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## Promoting children-nature relations through play-based learning in ecotourism sites

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### ABSTRACT

Ecotourism is viewed as a suitable context for disseminating knowledge about nature and promoting environmental values among tourists. However, few studies have drawn attention to the educational impact of ecotourism on young children. Moreover, environmental education in ecotourism tends to be framed by anthropocentric premises in which nature is viewed as detached from human domains and dependent on human protection. Considering this gap, this study aims to explore how play in ecotourism sites supports children to learn not only “about”, but also “with” nature. To that end, we draw upon the theoretical concept of play-based learning and focus on ecotourism activities in Queensland, Australia. The empirical data consist of semi-structured interviews with professionals in the fields of ecotourism, conservation and education. The study contributes to the field of ecotourism and the Anthropocene discussion by stressing the role of early childhood education in promoting a sound relationship between nature and humanity.

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Anthropocene; ecotourism; children; play-based learning; children-nature relations

## Introduction

The relationship between ecotourism and environmental education has been widely discussed in the literature (e.g., Kimmel, 1999; Lee & Moscardo, 2005; Peake et al., 2009; Powell & Ham, 2008; Ting & Cheng, 2017). It is common to find the educational aspect highlighted in the series of ecotourism definitions used in academia and the tourism industry (Donohoe & Needham, 2006; Fennell, 2001). For example, Fennell (2015, p. 17) defines ecotourism as “travel with a primary interest in the natural history of a destination. It is a form of nature-based tourism that places nature first-hand emphasis on learning, sustainability (conservation and local participation/benefits), and ethical planning, development and management”. In these terms, ecotourism is presented as an ideal context for learning about the natural world, conservation and environmental values. By engaging in ecotourism activities, visitors not only acquire knowledge about the natural environment, but also develop pro-environmental attitudes and behaviours (Beaumont, 2001).

The interest in ecotourism as a learning context has contributed to generating a considerable body of research on the pedagogical activities and techniques that can be

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used to support learning about nature among locals and visitors. A number of studies have shown that first-hand experiences and interactions with nature are not only critical for creating a positive relationship with the natural world, but also for developing an interest in protecting and conserving it (e.g., Beaumont, 2001; Broom, 2017; Ting & Cheng, 2017). Although these studies offer valuable insights about how ecotourism can promote environmental education, most of the discussion has revolved around pedagogical approaches shaped by an anthropocentric understanding of nature and the idea of converting ecotourists into environmental stewards. In doing so, the main research focus has been on exploring ways to educate adults and young adults, thus giving little attention to the role of ecotourism in supporting early childhood environmental education.

Considering the relevance given to children's education in the Anthropocene debates and the call for moving beyond the limits of humanist environmental stewardship framings (Clarke & Mcphie, 2014; Taylor, 2017), we examine what this means within an ecotourism context. To be more precise, our aim is to explore how play in ecotourism sites supports children to learn not only "about", but also "with" nature. For this purpose, we draw upon the notion of play-based learning and focus on ecotourism within a particular geographical area, Queensland, Australia. The empirical data used in the study consists primarily of 10 semi-structured interviews with professionals in the area of ecotourism and children's education. The data was collected during June and August 2019 as part of the master thesis of the first author (King, 2019) and analysed by using thematic analysis.

## Play-based learning

Over recent years, there has been a growing interest in play-based learning as a pedagogical approach in the context of early childhood education (Fesseha & Pyle, 2016). Scholars and policy makers have understood the relevance of children's spontaneous and free play in preschool pedagogy (Nicolopoulou, 2010; Samuelsson & Johansson, 2006). For example, Finland and Australia have a national learning framework that emphasises the importance of play in early childhood education (Australian Government Department of Education and Training, 2019; Finnish National Agency for Education, 2019). In these documents, play is recognised as an intrinsic aspect of learning.

Despite a common agreement about the relevance of play in early childhood, there is no universally accepted definition of play-based learning (Bennett et al., 1997; Bergen, 2014; Bubikova-Moan et al., 2019). Indeed, the stream of literature on play-based learning draws most attention to its conceptual diffusion and complexity, rather than offering a universal definition (see Bubikova-Moan et al., 2019; Sutton-Smith, 1997). In line with Wood (2009), play-based learning can be defined as the ways in which early childhood professionals make provisions for play and playful approaches to learning and teaching, how they design play/learning environments, and all the pedagogical decisions, techniques and strategies they use to support or enhance learning and teaching through play. It is through play that children also learn who they are as individuals and how they should interact with others in different contexts. Children learn cultural tools (e.g., activities, interactions and understandings that are appropriate and acceptable in everyday settings) in their families and communities (Jordan, 2010, p. 98). From this perspective, play and capacity to play can be considered significant for children in learning new things and forming relationships to nature and other human beings (Wood, 2010).

Indeed, there is a significant stream of literature exploring how early childhood environmental education and children-nature relationships can be promoted through play. For instance, some scholars have investigated how play-based learning can be integrated in early childhood educational settings to support the teaching and learning of environmental concepts (e.g., Cutter-Mackenzie & Edwards, 2013). Other studies have examined how learning, but also children-nature relationships, can be enhanced through play in nature-rich places such as green school or day-care yards (e.g., Laaksoharju & Rappe, 2017; Puhakka et al., 2019) and in natural environments, that is, environments not designed by humans (e.g., Ridgers et al., 2012; Skar et al., 2016).

Although play-based learning emphasises child-initiated and child-led play, some scholars have drawn attention to the role of adults in supporting and facilitating a playful environment (Fesseha & Pyle, 2016). For example, Cutter-Mackenzie and Edwards (2013) view adult interaction and engagement in play as essential to foster early childhood environmental learning. Adults support learning by providing a structured environment (e.g., supplying particular types of toys or tools) or sensitively responding to children's actions, offering instructions and encouraging children to explore materials (Weisberg & Zosh, 2018). Furthermore, interactions with adults not only provide new knowledge and ideas, but also stimulate children's play, by being role models for the attitudes they want to transmit to children. (Howe & Davies, 2010).

In particular, the socio-cultural perspective on learning has contributed to the understanding of children's play as a series of practices supporting socialisation, shared construction of meanings and knowledge under the scaffolded guidance of adults (Jordan, 2010; Rogoff, 1990; Vygotsky, 1978). This view underscores the interwoven nature of play and learning, the proactive and variable roles that adults may adopt in children's play and how different play-based learning practices may contribute and foster not only children's social, emotional and physical development but also their cognitive development in a holistic and mutually supportive manner (Pyle et al., 2018; Samuelsson & Johansson, 2006; Stephen, 2010; Wallerstedt & Pramling, 2012). The work of Piaget and Vygotsky draws attention to how children learn about their world, to apply new ideas and foster their imaginations through play and the endorsement of teachers (Fleer, 2010; Golinkoff et al., 2006).

However, as several scholars point out, it is essential that children have opportunities for autonomous, independent and unsupervised play in nature (e.g., Laaksoharju & Rappe, 2017; Ridgers et al., 2012; Skar et al., 2016; Weisberg & Zosh, 2018). Accordingly, children should be viewed as active explorers and playful agents who shape their selves, knowledge, skills and world-view (Gurholt & Sanderud, 2016). Spontaneous and autonomous play in nature is a precondition for supporting collective learning and more-than-human relations that may allow children to cross the onto-epistemological boundaries dividing the world into humans and the rest (Taylor, 2017).

## Methodology

Data for the study was collected by using semi-structured interviews (Brinkmann, 2013). Following Saldaña's (2011) advice, we chose research participants from diverse fields and with different viewpoints with the only condition being that they have knowledge of and working experience with environmental preschool education in an ecotourism, outdoors recreational or early childhood education context. A total of 10 semi-structured interviews

with 11 participants were conducted in the English language. Nine of the interviewees were female and two were male, and they all live in Queensland, Australia. The age range of the research participants was between 27 and 80 years old. Eight interviews were conducted face-to-face, one via the telecommunication application Skype, and one interview was conducted over the phone. One of the interviews was attended by two participants. The duration of the interviews varied between 30 minutes to 1 hour and 20 minutes. All the interviews were recorded and accurately transcribed.

Most of the research participants were found by conducting searches online for professionals and organisations located in Queensland, Australia that have knowledge and experience of the planning and implementation of educational activities with young children in an ecotourism context. Some interviewees were referred by one of the author's colleagues who knew about the study or by one of the interviewees, believing they would have suitable knowledge and experience. The research participants consisted of early childhood educators with backgrounds in environmental education and forest school education, conservationist and environmental educators, researchers in coastal management, environmental conservation and community development, ecotourism professionals in outdoors education, a wildlife presenter and trainer with a degree in wildlife and marine science and a guest activity manager in an ecotourism business.

The data of the study was analysed using the thematic analysis in an inductive way. Identifying the patterns and themes in the analysis was directed by the content of the data (Maguire & Delahunt, 2017; Nowell et al., 2017). The analysis consists of five phases. The first phase of the analysis was to become familiarised with the data by reading and rereading it. The second phase included creating codes that were relevant in answering the research questions. QSR NVivo 12 software was employed to facilitate the coding process of the analysis. After the codes were generated, they were examined and broader themes were identified. The fourth phase was reviewing the themes to refine, combine and discard some of them. After reviewing the themes, ten themes remained. These themes were: adult support, connection and love, environmental stewardship, interconnectedness, national parks, natural environments, nature-based tools, nature play, regular exposure and storytelling.

The fifth phase was defining what the themes represented and creating an analysis for each theme. Some of the themes were merged together during the fifth phase as they were similar, overlapped or correlated. The themes were then developed into three main themes by considering the previous literature. Based on the literature on play-based learning in promoting children-nature relationships, the themes connection and love, environmental stewardship, national parks, natural environments, nature-based tools and nature play were merged together under the first theme "learning about nature through play". As adult presence is largely emphasised in the play-based learning literature, we created the second main theme "the role of adults in supporting learning about nature" by combining the themes adult support and regular exposure. The third theme developed as storytelling emerged from the findings as a significant tool in supporting children's learning about the interconnectedness of nature, reflecting the idea of children learning with nature. Thus, the themes storytelling and interconnectedness were merged together.

In this research, we follow the Finnish National Board on Research Integrity guidelines on ethical principles of good research practice (TENK, 2019). Since the study was conducted in Australia and it involved individuals working with preschool children, we also follow the general principles of responsible conduct of research in Australia by the Australian Research Council (ARC, 2018).

## Findings

### *Learning about nature through play*

According to our findings, ecotourism sites offer an appropriate setting for early childhood environmental education and facilitating a connection between children and nature. The respondents agree that interaction and play in nature help children develop an understanding, respect and appreciation for the natural world and all its creatures, big and small. As the excerpts below indicate, professionals working with children in ecotourism see a correlation between early childhood experiences in nature and the development of pro-environmental values and attitudes, a result that is confirmed in the study by Broom (2017).

As I've been saying, all these programmes help the children to value what they see. And if they don't do that and understand that everything is important, then they have no comprehension of what conservation is ... we tell them that they need the whole ecosystem to support life. (I3)

So, making sure children are developing an environmental connection. Connection with nature. My understanding is that a lot of conservation values are strengthened by children being able to have a direct connection with nature, independently. (I9)

The way the interviewees talk about the need to engage children with nature seems to be based on environmental stewardship pedagogical premises, which position children as potential future guardians of nature (see Taylor, 2017). Indeed, learning about nature and how our life is connected to it is viewed as a precondition to protect nature from detrimental human activity (Broom, 2017; Ting & Cheng, 2017). The human-centric understanding of children's play in nature is also reflected in the way respondents refer to nature in terms of a learning space. In line with previous research on play in nature and nature-rich spaces, (Gurholt & Sanderud, 2016; Laaksoharju & Rappe, 2017; Puhakka et al., 2019), our results confirm that ecotourism is a suitable learning context for supporting personal development, human-relationships and a sense of community among children.

Nature provides the perfect challenges for children to learn about themselves. How to walk and how to maintain balance, how you relate to each other in space, you got to trust the people that you're with in the wild. (I4)

As the excerpts above show, nature is a learning environment where children learn through play, exploration, inquiry and discovery (Cutter-Mackenzie & Edwards, 2013). When children play in nature, they can challenge themselves, develop problem-solving skills and test motoric capabilities. In this view, playing in nature is located within a humanistic frame in which nature has instrumental value as an enabler of child development. This human focus is reflected when discussing ecotourism as a learning space.

Indeed, respondents used the term “tools” when referring to animals, sticks, stones and other natural elements that can support play and learning in nature.

The creatures and being outside and having trees and places that we can go and look for things and have a look at different styles of leaves and plants and stuff like that ... We use nature as our tools. (I2)

Several interviewees also stress the importance of role-play in learning about nature and developing human-nature relationships. By taking an imaginary role of national park ranger or wildlife hero, children not only play, but also develop a relationship to the natural world and, thus, a willingness to protect it.

If everybody was a ranger. We're all rangers. Or a wildlife hero and you'd have to save some animal, a koala, or a gecko, something like that ... That would be a great way to embody conservation values in children. (I9)

This excerpt again draws attention to the human-centric perspective that dominates the environmental educational discourse (see Taylor, 2017). Indeed, the belief that humans are superior to nature and therefore stewards of the natural world shapes their understanding of how knowledge is created through play and playful activities in ecotourism.

### *The role of adults in supporting learning about nature*

According to the findings, adults are seen as role models, supporters, facilitators, guides, supervisors, as well as providers of play in nature opportunities. The presence of adults and their influence on children's learning about nature and human-nature relationships was seen as essential. In particular, parents and educators were seen to play a crucial role in encouraging or discouraging environmental values and caring for nature among pre-school children.

We still need the support of a caring teacher or parent to nurture that further because if the children go home, and this often happens that the parents don't recycle or they use big plastic bags or they hate creatures or they don't have plants and ... they don't have a garden, then it kind of stops there. No matter how excited the children are about wanting to go home and trying to do something. (I2)

This excerpt highlights the role of adults in influencing the relationship between children and nature. While play in ecotourism can support learning about nature, it also needs the commitment of adults at home. As Broom (2017) explains, not only educators, but also parents who express an interest in nature become essential role models for supporting the development of children-nature relationships. In addition to role models, adults were also seen as guides and facilitators of free play experiences that promote environmental values. Most of the interviewees agreed with the idea that it is important to let children play and explore without too much guidance and adult involvement. During activities in nature, adults should avoid interfering with children's games and trying to teach them constantly. Several studies support the idea of letting children play free in nature without adult intervention and direction (e.g., Gurholt & Sanderud, 2016; Skar et al., 2016).

Yes, because I was just thinking about the parents that try and teach every five minutes. That really annoys me as well because you're completely interrupting their play. Let them play! Take the pressure off them. (I5)

On the other hand, respondents emphasised that children should be made aware that adults are there for them when needed and create a sense of security for the children. Yet, adults should adopt the role of an observer in play situations and only step in when children need guidance or scaffolding. As some respondents explain:

So, we would see the outdoors as a positive place for children to explore and feel comfortable and take risks and play and parents are there to be playful at times but not to dominate children's play. (I4)

The interviewees believe that parents, educators and other adults involved in children's lives can play an active role in providing opportunities for experiences and play in nature. As gatekeepers for children's access to natural environments, they play a key role in supporting learning about nature and children-nature relationships. Moreover, the idea of free and spontaneous play in nature offers an opportunity to learn about, but also with nature. Indeed, free play in ecotourism sites can allow children to explore natural materials and create knowledge through more-than-human encounters, interactions and relations (see Taylor, 2017).

### *Learning with nature through storytelling*

Our study draws particular attention to storytelling as an effective tool for strengthening the relationship between children and the natural environment. Indeed, as most of the interviewees pointed out, storytelling works as an interpretative tool which stimulates preschool children's imagination and supports not only learning about, but also with nature.

They can retell the stories or they can play the stories or they can be reminded when they're walking through a space or playing in a natural space. They'll be reminded of aspects when they see something interesting and that will all come back and they're able to share that information that way. Ecological storytelling ... We've given it a name because it's so important to us. (I4)

Preschool children usually enjoy listening to stories and sharing them with other people. Instead of memorising what is said, children use storytelling as a means to interpret their experience with the natural world (see Liu et al., 2011). Following Howe and Davies (2010) thoughts, it can be argued that the narrative and socio-cultural nature of storytelling play a vital role in supporting children's learning with nature. Furthermore, children can also mentor each other with their own stories of their experiences with more-than-human actors. The following excerpt describes the role of stories in promoting children-nature relationships in an ecotourism context.

I think it's a great opportunity to build a conversation with children that they are a part of nature, not separate from it. If you have stories that are playful and engaging for children and enable movement and being the characters in the stories. (I9)

By stressing that children are part of nature, the excerpt challenges the idea that nature is separated from the human domain. Our findings draw attention to the role of children as



co-designers of stories, by creating and taking active part in the stories told by them. From this perspective, play-based learning contributes to promoting children-nature relationships by giving them the opportunity and freedom to co-design their experiences and activities in nature the way they want. As one of the interviewees points out in the excerpt below.

It would be possible. Because you would be asking them what they would like to do, how they would like to do that. Because children are exposed to what's going on in the world. They're not living in a bubble anymore. (I6)

Considering the results from our study, it can be argued that storytelling is a powerful practice for play-based learning in early childhood environmental education. As previous studies indicate, storytelling can strengthen children-nature relationships and contribute to developing a sense of place (Wilson, 2011). Furthermore, storytelling is also essential in promoting learning, as children use reflection to understand what they are learning through their observation and knowledge acquired through interactions with adults and other children (Liu et al., 2011). In doing so, storytelling does not only communicate values, views, problems and possible solutions, but it also helps children to understand their relationship to nature and thus, establish a personal relation to it. As a learning tool, storytelling offers children the opportunity to learn with nature and create narratives based on their collaborative learning experiences with more-than-human actors.

## Conclusion

Environmental education has an essential role to play within the interdisciplinary Anthropocene debates. As several scholars argue (e.g., Clarke & Mcphie, 2014; Taylor, 2017), there is an urgent need to look for alternative pedagogies and educational settings that can help children and young adults to better understand human-nature relations. Considering this necessity, our study draws attention to the use of play-based learning in ecotourism as an opportunity to promote early childhood environmental education and to help children develop a sound relationship to the natural world. By focusing on children and the role of environmental education within Anthropocene debates, the study contributes to the discussions on the role of ecotourism in promoting both environmental awareness and education in society (e.g., Kimmel, 1999; Lee & Moscardo, 2005; Ting & Cheng, 2017). Given that children are fairly absent in tourism studies (Milne et al., 2019), this research also contributes to drawing attention to the role of children in tourism discussions concerning responsibility, sustainability and the Anthropocene.

Our study shows that play-based learning in ecotourism tends to be discussed in terms of a pedagogical activity to promote environmental stewardship. Accordingly, play in ecotourism sites is viewed as a means to help children learn "about" nature, establish a relationship with it and thus, develop pro-environmental values and attitudes that will foster protection of nature in the future (see Beaumont, 2001). This understanding, which is shaped by anthropocentric premises (see Taylor, 2017), is also reflected in the way nature, natural elements and animals in ecotourism sites are viewed as tools for environmental education and children's own personal development. Moreover, our results also draw attention to the role given to other humans, adults in particular, in delivering knowledge about nature and serving as an example of how to take responsibility for its

conservation. In these terms, nature is depicted as having instrumental value and being subjugated to human control and care.

This anthropocentric perspective is also reflected in the role given to adults in supporting play-based learning activities in nature. In line with previous studies (e.g., Broom, 2017; Sawitri, 2017), the interviewees agree that adults are key in facilitating, guiding, supervising and providing play opportunities in nature. In doing so, the interviewees seem to position adults as actors who are knowledgeable about the natural world and thus essential in influencing and shaping the relationships between children and nature. Although adult guidance was seen as important to support play in nature, the idea of letting children engage by themselves with nature was expressed by the professionals interviewed. Independent and autonomous children's play in nature, which has been discussed in the literature (e.g., Gurholt & Sanderud, 2016; Skar et al., 2016), was viewed by the interviewees as an opportunity for learning "with" nature. Indeed, free play in nature gives children the opportunity to create knowledge about the natural world through spontaneous more-than-human encounters (see Taylor, 2017).

Storytelling in particular was pointed out as an effective tool for learning "with" nature. According to our findings, storytelling was viewed as useful in creating and disseminating the knowledge resulting out of encounters between children and the natural world. The idea of free play in nature in combination with storytelling points towards a mindset where children are part of nature rather than detached from it. Through storytelling, children not only develop a relationship with nature, but are also able to position themselves as part of it. Although our study shows that an anthropocentric learning "about" nature approach prevails among the research participants, we can confirm that a learning "with" nature approach was not totally omitted by them either.

As a whole, the study indicates that visiting an ecotourism site does not automatically create a relationship between children and nature, if children are not able to actively engage with the natural world. From this perspective, the study helps staff at ecotourism sites to understand how play-based learning can be used as part of their educational practices to support children-nature relationships. First, ecotourism sites can embed play-based pedagogies in their environmental education programmes. For example, they could encourage child-initiated nature play opportunities by providing space for free play or organising nature playgroups and nature-based kindergartens such as forest schools or bush kindergartens. Second, as our findings show, these activities should be organised under the supervision, guidance and scaffolding of adults with pedagogical expertise. Indeed, the spaces and activities offered to children should be safe and pedagogically thought through, but at the same time they should offer the possibility to engage autonomously and spontaneously with the natural environment. Third, staff at ecotourism sites could reflect on ways of supporting storytelling practices in the spaces and activities offered to children. It is important that children have the opportunity to create their stories out of their encounter with nature, but also to share them with other children and adults too. Stories created by children can challenge adults' assumptions about nature and thus, lead them into new ways of understanding and relating to nature.

Finally, we should acknowledge the limitations of our study. Firstly, the interviews were conducted with respondents from Australia who were living in urban areas. Secondly, although the study focuses on children, they were not directly included in the study. The limitations of the study point towards avenues for future research. For example, future

studies could be based on ethnographic research exploring how children engage and learn with nature through play-based learning activities in an ecotourism site. It will also be interesting to conduct a similar study in a non-Western country and with research participants living in a rural environment.

## Disclosure statement

No potential conflict of interest was reported by the authors.

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