



Environmental Education in Ecotourism Destinations Visitor Experience on Tiritiri Matangi Island, New Zealand

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Abstract

Ecotourism destinations promote local history and culture and environmental awareness through education. However, there is a dearth of knowledge about the visitor experience of environmental education for promoting a sense of environmental awareness and pro-environmental behaviours. This study examines the visitor experience of environmental education programmes on Tiritiri Matangi Island, New Zealand, and related impacts on their knowledge, awareness and intentions. The findings of this study suggested that the educational programmes on Tiritiri Matangi Island, including the guided walk, signage and storytelling, had transformative impacts on visitors as they came without the intent to learn and left feeling more knowledgeable and interested in conservation and responsible tourism.

Keywords

Ecotourism, Environmental Education, Visitor Experience, Pro-environmental Behaviour, Tiritiri Matangi Island.

Introduction

Ecotourism has become one of the fastest-growing sectors within the tourism industry as it promotes the socio-economic and environmental benefits of tourism and responds to consumer demand for responsible travel (Fennell, 2015; Lee & Jan, 2019; Self et al., 2010; Yeoman, 2001). However, scholarly discussion on the effects of providing visitors with conservational knowledge is insufficient (Cousins et al., 2009; Xu et al., 2018). Existing literature on ecotourism considers the positive influence and appeal that ecotourism ventures have on visitor purchasing decisions (Graci & Dodds, 2008; Manaktola & Jauhari, 2007; Sasidharan et al., 2002) while there is a lack of studies demonstrating the impact that ecotourism ventures have on the visitor experience. Furthermore, various studies have explored the impact that environmental education programmes have on ecotourism destinations (Jacobson & Robles, 1992; Simarmata & Astuti, 2020; Skanavis & Giannoulis, 2010), acknowledging the fact that visitors' post-experience perceptions and intentions are an under-researched component of ecotourism. Therefore, ecotourism researchers have noted the need for further inquiry into visitor management approaches that focus on education and interpretation to enable visitors to be better informed and better behaved (Albrecht & Raymond, 2022; Boyd, 2000; Boyd & Butler, 1996; Orams, 1995; Welford et al.,

1999). This qualitative case study aims to understand the educational experiences of Tiritiri Matangi Island visitors and related impacts on their environmental knowledge, awareness, and intentions given that the educational experience, as opposed to any mass tourism experience, sets ecotourism apart from other types of tourism.

Literature Review

Environmental conservation, community benefits, and environmental awareness through education are the primary goals of ecotourism ventures (Lee & Jan, 2019; Yeoman, 2001), thus reflecting the complex relationship between nature and human beings. Educational experiences not only raise visitors' environmental knowledge and awareness, but enhances their abilities and competency in problem-solving, and foster the attitude, motivation, and commitment necessary to make decisions and take action (Juma & Khademi-Vidra, 2022). While the first function of environmental education in ecotourism coincides with what will often be the primary motivation for undertaking an ecotourism experience (Ban & Ramsaran, 2016), the ultimate goal of ecotourism is to encourage sustainability beyond the visitor experience (Walker & Moscardo, 2014).

New Zealand has emerged as a leading ecotourism destination (Morrow & Mowatt, 2015), and the Department of Conservation aims to better equip visitors, especially children and young people, with the knowledge, skills, and motivation to tackle environmental issues (Department of Conservation, 2017). However, while it is argued that New Zealand's ecotourism destinations provide opportunities for environmental education (Zhang et al., 2018), the linkages between New Zealand ecotourism's operational characteristics and impacts on visitors' conservation knowledge, attitudes and intentions are scarce. In order to understand visitors' educational experiences and related impacts, this case study investigates the pest-free eco-sanctuary of Tiritiri Matangi Island, which in the context of New Zealand is described as "a project larger than twenty-five hectares

implementing multispecies, pest mammal control for ecosystem recover objectives, and with substantial community involvement" (Innes et al., 2019, p. 372). The island's location in the Hauraki Gulf, thirty kilometres north of Auckland city, makes this a unique setting as the island is an integral component of urban ecology. This is because its ease of access plays a significant role in reconnecting visitors to other living systems (Wu, 2014) and allows them to realise that there is no divide between cities and nature (Tidd, 2015). In addition, little attention has been given to understanding visitor experiences when it comes to ecosanctuaries (Zhang et al., 2018), thus the purpose of this study is to explore how the Tiritiri Matangi Island educational experience impacts visitor perceptions and intentions to contribute to nature. As a result, the study will provide insights into the conservation opportunities and challenges and advance the understanding of engaging in environmental education through the visitor experience.

Methodology

This qualitative study focuses on understanding the visitor experience of environmental education in an in-depth, individualised and contextually sensitive manner (Brunt et al., 2017; Patton, 2015). As this research is ongoing, key themes and findings presented in this paper emerged from five semi-structured interviews with Tiritiri Matangi Island visitors who spoke English and were over the age of sixteen. Semi-structured interviews allow participants to share their stories in the context of their own personal values and experiences, which may be constrained in a more structured interview approach (King, 2004). Both international and domestic visitors, as well as visitors who had and had not taken a guided walk, were included in the study so the researcher could compare their experiences.

The qualitative data collected through semi-structured interviews were analysed using thematic analysis (Alhojailan, 2012). More specifically, this study utilised thematic analysis by using Braun and Clarke's (2006) six phases which included data familiarisation, initial code generation, searching for themes, reviewing themes, defining and naming themes, and producing the report.

Notable limitations of this study are the small sample and the fact that the chosen subjects of the research do not represent the whole visitor market. Nonetheless, this group has provided insightful grounds for understanding the educational experiences on Tiritiri Matangi Island.

Findings and Discussion

From the remarks of participants, it was evident that the Tiritiri Matangi Island educational experience involves visitors taking a guided walk through the bush to learn about the island's history, conservation work, and flora and fauna, or exploring the island at their own pace with the opportunity to learn about the island and its endemic inhabitants through interpretive signage.

Formalised Guiding

Responses from visitors that took a guided walk revealed that they enjoyed the guiding experience as its formalised nature ensured that they came away with knowledge and awareness about the wildlife and natural environment. This was important because the majority of the visitors revealed that they can be oblivious to the environment around them and regard nature experiences as

enjoyable exercise and a pleasant day out while missing wildlife and interpretive signage. This relates to Tidd's (2015) argument that while signage can be useful in adding physical information to a site, it can be easily ignored by visitors and visitors without prior ecological expertise may require more to help them build a better understanding. The guided walk experience also proved impactful as the visitor that did not take the guided walk wished they could have seen and recognised the birds they could hear. This finding reflects Skanavis and Giannoulis' (2010) argument that interpreters serve as the primary informational and awareness-raising resource for many visitors to naturally protected destinations through direct interaction.

Storytelling

Visitors' insights into their guiding experience revealed that the alarmist stories were effective in making them more aware and concerned about the impacts of predators, while the positive stories reflecting the conservation message and progression of the island were effective in making them interested in the aspect of the island being predator-free and appreciative of the volunteers and the effort that went into bringing the island back to what it is now. According to Martínez-Rodríguez et al. (2018) and Sheldon (2020), storytelling stages a transformative experience in a physical environment as visitors can understand their place and connection to nature. This is important because, through these elements of emotional connectivity and human connectivity, environmentally responsible behaviour can be demonstrated by visitors who are aware of how their actions affect the environment (Puhakka, 2011). Furthermore, Pera's (2017) study revealed that storytelling is a powerful co-creative behaviour in tourism, which is supported by Li and Liu (2020) who argued that empathy and persuasion developed by story plots affect visitors' attitudes and willingness to act. In another study, Hughes (2013) found that respondents were more likely to indicate and intend to modify their behaviour if they had been emotionally invested in the experience, whether negatively or positively. For instance, storytelling was valuable for Participant 4 because it made them more mindful of their smoking habits which caused them to restrain for the sake of the birds.

Immersed in Nature

Connections: Participants highlighted that receiving environmental education while being immersed in nature was an impactful aspect of their visitor experience as it allowed them to make connections between the information they received from the guides and signage with the flora and fauna surrounding them. For instance, Participant 1 stated that *"it's hard to read things in the abstract, but if you're there and there's a plant, you can remember it."* In addition, the visitor who did not take a guided walk revealed that reading the literature about the wildlife and then seeing them in their natural habitat was enough for them to gain interest and inspire them to read more signs to make more connections. This relates to Fennell's (2020) argument that many protected areas rely on these interpretive features to allow visitors to appreciate their natural surroundings and develop a better understanding of how natural features function.

Comparisons: Most participants from the study were clear that visiting the unique environment of Tiritiri Matangi Island allowed them to make comparisons between the quality and preservation of the island with their hometowns. This caused international visitors especially, to appreciate and

respect the conservation work that is being done in New Zealand and made them think about what they could be doing differently at home to improve their own natural environment. This is an important finding as most previous studies on destination image have focused on pre-trip image and its influence on travel decisions (Assaker et al., 2011; Baloglu & McCleary, 1999), while this finding links experience and perceived destination image post-trip.

Future Intentions

Visiting Ecosanctuaries: Respondent's accounts of their experiences suggested that the Tiritiri Matangi Island educational experience is impactful as all participants expressed their enthusiasm to visit the island again or similar destinations such as Rangitoto to support the ongoing conservation work and learn more. For example, based on the initial impact of the experience on Participant 2, they said that they are going to try and make another trip next week whereas they would usually be looking for a pub. It was also highlighted that visitors intend to enhance their experience on Tiritiri Matangi Island next time by bringing tools such as a notebook to assist them in remembering the information and embarking on different experiences by visiting the island at a different time of year or staying overnight to see nature through a different lens.

Recommendations: When further probed about their future intentions, all participants were willing to recommend the experience to their family and friends. They believed that sharing their experience with others through word-of-mouth and photographs will reinforce what they have learnt. A few visitors also mentioned their intent to learn more once they return home as the experience made them more interested in how the birds survive, with one international visitor stating that they want to research how they are impacting the environment in their own home and make sure everything is hospitable for all animals to make life easier for them.

Pro-environmental Behaviour: As a result of this educational experience and learning about the impacts on the natural environment, visitors also revealed that they are more cautious of littering than before, and will uptake minimal learned behaviours such as ensuring their boots are clean and sticking to walking tracks. This is consistent with Ballantyne and Packer's (2011) study, which found visitors were more likely to engage in conservation activities that required minimal effort, such as recycling, conserving water, and conserving electricity, than those that required more effort, like donating money to environmental organisations and engaging in volunteer work for the environment. However, domestic visitors expressed their interest in joining the Supporters of Tiritiri Matangi Island or similar groups in their own cities and making donations to support conservation efforts in New Zealand. On the other hand, international visitors mentioned that while they were more conscious of the environment, they either believed they were already doing all they could or were unsure how to get involved in conservation efforts in their home countries.

Conclusion

The current study can be interpreted as the initial stage of the research on the visitor experience of environmental education on Tiritiri Matangi Island. Insights drawn from the visitors' experiences highlighted that alarmist stories made visitors more aware and concerned about the environment, while the positive stories made visitors interested and appreciative of the environment and people

working to conserve it. Furthermore, being immersed in nature allowed visitors to make connections between factual information and the environment around them. The findings of this study also suggested that the experience had a transformative impact on visitors as they came without the intent to learn and left feeling more knowledgeable and interested in environmental matters. In terms of intentions, participants would visit Tiritiri Matangi Island again but with tools and changes to enhance their experience, visit similar destinations to learn more and support conservation work, and tell their friends to not only inspire them to come but reinforce what they learnt.

It was valuable to engage with the visitors to understand their educational experiences on Tiritiri Matangi Island so that the education providers can determine whether they demonstrate a successful model of sustainability and management by conserving nature and culture while instilling insight, inspiration and participation among their visitors. However, it is important to continue this research and engage with more visitors on Tiritiri Matangi Island and similar destinations to provide different perspectives. Future studies could also go further by following up with participants to determine whether their intentions have converted into actual behaviour.

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