

If the afore-mentioned is also the case for visitors to the AENP, the level of education can be a useful alternative base to segment nature tourists, especially as education is a main principle of ecotourism (Ceballos-Lascurain, 1987; Fennel & Eagles, 1990; Fennel, 2003). The AENP will be able to profile their visitors, analyse their different needs and preferences and identify the park's most viable market. Understanding what makes nature tourists different is important to marketers of an ecotourism product, such as the AENP, that wants to attract individuals who recognize their responsibility to sustain the environment that they are visiting (Bricker & Kerstetter, 2000). The opinions and observations of visitors provide an important source of information to guide planners and managers of protected areas such as the AENP (Boshoff *et al.*, 2007). This information can relate to a range of issues that might affect the quality of the experience of the visitor to the AENP. It can be used to assess the visitors' views of and support for a range of wider conservation and associated economic issues (Ormsby & Kaplin, 2005; Wilson & Tisdell, 2005; Boshoff *et al.*, 2007). Dieke (2001) states that the importance of developing sustainable ecotourism in South Africa cannot be over-emphasised because of its potential for diversifying the economy while protecting the formidable environmental heritage.

## **Methodology**

This exploratory research used a structured questionnaire to collect the data. Simple random sampling was used to distribute the survey at the AENP. The results were used to compile a general client profile and to analyse the visitors based on their education level.

## The questionnaire

The questionnaire was divided into four sections. Section A captured demographic details (gender, home language, age, home province, level of education and marital status), while Section B captured spending behaviour (number of persons paid for, length of stay and expenditure). Section C focused on the motivational factors, measuring 23 items on a five-point Likert scale, where 1 = not important at all; 2 = slightly important; 3 = neither important nor less important; 4 = very important and 5 = extremely important. Section C also asked for information specific to the Park (information sources, preferred services and activities and loyalty to the park) as well as an evaluation of the park.

## Sampling method and survey

The survey followed a probability sampling method, by means of simple random sampling, and was conducted at AENP between '19 November 2010' and '24 November 2010'. Fieldworkers distributed questionnaires just before sunset, to overnight visitors staying in the chalets and the campsites, and collected the questionnaires back later in the evening. Fieldworkers were instructed to approach the respondents and explain the goal of the survey and the questionnaire to ensure that they participated willingly and responded openly and honestly. A total of 131 questionnaires were completed and included in the analysis. The total number of completed questionnaires is considered sufficient, as the profile of visitors surveyed is consistent with the profile of visitors that was compiled between '2001' and '2009' by Saayman *et al.* (2009), as Table 1 shows.

## Statistical analysis

The data was captured in Microsoft<sup>®</sup> Excel<sup>®</sup> and analysed using SPSS (SPSS Inc, 2007). The analysis was done in three stages. First, a general profile of visitors to AENP was compiled. Second, a principal component factor analysis, using an Oblimin rotation with Kaiser normalization, was performed on the 23 motivation items to explain the variance-covariance structure of a set of variables through a few linear combinations of these

variables. The Kaiser-Meyer-Olkin measure of sampling adequacy was also used to determine whether the covariance matrix was suitable for factor analysis. Kaiser's criteria for the extraction of all factors with eigenvalues larger than one were used because they were considered to explain a significant amount of variation in the data. In addition, all items with a factor loading above 0.3 were considered as contributing to a factor, and all with loadings lower than 0.3 as not correlating significantly with this factor (Steyn, 2000). In addition, any item that cross-loaded on two factors with factor loadings greater than 0.3 was categorized in the factor where interpretability was best. A reliability coefficient (Cronbach's alpha) was computed for each factor to estimate the internal consistency of each factor. All factors with a reliability coefficient above 0.6 were considered to be acceptable in this study. Also computed as another measure of reliability were the average inter-item correlations, which should lie between 0.15 and 0.55, according to Clark and Watson (1995). Third, visitors were analysed on the basis of their level of education. Any significant differences between visitors were investigated using two-way frequency tables, chi-square tests, ANOVAs and Tukey's multiple comparisons. The study used demographic variables (gender, home language, age and province of origin), behavioural variables (length of stay, expenditure, group size) and motivational factors to examine whether there were statistically significant differences between the groups. Cross-tabulations with chi-square were further employed to profile these groups demographically.

## Results

This section provides an overview of the profile of visitors to the AENP, discusses their travel motives (using the factor analysis results) and presents the results of the ANOVAs and cross-tabulations with chi-square tests.

### Profile of respondents surveyed at AENP

As Table 1 shows, the respondents were predominantly English-speaking, had an average age of 54 years and originated from

the Western and Eastern Cape Provinces. Most respondents were married and spent an average of R2508.00 per group during their stay. They stayed an average of three nights, preferred self-catering accommodation and

had previously visited national parks an average of six times. These visits were their main source of information, and all of the visitors would recommend the Park to family and friends.

**Table 1: Profile of visitors to AENP 2010**

CATEGORY	PROFILE OF VISITORS
Home language	50% English speaking; 30% foreign languages; 20% Afrikaans speaking
Age	Average 53.7 years
Marital status	Married (80%)
Province of residence	Western Cape (40%); Eastern Cape (38%)
Number of nights	Average of 3.2 nights
Number of visits to national parks	Average of 6.3 times
Expenditure per group	Average of R2508.00 per group
Catering preferences	Self-catering (71%); dine-out and self-catering (32%)
Preferred information source	Previous visits (46%); friends and family (39%), website (31%)
Recommend the park	Yes (100%)

### Results from the factor analysis

The pattern matrix of the principal axis factor analysis, using an Oblimin rotation with Kaiser normalization, identified seven factors, which were labelled according to similar characteristics (Table 2), and accounted for 71.2% of the total variance. All had relatively high reliability coefficients, ranging from 0.51 (the lowest) to 0.91 (the highest). The average inter-item correlation coefficients with values between 0.28 and 0.83 also imply internal consistency for all factors. Moreover,

all items loaded on a factor with a loading greater than 0.3; the relatively high factor loadings indicate a reasonably high correlation between the factors and their component items. The Kaiser-Meyer-Olkin measure of sampling adequacy of 0.78 also indicates that patterns of correlation are relatively compact and yield distinct and reliable factors (Field, 2005). Barlett's test of sphericity also reached statistical significance ( $p < 0.001$ ), supporting the factorability of the correlation matrix (Pallant, 2007).

**Table 2: Results of factor analysis of AENP visitors' motives**

MOTIVATION FACTORS AND ITEMS	FACTOR LOADING	MEAN VALUE	RELIABILITY COEFFICIENT	AVERAGE INTER-ITEM CORRELATION
<b>Factor 1: Education</b>		<b>3.29</b>	<b>0.91</b>	<b>0.65</b>
To learn about endangered species	0.93			
To learn about animals in general	0.87			
To learn about specific animals	0.81			
To learn about plants	0.79			
Primarily for educational reasons (to learn things, increase my knowledge)	0.65			
<b>Factor 2: Escape</b>		<b>3.77</b>	<b>0.68</b>	<b>0.37</b>
The park has great accommodation facilities	0.72			
To get away from my routine	0.60			
To relax	0.58			

To be with family or to spend time with someone special	0.47			
<b>Factor 3: Value for money</b>		<b>3.74</b>	<b>0.71</b>	<b>0.45</b>
It is value for money	0.95			
The park has a variety of accommodation to choose from	0.51			
It is an ideal holiday destination	0.47			
<b>Factor 4: Geo attributes</b>		<b>2.45</b>	<b>0.51</b>	<b>0.30</b>
I prefer the park for its geographical features	0.79			
To do hiking trails	0.44			
It is a spiritual experience	0.44			
<b>Factor 5: Park attributes</b>		<b>3.77</b>	<b>0.54</b>	<b>0.28</b>
To explore a new destination	0.66			
Primarily to see the elephants	0.50			
To photograph animals and plants	0.33			
<b>Factor 6: Family and friends</b>		<b>2.74</b>	<b>0.60</b>	<b>0.33</b>
For the benefit of my children	0.89			
It is the nearest national park for me	0.50			
To spend time with my friends	0.25			
<b>Factor 7: Nature appreciation</b>		<b>2.91</b>	<b>0.91</b>	<b>0.83</b>
So that other members in my party could develop an appreciation for endangered species	0.83			
So that other members in my party could learn about nature	0.74			
<b>TOTAL VARIANCE EXPLAINED</b>	<b>71.2%</b>			

Factor scores were calculated as the average of all items contributing to a specific factor, in order to interpret them on the original five-point Likert scale of measurement. As Table 2 shows, the following motives were identified: *Education*, *Escape*, *Value for money*, *Geo attributes*, *Park attributes*, *Family and friends* and *Nature appreciation*. *Escape* (factor 2) and *Park attributes* (factor 5) obtained the highest mean values (3.77) and were considered the most important motives for travel to the AENP. These factors had, respectively, reliability coefficients of 0.68 and 0.54 and average inter-item correlations of 0.37 and 0.28. *Value for money* (factor 3) had the second highest mean value (3.74), followed by *Education* (factor 1) (3.29), and *Nature appreciation* (factor 7) (2.91). *Geo attributes* (factor 4) had

the lowest mean value (2.45) and was rated the least important motive.

The results of this research mirror those of other studies that examined the motives for attending national parks in South Africa (Saayman & Saayman, 2009; Kruger & Saayman, 2010; Scholtz *et al.*, 2011) in finding that the most common motive for travel was to *Escape*. The high mean value of *Education* also supports the findings by Fennel (2008), Fennel and Smale (1992), Reingold (1993), Holden and Sparrowhawk (2002), Ballantine and Eagles (1994), Kerstetter *et al.* (2004), Wight (2001), Chipkin (1994) and Bădulescu and Băc (2009) that nature tourists are interested in learning about the environment. The research for the AENP in 2010 also identified some unique motives such as *Value for money*, *Geo*

*attributes, Park attributes, Family and friends and Nature appreciation.*

42% of the respondents have a diploma or a degree, 26% have a professional qualification and 21% have a post-graduate qualification, while only 11% have matric.

### Visitors' level of education at AENP

The majority of visitors to the AENP have a high level of education. As Table 3 shows,

**Table 3: Visitors' level of education at AENP**

Level of education	PERCENTAGE
Matric	11%
Diploma, degree	42%
Post-graduate	21%
Professional	26%

### Results of ANOVAs and Tukey's post hoc multiple comparisons

ANOVAs were used to determine the differences between the respondents based on their socio-demographic and behavioural characteristics and their motives for visiting the park. As Table 4 shows, the four educational groups showed statistically significant differences based on age ( $p < 0.027$ ); however Tukey's post hoc multiple

comparison indicated no significant differences. Even though there were no statistically significant differences based on the  $p$ -value for the number of previous visits, Tukey's post hoc multiple comparison indicated significant differences with regard to this variable. No statistically significant differences were found between the educational groups when it came to the other variables or motivational factors.

**Table 4: Results of ANOVA and Tukey's post hoc multiple comparisons for visitor characteristics**

CHARACTERISTICS	LEVEL OF EDUCATION OF VISITORS				F-RATIO	SIG. LEVEL
	Matric (N=)	Diploma, degree (N=)	Post-graduate (N=)	Professional (N=)		
Age	53.50	56.78	46.52	54.97	3.179	0.027*
Number of people paid for	2.67	2.27	2.12	2.71	1.280	0.285
Nights	2.14	4.12	2.52	3.09	1.614	0.190
Number of previous visits	11.31 <sup>a</sup>	5.20 <sup>b</sup>	5.08 <sup>b</sup>	7.22 <sup>ab</sup>	2.208	0.091
Spending per person	R1060.83	R1339.83	R1199.03	R1026.71	0.235	0.872
<b>Motives<sup>†</sup></b>						
<i>Education</i>	3.38	3.38	2.81	3.43	1.837	0.144
<i>Escape</i>	4.03	3.69	3.73	3.84	0.611	0.609
<i>Value for money</i>	3.90	3.70	3.58	3.92	0.856	0.466
<i>Geo attributes</i>	2.54	2.42	2.42	2.61	0.274	0.844
<i>Park attributes</i>	3.60	3.92	3.38	3.88	2.233	0.088
<i>Family and friends</i>	3.33	2.44	2.71	3.03	2.383	0.073
<i>Nature appreciation</i>	2.79	2.82	2.58	1.41	1.702	0.171

<sup>†</sup> Respondents were asked to indicate how they evaluated each motivation item on the scale (1 = not important at all; 2 = slightly important; 3 = important; 4 = very important; 5 = extremely important). Superscripts a, b, indicate statistically significant differences exist between the groups.

\* Statistically significant difference:  $p \leq 0.05$

The following similarities and differences were found between the four educational groups:

- **Age.** The youngest visitors to the Park (average age of 47 years) have a *Post-graduate* qualification, while the oldest visitors (average age of 57 years) have a *Diploma, degree*.
- **Number of people paid for.** Respondents with a *Matric* and *Professional* qualification were each financially responsible for an average of three persons. Visitors with a *Diploma, degree* and a *Post-graduate* qualification were financially responsible for an average of two persons.
- **Nights in the park.** Visitors with a *Matric* qualification spent the fewest nights in the Park (an average of two nights) and visitors with a *Diploma, degree* stayed the longest (an average of four nights). Visitors with a *Post-graduate* and *Professional* qualification stayed an average of three nights.
- **Number of previous visits.** Statistically significant differences were found between visitors with a *Matric* qualification and visitors with a *Diploma, degree* and a *Post-graduate* qualification. Visitors with a *Matric* qualification had previously visited national parks an average of 11 times, compared to visitors with *Diploma, degree* or a *Post-graduate* qualification who had made an average of five visits to national parks. Respondents with a *Professional* qualification had previously visited national parks an average of seven times.
- **Spending per person.** Visitors with a *Diploma, degree* spent the most (R1339.83) at the park, followed by visitors with a *Post-graduate* qualification (R1199.03). Visitors with a *Matric* and *Professional* qualification spent the least at the park (an average of R1060.83 and R1026.71 respectively).
- **Motives.** *Escape, Value for money, Education, and Park attributes* were very important motives for all four educational groups. *Geo attributes* and *Nature appreciation* were less important motives. In general, visitors with a *Post-graduate* qualification obtained the lowest mean values for the motives, while the values

for the other three educational groups varied.

### Cross-tabulations and chi-square test results

As Table 5 shows, only statistically significant differences were found between the four educational groups based on shows as preferred media ( $p = 0.044$ ). Visitors with a *Professional* qualification heard about the park from shows such as *Getaway*, which was not a popular marketing medium for the other three groups. For other information sources, SANParks' website, magazines, SANParks, friends and family and previous visits were the preferred media for all four groups.

For the other variables, the educational groups showed no statistically significant differences. The following similarities and differences were evident.

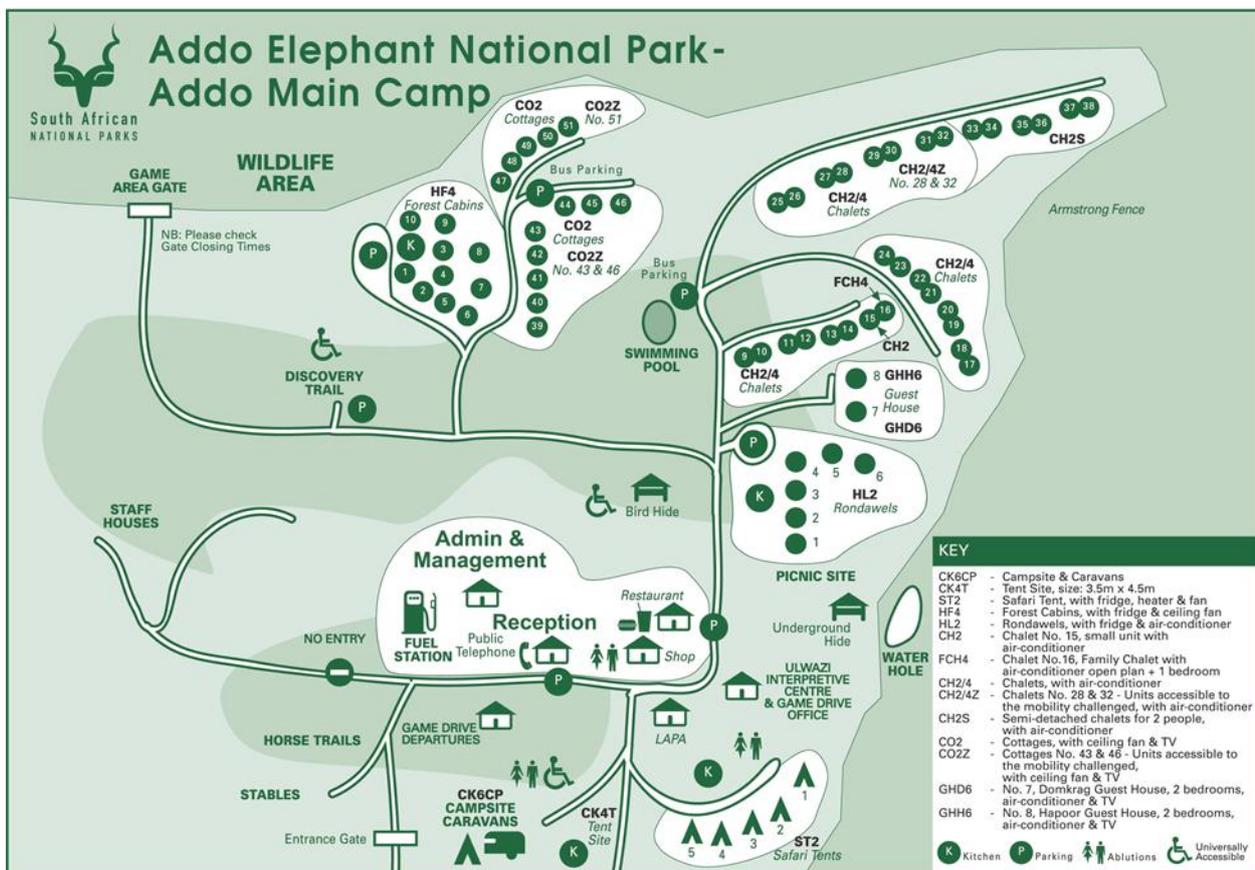
- **Home language.** Visitors with *Matric* were mainly Afrikaans- and English-speaking, while a significant percentage of visitors with a *Professional* qualification were also Afrikaans-speaking or had a different home language (either foreign or African). However, although visitors with a *Diploma, degree* and *Post-graduate* qualification were mainly Afrikaans-speaking, they also spoke either English or a different home language.
- **Marital status.** All four educational groups were predominately married, while a small percentage of visitors in each group were not married, widowed or living together.
- **Province of origin.** The majority of respondents in all four educational groups came from the Eastern and Western Cape Provinces. Visitors with a *Diploma, degree* and a *Post-graduate* qualification also travelled from Gauteng Province.
- **Mode of transport.** All four groups mainly travelled in a sedan, 4x4 and 2x4 to the park. However, the groups also included some visitors who travelled in a kombi and leisure vehicle.
- **Preferred recreational activities.** An insignificant percentage of visitors in each group indicated a real preference for recreational activities. However, a small

percentage did indicate a need for guided walks, parent-and-child activities and recreational programmes.

- **Preferred type of accommodation.** All four groups preferred self-catering accommodation followed by a combination of dine-out and self-catering.
- **Wild Card owner.** More than half of the respondents with *Matric*, a *Diploma*, *degree* and a *Professional* qualification

were Wild Card owners. The opposite was found for visitors with a *Post-graduate* qualification.

- **Recommend the Park.** All four groups would recommend the park to family and friends.



Source: <http://www.sanparks.org/images/parks/maps/addo-main-camp-layout.jpg>

**Table 5: Chi-square test results of visitor characteristics (n=131)**

CHARACTERISTICS	LEVEL OF EDUCATION TIME OF VISITORS				CHI SQUARE VALUE	DF	SIG. LEVEL	PHI-VALUE
	<i>Matric</i> (N=)	<i>Diploma, degree</i> (N=)	<i>Post-graduate</i> (N=)	<i>Professional</i> (N=)				
<b>Home language</b>					9.892	6	0.129	0.281
Afrikaans	72%	39%	48%	63%				
English	21%	25%	26%	9%				
Other	7%	37%	26%	28%				
<b>Marital status</b>					11.244	12	0.508	0.304
Married	71%	80%	78%	87%				
Not married	14%	6%	7%	7%				
Divorced	0%	4%	7%	3%				
Widow/er	14%	4%	0%	0%				
Living together	0%	6%	7%	3%				
<b>Province</b>					19.917	18	0.338	0.508
Gauteng	0%	14%	25%	7%				
KwaZulu-Natal	8%	7%	5%	7%				
Eastern Cape	54%	41%	40%	20%				
Western Cape	31%	35%	30%	60%				
Mpumalanga	8%	0%	0%	0%				
Free State	0%	0%	0%	7%				
North West	0%	0%	0%	0%				
<b>Mode of transport</b>					17.122	15	0.312	0,375
4x4	14%	20%	35%	22%				
Kombi	7%	6%	4%	0%				
Leisure vehicle	0%	14%	8%	28%				
Sedan	50%	34%	31%	31%				
2x4/Bakkie	21%	14%	23%	13%				
Other	7%	12%	0%	6%				

<b>Services at the visitor centre</b>								
Auditorium with nature videos	Yes=43%; No=57%	Yes=58%; No=42%	Yes=52%; No=48%	Yes=45%; No=58%	1.717	3	0.633	0.118
Slide shows	Yes=43%; No=57%	Yes=35%; No=65%	Yes=41%; No=59%	Yes=36%; No=64%	0.425	3	0.913	0.065
Specialist talks	Yes=50%; No=50%	Yes=48%; No=52%	Yes=59%; No=41%	Yes=58%; No=42%	1.299	3	0.729	0.102
Entertainment for kids	Yes=36%; No=64%	Yes=27%; No=73%	Yes=48%; No=52%	Yes=23%; No=77%	5.235	3	0.155	0.205
<b>Preferred recreational activities</b>								
Games (activity book)	Yes=7%; No=93%	Yes=12%; No =88%	Yes=22%; No=78%	Yes=3%; No=97%	5.468	3	0.140	0.210
Educational talks	Yes=0%; No=100%	Yes=4%; No=96%	Yes=15%; No=85%	Yes=13%; No=87%	5.114	3	0.164	0.203
Guided walks	Yes=29%; No=71%	Yes=14%; No=86%	Yes=33%; No=67%	Yes=13%; No=87%	6.126	3	0.106	0.222
Parent-and-child activities	Yes=14%; No=86%	Yes=14%; No=86%	Yes=15%; No=85%	Yes=10%; No=90%	0.413	3	0.938	0.058
Nature videos	Yes=0%; No=100%	Yes=15%; No=85%	Yes=22%; No=79%	Yes=16%; No=84%	3.540	3	0.316	0.169
Recreational programme	Yes=14%; No=86%	Yes=12%; No=88%	Yes=26%; No=74%	Yes=7%; No=93%	4.998	3	0.172	0.201
Daycare	Yes=7%; No=93%	Yes=6%; No=94%	Yes=7%; No=93%	Yes=0%; No=100%	2.222	3	0.528	0.134
<b>Preferred type of accommodation</b>								
Self-catering	Yes=71%; No=29%	Yes=67%; No =33%	Yes=78%; No=22%	Yes=72%; No=28%	0.961	3	0.811	0.088
Dine out and self-catering	Yes=36%; No=64%	Yes=31%; No=69%	Yes=33%; No=67%	Yes=28%; No=72%	0.336	3	0.953	0.052
Bed & breakfast	Yes=14%; No=86%	Yes=12%; No=88%	Yes=7%; No=93%	Yes=3%; No=97%	2.360	3	0.501	0.137
Dinner, bed & breakfast	Yes=7%; No=93%	Yes=12%; No=88%	Yes=7%; No=93%	Yes=9%; No=91%	0.474	3	0.925	0.062
<b>Preferred media</b>								
Website	Yes=29%; No=71%	Yes=29%; No=71%	Yes=22%; No=78%	Yes=45%; No=55%	3.987	3	0.263	0.263
Shows (getaway)	Yes=7%; No=93%	Yes=6%; No=94%	Yes=0%; No=100%	Yes=19%; No=81%	8.084	3	0.044*	0.255
Friends and family	Yes=21%; No=79%	Yes=39%; No=61%	Yes=52%; No=48%	Yes=39%; No=61%	3.668	3	0.300	0.172
Radio	Yes=7%; No=93%	Yes=2%; No=98%	Yes=0%; No=100%	Yes=10%; No=90%	4.635	3	0.201	0.193
TV	Yes=7%; No=93%	Yes=6%; No=94%	Yes=4%; No=96%	Yes=10%; No=90%	0.923	3	0.820	0.086
Magazines	Yes=14%; No=86%	Yes=25%; No=75%	Yes=7%; No=93%	Yes=23%; No=77%	3.968	3	0.265	0.179
SANParks	Yes=36%; No=64%	Yes=33%; No=67%	Yes=37%; No=63%	Yes=48%; No=52%	2.085	3	0.555	0.130
Previous visits	Yes=57%; No=43%	Yes=48%; No=52%	Yes=33%; No=67%	Yes=47%; No=53%	2.891	3	0.409	0.153
<b>Wild Card owner</b>					0.831	3	0.842	0.082
Yes	57%	54%	44%	52%				

No	43%	46%	56%	48%				
<b>Recommend AENP</b>								
Yes	100%	100%	100%	100%				
No	0%	0%	0%	0%				

\* indicates significance at a 5% level and \*\* indicates significance at a 10% level.



Source: [www.south-africa-tours-and-travel.com-550](http://www.south-africa-tours-and-travel.com-550)

## Findings and implications

This research used the level of education to segment nature tourists at the AENP, comparing visitors with a high and low level of education based on socio-demographics, behavioural characteristics and motivations. The first finding reveals that nature tourists at the AENP are homogeneous in terms of their characteristics, behaviour and travel motives, contradicting the notion by Wight (2001) and Bricker and Kerstetter (2000) that nature tourists are in general not homogeneous. This aspect has a significant impact on the results since the main difference between visitor groups was their length of stay: visitors with *Matric* and a *Professional* qualification have the shortest length of stay at the park. This finding needs further investigation since it contradicts research by Fish and Waggle (1996), Kruger (2009), Saayman *et al.* (2009), Cannon and Ford (2002), Crouch (1994), Legohérel (1998), Mak *et al.* (1977), Mehmetoglu (2007), Taylor *et al.* (1993) and Thrane (2002), who found that visitors with a higher income occupation – which implies a higher level of education – stay longer. Therefore this research also contradicts the general notion that the higher the qualification, the higher the spending since length of stay has a direct impact on visitors' spending.

The second finding is that younger visitors have a higher level of education than their older counterparts. This finding confirms the study by Hvenegaard (2002), which found that nature based tourists were well-educated, and shows that the younger the visitors, the better their qualifications. The implication is that national parks will have to ensure that they meet the needs of younger visitors, which may be different from those of older tourists. This aspect will require in-depth research.

Thirdly, the research also identifies the motive *Education* as a very strong motive to travel, with visitors expressing an interest in learning about the environment, which supports previous research (Fennel, 2008; Fennel & Smale, 1992; Reingold, 1993; Holden & Sparrowhawk, 2002; Ballantine & Eagles, 1994; Kerstetter *et al.*, 2004; Wight, 2001; Chipkin, 1994; Bădulescu & Băc, 2009) that found education plays an important role in nature or ecotourism. This implies that AENP can use the motive *Education* and should include the activities of the Education and Interpretation Centre in marketing campaigns to attract visitors. The finding also suggests that the Park should do more in terms of education, such as improve information signs, plant and animal identification and provide well-qualified guides.

Fourthly, this research highlights the fact that the average nature tourist to the AENP is middle aged, stays for a long time (4 nights) and is interested in learning about nature, which support the findings by Fennel (2008), Fennel and Smale (1992), Reingold (1993), Holden and Sparrowhawk (2002), Ballantine and Eagles (1994), Kerstetter *et al.* (2004), Wight (2001), Chipkin (1994) and Bădulescu and Băc (2009). The implication is that park marketers can use this profile in their marketing campaigns.

Fifthly, visitors to this Park and national parks in particular are loyal, since they regularly travel to the park. The study also found that older visitors with a *Matric* qualification travel the most, which contradicts research by Page and Connell (2009), McGuiggan (2001) and Bhatia (2006) that found visitors with a higher level of education tend to travel more frequently. What is interesting to note is that those with a diploma, degree and a post-graduate qualification make the least number of visits, although the latter spends the most money during their stay.

Therefore, from an economic point of view, both categories (visitors with a *Matric* qualification who travel more frequently than and the rest) are important, which implies that the park can use a diversified approach to attract visitors.

Lastly, Laarman and Durst (1987) distinguished between hard and soft nature tourists based on visitors' level of interest. In the case of the AENP research, the visitors' frequency of visitation can be used as a measure to indicate their level of interest. Thus, the number of visits to the park can be used to categorise visitors to the AENP as hard and soft nature tourists. Visitors with *Matric* and a *Professional* qualification visit the park the most and can therefore be classified as hard nature tourists, while visitors with a *Diploma, degree* and a *Post-graduate* qualification make fewer visits and can be regarded as soft nature tourists. Alternatively, applying the classification developed by Lindberg (1991), which is based on motives and interest levels, visitors to the AENP with a *Matric* and a *Professional* qualification can be regarded as *dedicated nature tourists* while those with a *Diploma, degree* and a *Post-graduate* qualification can be classified as *mainstream nature tourists*.

## Conclusion

The aim of this research was to profile and segment overnight visitors to AENP using the level of education as the dependable variable. The mixed results revealed that overnight visitors to AENP are very homogeneous, which contradicts most other studies done in this field. Furthermore, results showed that younger visitors are more qualified and have a higher level of education than older visitors. This research contributes to the market and visitor segmentation literature by being the first time that this approach was used in a nature-based destination. It

confirmed that the educational level can be used to segment nature-based tourists in particular. What is important to note is that visitors to this park are well-educated, which has management implications. For example, to satisfy these tourists, park management should expand education and interpretation aspects, and the AENP recently developed an education centre to address pro-actively the 'education' needs of these visitors. More research is required into the educational needs of visitors, to establish whether research such as comparative studies of other national parks or nature-based products, will be sufficient. Furthermore, differences even among people who are well qualified have an impact on the way a park is managed and marketed, as different markets have different needs. In order to fulfil the needs of visitors, continuous research is a requirement. One limitation of this research is that the sample size is small, as AENP attracts fewer visitors than a park such as Kruger National Park. Qualitative research might be a solution when it comes to smaller parks that attract few visitors.

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