

Discovering wildlife tourism: a whale shark tourism case study

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(Received 15 April 2009; final version received 5 May 2009)

This paper investigates the different sources of information used by tourists to learn about a particular wildlife tourism activity, specifically, whale shark tourism at Ningaloo Marine Park in Western Australia. The findings from this research concur with previous studies of wildlife tourism showing that wildlife tourism operations are reliant on more informal and general forms of promotion, in particular word of mouth and guide books. Conversely, more deliberate marketing mechanisms, such as the internet and documentaries, are not extensively utilised. To disaggregate consumer preferences for various information sources, this article segments the population into more homogenous groups, thereby demonstrating distinct differences in the choice of information source based on the participants' normal place of residence.

Keywords: wildlife tourism; distribution channels; whale shark

Introduction

Viewing wildlife is a subsector of tourism that attracts millions of people worldwide. Although there are no reliable global figures for the number of wildlife tourists, in Australia alone, over 1000 wildlife tour operators collectively generate several billion dollars annually in revenue (Higginbottom, Rann, Moscardo, Davis, & Muloin, 2001). Thus, given the scale and economic importance of this industry, it is vital that a comprehensive understanding of all the mechanisms that underpin wildlife tourism is attained. Certain aspects of wildlife tourism have been the focus of considerable research, including studies on tourism impacts on subject species, on best practice strategies for human management and on economic valuation of the industries. By contrast, the marketing of wildlife tourism activities has been a relatively neglected research priority.

Wildlife tourism businesses

Wildlife tourism, according to Higginbottom (2004), is broadly defined as any tourist activity that has wildlife as its main focus of attraction. The size and scale of wildlife tourism enterprises vary considerably, from large zoos and aquaria, which are normally orientated towards mass tourism, to small privately run tours that appeal to specialised

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wildlife tourists (Beeton, 2004). The purpose of this paper is to provide an insight into the means by which tourists first learn of a particular wildlife tourism activity, and it will use as a case study whale shark tourism undertaken at Ningaloo Marine Park (NMP), Western Australia. Consequently, discussion of wildlife tourism will be limited to non-consumptive tours based on free-ranging wildlife, an activity which encompasses the majority of wildlife tourism businesses (Beeton, 2004).

As noted by Higginbottom and Buckley (2003), small-sized wildlife tourist enterprises make up the greater part of the industry. Many of these small wildlife tourism enterprises are in remote, regional and rural areas, and this is particularly so in large and sparsely populated countries such as Australia. In addition to being physically isolated, many small wildlife tourism enterprises exist in a skills vacuum. A large number of these small businesses contain personnel without previous experience in the hospitality industry or formal qualifications in business practices (McKercher & Robbins, 1998). As Beeton (2004) argues, having sufficient knowledge of tourism marketing methods is essential to sustained business success, yet most wildlife tourism businesses are deficient in this facet of their operations, particularly those located in regional areas. Consequently, McKercher and Robbins (1998) contend that their small business size, coupled with the high cost of using standard tourism advertising methods, deters these nature-based tour operators from taking full advantage of more formal methods of advertising.

Not surprisingly therefore, research from studies of wildlife tourism clearly indicate that word of mouth characteristically plays a leading role in marketing for the majority of wildlife tourism industries (Birtles, Valentine, Arnold, & Dunstan, 2002; Lewis & Newsome, 2003; Moscardo, 2000; Warburton, Parsons, Woods-Ballard, Hughes, & Johnston, 2001). However, to date, these findings have been given little attention or scrutiny. As Beeton (2004, p. 207) concludes in her discussion of the current state of wildlife tourism: 'In relation to understanding the wildlife tourism industry further, the roles of packaging, pricing and marketing in particular need to be more thoroughly understood by all parties involved'.

These present a number of intrinsic challenges for wildlife tourism operators seeking to run a successful business. However, sometimes adequate skills and systems are not sufficient alone. A simple dearth of information in a particular area can in itself be a major barrier to successful operation. Consequently, the purpose of this article is to analyse, in detail, the different sources of information accessed by tourists to make themselves aware of whale shark tourism at NMP.

Background

Whale sharks, the largest fish in the world, are a prominent feature in the branding of Western Australian tourism. They appear in a wide range of advertising that emphasises experiences with nature and, more recently, they have been included in the Australian Tourist Commission's international promotions. NMP, 1000 km north of Perth on the mid-north coast of Western Australia, is the only place in Australia where whale sharks can be reliably encountered. Their annual appearance attracts visitors from around Australia and across the world to partake in swim with whale shark experiences. As a result, whale sharks have become the basis of an entirely new tourist season (from April to June). This contributes substantially to the local economy which relies increasingly on tourism as a source of revenue. Catlin, Jones, Norman and Wood (2009) calculated that, in 2006, whale shark tourists spent AUD 6.0 million in the region. Although accurate records of participant numbers are not kept, estimates place the total number of whale shark tourists

between 8000 and 10,000 annually. There currently exist 15 licences for the operation of whale shark tours in NMP, which are distributed among a small number of tour companies. All operators run small businesses and, for many, this has been their first experience in operating a tourism business. Nonetheless, while some are new to the industry, others have been involved for over a decade. From a customer's perspective, all operators offer a largely consistent product for a very similar price, rendering them particularly undifferentiated from each other.

Methods

Data collection

The data collected for this research were obtained through the administration of a survey. The questionnaire employed in the survey was based on that used by Wood (2000) for tourist surveys in the Ningaloo Coast region since 1997. The survey was developed further by Carlsen and Wood (2004) in conjunction with the Sustainable Tourism Cooperative Research Centre. The questionnaire captured information on visitor demographics and trip characteristics, on their sources of information for the tours and on the visitor expenditure. This paper only focuses on the first two points. For a detailed explanation of the visitor expenditure results, refer to Catlin et al. (2009).

The questionnaires were administered, in both English and Japanese language versions, to whale shark tour participants from April to June 2006. Two different methods of administering the survey were employed. First, questionnaires were distributed directly to the whale shark participants at Tatabiddi boat ramp to the north of NMP. This method had already been proven successful in achieving a high response rate by Catlin (2005). Although an exact response rate was not calculated for this survey, an estimated return rate of 90% was attained. This method accounted for close to one-third of all completed questionnaires.

The other mode of distribution involved delivering the questionnaires to the whale shark tour operators, in order for them to distribute the survey forms to the participants. This method allowed for a large number of questionnaires to be distributed. Davis and Tisdell (1998), in their previous study of whale shark tourists, acknowledged that this approach may have introduced bias as a result of variations in participation levels between operators. To overcome this potential bias, regular contact was maintained with operators to encourage participation. In addition, it was assumed that the inclusion of an educational whale shark brochure and a sticker promoting whale shark photo identification would persuade tour operators to hand out the survey forms. From both methods of distribution, a total of 804 questionnaires were completed and returned. Analysis of the results showed very minimal variation in responses between the two methods of survey administration.

Data analysis

To gain a better understanding of how participants first discovered the whale shark tours, it was necessary to segment the survey sample into smaller more homogenous sets. As Hsieh, O'Leary and Morrison (1992, p. 210) states 'Segmentation leads to a more efficient allocation of marketing resources and a more precise setting of market objectives. It can offer significant advantages as a competitive strategy and as a guide to market planning and promotional strategies'. For the purpose of this paper, whale shark participants' first source of information was the defining variable for the segments. In order to determine which segments best predicted participants' first source of information, a function of

SPSS Answer Tree – the chi-squared automatic interaction detection (CHAID) classification tree – was employed. CHAID, which was first formulated by Kass, ‘partitions the data into mutually exclusive, exhaustive subsets that best describe the dependent variable’ (Kass, 1980, p. 119). This process allowed the best predictor variable and the best split for this variable to be determined. While not overly common in tourism research, CHAID has been used for tourism market segmentation before. For instance, Diaz-Perez, Bethencourt-Cejas and Alvarez-Gonzalez (2005) segmented the tourists to the Canary Islands based on their expenditure patterns.

Results

These results show the demographic and trip characteristics of the whale shark tour participants. The whale shark tourists surveyed came from a variety of locations throughout the world (Table 1). The main international sources were the UK and Ireland with a large number of mainland European participants coming from Germany. Japanese tourists accounted for the majority of participants from Asia. Australian visitors made up nearly half the sample, with close to half of these coming from Western Australia.

The vast majority (80.6%) of participants were middle-aged or younger (Table 2), with a mean age of 34.4 years. It was also found that female participants (55.8%) slightly outnumbered males. These findings are consistent with the demographic characteristics discovered for similar water-based activities in Australia (Davis, Banks, Birtles, Valentine, & Cuthill, 1997; Green, 1997; Musa, 2003).

In the survey, participants were asked to nominate how they first learnt of the whale shark tours. As displayed in Table 3, the informal means of word of mouth was the dominant source of information for all respondents. Guide books were clearly the second most used source of information. Neither the internet nor tourist information centres were the major starting points for obtaining such information.

The next stage of analysis of the results was to determine demographic segments using the participants’ source of information as the defining variable. Figure 1 displays the segments created through a CHAID decision tree. A number of predictor variables covering key demographic and trip characteristics – including age, gender, length of stay and accommodation type – were compared against the target variable ‘first source of information’ for a statistical significance ($p < 0.05$) relationship using a chi-squared calculation. Of these

Table 1. Regions of origin for whale shark participants ($n = 758$), showing major subregions.

Region of origin	Number	Percentage
Australia	370	48.8
WA	181	23.9
NSW	83	10.9
Vic	57	7.5
Europe	273	36.0
UK and Ireland	131	17.3
Germany	64	8.4
Asia	67	8.8
Japan	51	6.7
Other	48	6.3
Total	758	100.0

Table 2. Demographic characteristics of whale shark participants.

Variable	Percentage
Gender (<i>n</i> = 765)	
Male	44.2
Female	55.8
Age (<i>n</i> = 763)	
18–30	51.1
31–45	30.5
46–60	13.0
61+	15.4

variables, region of origin was the best predictor of participants' source of information, and thus formed the basis for the first tier of segmentation.

Some respondents listed more than one first source of information; however, it is not possible to include multiple response sets for the target variable in a CHAID analysis. To overcome this issue, solely for the purpose of segmentation, all respondents who listed multiple responses were not included in the segmentation process. A chi-square analysis determined that the reduced sample was not significantly different ($p > 0.05$) from the base sample for the variable 'region of origin'.

Word of mouth was consistently the primary source of information among all segments (Figure 1). However, there were clear distinctions between the participants from Western Australia, Interstate and Overseas. Most noticeable was the reliance on guide books by the international participants (28.7%). Based on the survey results, people from interstate were substantially more likely to become aware of the tours through documentaries (22.8%) than were the other respondents. On the other hand, Western Australians were slightly more likely to find out through advertisements and were more likely to use the local tourism office.

International participants could be further segmented based on their country/place of origin. The survey results indicate that European tourists were more likely to source information from a guide book than were Japanese participants, but they were less likely to do so than were people from the rest of the world. However, Japanese tourists were more likely to learn about the tours from the local tourist centre in Exmouth and advertisements, suggesting that many were not aware of the tours before they arrived in the region. Despite the existence of two major subgroups of European participants (Table 1), namely

Table 3. First sources of information for whale shark tours.

Source of information	Number of responses ^a	Percentage
Word of mouth	331	31.9
Guide book	185	17.8
Advertisement	122	11.8
Documentary	109	10.5
Internet site	104	10.0
Local tourism office	72	6.9
Tourism WA	55	5.3
Other	60	5.8
Total	1038	100.0

^aRespondents were permitted to list more than one response.

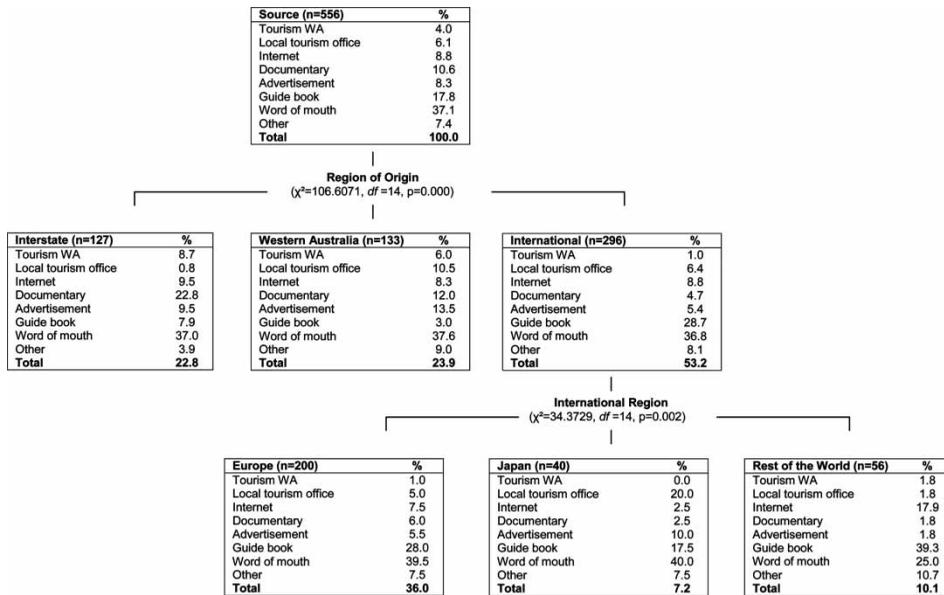


Figure 1. CHAID decision tree segmenting the predictors of first source of information.

British/Irish, and Germans, there was no significant difference ($p > 0.05$) between the sources of information accessed by these groups.

Discussion

Despite being one of the most celebrated wildlife tourism activities in Australia, it would seem that whale shark tourism is largely reliant on a passive form of advertising, namely word of mouth. Furthermore, when the results were segmented according to the participants' place of origin, word of mouth was consistently the most cited source of information for all but one of the demographic segments (Figure 1). As this survey has established, word of mouth is fundamental to encouraging participation in whale shark tourism.

It is commonly claimed within the tourism literature (Hugo, 1999; Prebensen, 2005; Saleh & Karwacki, 1996) that enhancing word of mouth promotion is achieved through satisfying tourists' expectations. For instance, Prebensen (2005, p. 27) states 'the propensity to revisit a destination and to engage in positive word of mouth is dependent on satisfaction with the travel experience'. However, beyond the axiomatic acknowledgement of the need to deliver a quality product or service, there is little information regarding how word-of-mouth marketing can best be encouraged and built upon in the tourism industry. As Murphy (2001, p. 51) argues 'while word of mouth promotion is consistently identified in tourism research as an important source of information used in decision-making, there has been little or no research done to investigate this phenomenon in detail'.

Furthermore, it is also contended that simply satisfying tourists is insufficient in itself to generate positive word of mouth. Derbaix and Vanhamme (2003), Rust and Oliver (2000) and Biyalogorsky, Eitan and Libai (2001) argue that, to take full advantage of word-of-mouth promotion, service providers must strive to have their customers' expectations exceeded, ideally reaching a state of 'customer delight'. According to Oliver, Rust and Vakie (1997), customer delight is attained when participants' expectations have been

exceeded, producing a significantly higher level of satisfaction resulting in exceptional behavioural responses, such as positive word of mouth and customer loyalty.

Customer loyalty has minimal relevance for the purpose of repeat patronage on whale shark tours since repeat patronage for such 'a once in a lifetime' experience in such a remote area is very low. Even so, whale shark tours are primarily reliant on word of mouth to generate new customers. Most tourists would only participate in a single tour with a specific operator, thus it is unlikely that they will differentiate between their own experience and that provided by the other tour operators when they engage in word-of-mouth recommendation, particularly considering the lack of variety among the tours. Given this premise, it is important that the qualities of all the tours are maintained at a uniformly high standard to uphold the reputation of excellence by the whole industry and to exploit positive word of mouth to its full potential.

Previous research conducted on whale shark tourists at Ningaloo (Catlin & Jones, 2006) found high satisfaction levels among the majority of those participating in the whale shark experience with all the local operators. However, only one-third of the respondents claimed to have their expectations exceeded, thus reaching the hypothesised state of customer delight which, it is argued, would be likely to generate positive word of mouth. In that respect, to maximise positive word of mouth, the whale shark tours would require all operators to frequently exceed their participants' expectations.

Managing word of mouth promotion is not purely concerned with encouraging positive responses. It is also necessary that dissatisfactions are dealt with promptly and appropriately in order to minimise the generation of negative word of mouth. Cadotte and Turgeon (1988) have shown that customers are more likely to be aware of the substandard aspects of the service experience than they are of the positive aspects. Additionally, as noted by Richins (1983), minor dissatisfactions are not likely to produce a response by the customer. As with customer delight, the more extreme form of dissatisfaction, on the other hand, if not remedied, may lead to customers sharing their grievances with others (Richins, 1983). Given the overwhelming reliance on word of mouth advertising, it is therefore especially important that the tour operators are aware of and address the concerns of any dissatisfied customers as promptly and effectively as possible.

Another major source of information over which the operators have minimal control is the content of guide books, which was ranked second in the most cited sources of information. International participants, in particular, tended to use guide books. A content analysis of the available guide books ($n = 10$), which included North West Western Australia, revealed a number of issues. In most cases, the information was very positive about the tourism experience. To illustrate, one guide book read 'a successful swim with a whale shark is simply the most awesome experience Australia has to offer' (Swaffer & O'Brien, 2005, p. 260). Nevertheless, the type and depth of information provided by this selection of guide books varied from nothing at all in one case, through very brief reports ($n = 4$), to detailed descriptions ($n = 5$). Zillinger (2006) has demonstrated that the presentation of an attraction in a guide book was directly related to its success as a tourist attraction. Fortunately for the tour operators, the guide books considered most popular (i.e. Lonely Planet and Footprint) were positioned at the more detailed end of the spectrum.

Of concern, from the analysis of the guidebooks, was the fact that many of the guides stated that the whale shark season began in March. Although the season is variable, often it will not commence until very late March, and the possibility of encountering a whale shark does not normally become high until the middle of April. Considering the brief nature of the season and the fact that the majority of tourists were found to stay in the region for less than a week (Catlin et al., 2009), it would be desirable if the guide books provided more

precise dates. This would minimise the possibility of people arriving out of season and missing a whale shark sighting. In addition, although the product and price are fairly consistent across all of the operators, there is a tendency for guide books to recommend a small number of select operators in those cases where they make recommendations. This could potentially direct the benefits accruing from the guide books to particular operators rather than for them to permeate through the industry. To achieve the representation of a greater range of tour operators in the guide books, it is suggested that all operators actively seek guide book promotion, where possible.

Documentaries were another medium that was influential for a particular segment – Australian participants from outside of Western Australia. Coverage of whale shark tours through documentaries was prevalent in Australia during 2006, with the industry featuring in two popular Australian television travel shows ('Getaway' and 'The Great Outdoors'). While this happened too late in the year to influence the 2006 whale shark season, it would be expected that this extra coverage would raise awareness of the tours in the forthcoming seasons.

In addition, documentaries are seen as having been a major contributor to the disproportionate numbers of Japanese whale shark tourists a decade earlier. Surveys of whale shark tourists at Ningaloo in 1995 and 1996 found Japanese participants to be the most significant international group comprising approximately 42.3% of the tourist population (Davis et al., 1997). However, a more recent study in 2005 (Catlin & Jones, 2006) discovered that the percentage of Japanese tourists had decreased substantially. Results from this survey also confirm the finding that the Japanese now only make up a small proportion of participants. Interestingly, despite the decrease in Japanese people taking part in whale shark tourism events at Ningaloo, the total number of Japanese tourists visiting Western Australia has increased over the last decade (WATC, 2002). To explain this paradox, it is believed that this is at least partially the result of a particularly high level of awareness of whale sharks tours in Japan a decade earlier, following the screening of a Japanese documentary on whale sharks at Ningaloo Reef produced in the early 1990s. The dramatic decrease in Japanese participants highlights the fickle nature of international markets once publicity mechanisms decline. In contrast, Japanese participants now rely primarily on word of mouth to find out about the tours.

Highlighting the industry's reliance on more passive forms of publicity, the internet was not prevalent as a first source of information for any particular sample segment. This is despite the fact that the majority of whale shark tour operators have well-developed internet sites. However, this finding does not exclude internet sites as important instruments for taking bookings and attracting already informed customers. Results from other wildlife tourist studies have found that the internet is not used widely as a source of information for the tours (Lewis & Newsome, 2003; Moscardo, 2000). Nevertheless, this is not always the case. For instance, for people who knew about the opportunity of swimming with minke whales on the Great Barrier Reef before they participated in that activity, the internet rated very highly (Birtles et al., 2002). In that regard, the internet should not be automatically discounted. Moreover, the results should serve as a reminder of the need to better harness the internet as a mechanism for promotion.

A potential method of raising the profile of a wildlife tourism industry, which has been recommended for other nature-based tourism industries (Weaver, Glenn, & Rounds, 1996; Woods-Ballard et al., 2003), is to consolidate resources among operators. As noted by Weaver et al. (1996, p. 144), 'Organised networks (horizontally and vertically integrated) may allow a group of small scale operators to achieve the critical mass of resources and attractions necessary for effective promotion to target markets'. This phenomenon, referred

to as co-opetition, has been widely used by airlines, especially to access hard-to-reach markets (Vander Kraats 2000 cited in Beeton, 2004). A regional tourism commission for the Ningaloo coast already promotes whale shark tours, both locally and internationally, as part of the whole regional experience. However, only 4 of the 15 tour operators participate in this process. McKercher and Robbins (1998) found that many nature-based tour operators in Australia are dissatisfied with travel distribution networks because of their perceived high commission rates. Whether this sentiment is shared among the whale shark tour operators in NMP is unknown. Nevertheless, there may be some benefit in creating industry-wide and controlled whale shark tour focused promotional mechanisms. Pooling of the whale shark tour operators' marketing resources, such as for internet promotion, is especially relevant if they are to develop international markets, and in particular to regain lost ground in the Japanese participants.

Conclusion

This article has provided an in-depth insight into a largely unexplored aspect of wildlife tourism research. The results from this research have reinforced the findings of previous wildlife tourism studies that the more informal forms of promotion prevail as the first source of information, and that whale shark tourism is no exception in this respect. Word of mouth and guide books provide most participants with their knowledge of the whale shark tours. Conversely, the more deliberate forms of advertising such as the internet and documentaries are not used to their full potential by the whale shark tour industry at Ningaloo. The main barriers identified are the small business size, the high cost of official advertising and lack of appropriate knowledge to exploit these methods. The result of having such a heavy reliance on word of mouth is that the industry is particularly susceptible to the consequences of service quality. In addition, this article has suggested other ways in which the whale shark operators might take advantage of the current situation such as the pooling of resources and the refinement of guidebook information. Lastly, this study has shown the novel, but pragmatic, statistical technique CHAID, which can be a useful tool for market segmentation. Through the process of segmentation enabled by CHAID, we have established that tourists from different geographic regions tend to discover the whale shark tours through different media and that this issue therefore should be considered in the marketing process.

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