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**What factors determine the types of environmental learning activities
offered by service providers?**

The case of the Peruvian Amazon.

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obtain the academic degree of Master in Management of Tourism
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Abstract

This thesis aims to lay out what factors determine environmental learning activities offered by service providers in tours in the Peruvian Amazon. Semi-directive interviews have been carried out with different service providers to retrieve the necessary information. This method has been complemented by on-site participatory observation in the Madre de Dios region of Peru, where I participated in different tours and could talk to some tour guides and scientists involved in tourism activities. The results first provide a list of all environmental learning activities identified, ranging from observation activities, over guiding techniques to scientific and community-based experiences. However, when exactly experiences can be considered environmental learning activities needs to be further looked into. The factors determining said activities are numerous. The latter depend on the tourists' demand, the possibilities and interests of the providers and various aspects regarding the tour guides. Some external factors also play a role. Regarding scientific and community-based tourism, some more elements need to be considered. In future research, more environmental learning activities and factors could be identified, which could help get an even better understanding of the subject and possibly increase learning outcomes in tourism activities.

Keywords: Environmental learning activities, environmental awareness and behaviour, guiding techniques, wildlife tourism

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Introduction

One of the major problems humanity faces now is biodiversity loss. According to the 2022 living planet index, assembling information on almost 32,000 animal populations worldwide, there has been a decline of 69% in monitored wildlife between 1970 and 2018. With a decrease of 94%, Latin America is affected the most (Almond et al., 2022). Various threats are the drivers of this loss, such as human consumption, agriculture, overexploitation in general, and climate change, the latter being at the same time a driver and a consequence of biodiversity loss. The reduction of species is far more significant than before human influence and goes far enough for scientists to refer to it as a sixth mass extinction (OECD, 2019). This evolution, in turn, poses a risk for humanity as we derive everything we need to live from nature (Almond et al., 2022). Hence, there is a great urgency to get biodiversity loss under control.

Nevertheless, the problem is not tackled as much as problems of similar urgency, such as climate change, for example (OECD, 2019). This situation would have to change if we were to avoid an even more significant loss of species. In fact, countries are already starting to set goals to save biodiversity and increase conservation efforts. All countries except the USA signed the Convention on Biological Diversity in 1992, intending to conserve biodiversity and use it sustainably. The convention determines the goals each country must achieve using its chosen means (Grooten et al., 2018). In December 2022, at COP 15 held in Montreal, countries went one step further. They adopted an agreement to conserve at least 30% of the world's lands, inland waters, coastal areas and oceans until 2030 (Secretariat of the Convention on Biological Diversity, 2022).

To increase conservation efforts, it is also indispensable to spread awareness about the importance of this issue beyond governments and to render people's attitudes and behaviour more environmentalist. According to Vaughan (2000), ecotourism, if carried out correctly, can be a driver to achieve this goal. However, whether or not this potential is exploited depends on the choices made by service providers in terms of the touristic activities they offer. Offering environmental learning activities can increase environmentally friendly behaviour among tourists.

Such activities can take different forms. Nowadays, for example, experiential tourism is more and more desired by travellers, and the tourism sector is increasingly adapting to this trend (Tolkach et al., 2016). In such a touristic concept, visitors actively participate in activities and interact with people and culture instead of just observing a destination (Garcia Henche, 2018). Touching the tourists' senses is essential in this type of activity, giving meaning to the visited place, enhancing the visitor's experience and improving learning processes during the visit (Meacci & Liberatore, 2018). Stakeholders might incorporate these new trends into environmental learning activities. The decision as to whether or not they offer such activities and what exactly they would look like lies in their hands. However, many different circumstances might influence their decision.

The present thesis aims to identify what factors determine the environmental learning activities offered by service providers. Only after understanding what incentives and barriers play a role

can one look into developing further environmental learning activities, which can contribute to spreading awareness.

Research in this field is very scarce for now. This thesis aims to address this lack of research using qualitative methods by classifying environmental learning activities and identifying the factors influencing the activities chosen by service providers in wildlife tourism. The information retrieved aims to serve as a basis for the development of environmental learning activities in the future.

To get a holistic idea of the previous research conducted in the field, I have looked into English, French, German and Spanish literature.

Literature Review

1. Environmental learning in tourism

In the context of tourism, environmental learning is mainly included in ecotourism and (especially marine) wildlife tourism. Ecotourism can be defined as visiting sustainable natural areas, where participants will learn about the nature and importance of the site (Van der Merwe et al., 2020). Wildlife tourism, sometimes referred to as a type of ecotourism, encompasses a range of different activities. In general, it is defined as the observation of wildlife and plants, which is why even seeing and interacting with captivated animals, a practice that can be extremely harmful to the latter, can fall into the definition. However, this thesis considers wildlife tourism only as the observation of free-ranging animals in their natural habitat and of the habitat itself (Borges de Lima & Green, 2017). Furthermore, learning activities about nature and conservation are more abundant in wildlife tourism than in other types of nature tourism (Walter, 2013).

Generally speaking, learning concepts sparked much interest among researchers until around 1960, with a strong focus on behavioural learning concepts. From the late 1960s, scholars started looking more into cognitive concepts, trying to understand how the human mind works, even though general interest in learning theories decreased. Since 1975, research in the field has started to intensify again. Ever since, much content has been written about learning theories, now mainly embedded in cognitive psychology. Learning can be defined as an enduring change in behaviour resulting from practice or experience (Shuell, 1986).

To achieve that behaviour change, many scholars agree that simply providing information is insufficient (Borges de Lima & Green, 2017; Garrod & Gössling, 2008; Kimmel, 1999; Li et al., 2021; Orams, 1994). Therefore, they tend to refer to interpretation, a concept set up by Tilden in 1977. The latter defines interpretation as follows: *"An educational activity which aims to reveal meanings and relationships through the use of original objects, by first-hand experience, and by illustrative media, rather than simply to communicate factual information"* (p. 8). He adds that an activity should be provocative to be effective (Tilden, 1977). Orams (1994) completes Tilden's work by saying that interpretation should, above all, lead to a change in human behaviour, which is in line with Shuell's definition of learning mentioned above.

Concerning learning and interpretation in an environmental context, these concepts emerged around the same time as Tilden's publication. In 1977, the world's first *Intergovernmental Conference on Environmental Education* was held in Tbilisi by the United Nations Educational Scientific and Cultural Organisation (UNESCO) in cooperation with the United Nations Environment Programme (UNEP). This conference was based on previous research on (environmental) education strategies carried out by UNESCO. It also referred to the Declaration of the United Nations Conference on the Human Environment held in 1972, stating that *"to defend and improve the environment for present and future generations has become an imperative goal for mankind"* (p. 24). In response to that, the Tbilisi declaration states that *"Education utilising the findings of science and technology should play a leading role in creating an awareness and a better understanding of environmental problems"* (p.24). (« The Tbilisi Declaration », 1978). Today, according to Kimmel (1999), much literature on environmental learning is available. However, there is a strong focus on education aimed at youth in most of the content.

Having analysed the situation of current research myself, I have made the same observation as Kimmel. Literature about environmental learning, interpretation and the right approach to communication, especially in the context of school education, is abundant. However, the subject has scarcely been applied to the context of tourism. No specific bias as to the destinations analysed can be observed. Instead, in one particular type of tour, investigators conduct a lot of research on environmental learning, namely in marine wildlife tours (Ballantyne et al., 2011; Borges de Lima & Green, 2017; Garrod & Gössling, 2008; Lück, 2003; Zeppel, 2008). Jungle destinations, for their part, have not been treated regarding the subject in question, not to mention the (Peruvian) Amazon. Even though wildlife (tourism) is abundant here, few scholars have worked on environmental learning in this touristic destination.

For now, one can say that environmental learning, no matter in what context, achieves the best outcomes when taking place in the natural environment. When using conventional teaching methods in a classroom setting, nature is less tangible, and its importance is more challenging to be conveyed. On the other hand, when taking people to the natural environment, they can experience nature by being immersed in it and by actively observing wildlife. This strategy is far more effective and can lead to greater knowledge among the participants. It can even change their attitudes and behaviour, making them act more responsibly (Ballantyne & Packer, 2009). However, it should be clarified that simply taking people to specific sites will not trigger a learning process among visitors. Including environmental learning activities in tours is vital if education is among the objectives (Kimmel, 1999).

Environmental learning should also enable the people involved to participate actively. Thus, according to The Tbilisi Declaration (1978), *"it should involve the individual in an active, problem-solving process within the context of specific realities, and it should encourage initiative, a sense of responsibility and commitment to build a better tomorrow"* (p. 24). It should further *"provide the necessary knowledge for interpretation of the complex phenomena that shape the environment, encourage those ethical, economic, and aesthetic values which, constituting the basis of self-discipline, will further the development of conduct compatible with the preservation and improvement of the environment. It should also provide a wide range of*

practical skills required in the devising and application of effective solutions to environmental problems" (p.25).

2. Environmental Learning Activities

As of the information given above, there tends to be a strong focus on the power of environmental learning to increase environmentally positive behaviour and consciousness. However, what is missing in current research are attempts to delimit environmental learning activities in tourism and differentiate between various kinds of them. As seen before, simply taking tourists into nature, for example, cannot be considered environmental learning, but it can undoubtedly be seen as nature tourism. Ballantyne & Packer (2009) have conducted empirical research on environmental learning, comparing teacher-directed methods to experiential learning. Doing that, they have also identified a set of pedagogic strategies and analysed their effectiveness in changing people's knowledge, attitudes and behaviour. Although their research is not based on a tourism context and focuses solely on experiential learning, not including any categories, it can be used as a reference for setting up different activity types in wildlife tourism.

To respond to the lack of research on environmental learning activities in tourism, I have set up a definition and classification that will be used as the basis for this research. Based on Ballantyne and Packer (2009) and the definition of *The Tbilisi Declaration* (both seen here-above), environmental learning activities are defined as follows: ***Activities taking place in the natural environment, actively involving the participants and leading to the development of environmentally conscious values and behaviour among them.***

In line with this definition, the little research I did find, and the few existing concepts, I continued with the classification of environmental learning activities. To classify them, I have used three main criteria helping to delimit one category from the other. These criteria are based on the following questions:

1. Who is the main organiser carrying out the touristic activity on the field?
2. What is the role of the main organiser?
3. What is the role of the tourist participating in the experience?

Based on these criteria, I have identified the following types of activities:

2.1. Interpretative activities

The first category is characterized by interpretative activities carried out by a tour guide. The latter explains what can be seen and tells stories to make his speech more captivating and sensitise the visitor toward the natural world (Borges de Lima & Green, 2017; Lück, 2003; Walter, 2013). The guide can, but must not, use interpretative material to bring across more information, such as signage, flyers, images, information boards, hand-outs or other reading materials (Borges de Lima & Green, 2017; Garrod & Gössling, 2008; Ilyina & Mieczkowski, 1992; Kimmel, 1999; Lück, 2003; Powell & Ham, 2008; Van der Merwe et al., 2020). The activity should be provocative and stimulate thought among participants (Tilden, 1977).

2.2. Problem-solving and stimulating activities

In this category, activities are more interactive than in the first two ones. The guide encourages the tourists to participate by reflecting on different issues before receiving an answer (Ballantyne & Packer, 2009; Kimmel, 1999; Li et al., 2021; Walter, 2013). In this case, the learning process is experience-based. According to Ballantyne & Packer (2009), this approach, including reflective activities, is more effective in changing people's knowledge, attitudes and behaviour. They also argue that activities should touch more and, if possible, all our senses to achieve the most results. Other scholars mention the importance of touching people's emotions (Borges de Lima & Green, 2017; Orams, 1994). According to Orams (1994), having done a literature review on the effectiveness of interpretation programmes in wildlife tourism, this approach is also highly likely to change visitors' attitudes and behaviours. In the classification used for this thesis, both touching senses and emotions are part of the second category.

2.3. Participatory, hands-on and scientific activities

This category includes all activities that do not only involve people in thinking processes but let them participate in conservationist or scientific activities. Examples are joining scientists during their work, participating in experiments or collecting data (Borges de Lima & Green, 2017; Ilyina & Mieczkowski, 1992; Zeppel, 2008). Scientists, tour guides or both can carry out the activity. According to Borges de Lima and Green (2017), such activities effectively spread awareness about the importance of conservation and field research. As of the study conducted by Ballantyne and Packer (2009), these activities, just like the ones described in category two, also fall under the spectrum of experience-based learning. Participating in field research is also very effective in changing people's behaviour.

Activities like those mentioned in category three have barely been the subject of research before. Bournalon and Mao (2011) designate them as cultural scientific tourism, thus differentiating them from other types of scientific tourism, focusing solely on science. They describe them as *"organised educational, structured tours elaborated according to a scientific subject. A restricted group of tourists, keen to learn and experiment, carries out the suggested activities. These educational tours are guided by specialists of the area who share their expertise and allow the tourists to learn while living a unique experience"* (p.80). It is important to note that they refer exclusively to conventional tourists, not volunteers, students or scientists. Therefore, Bournalon and Mao have precisely defined one type of activity that will be treated as part of this thesis. However, they have not examined the effects on learning of this type of activity, nor have any other researchers in the field. Bournalon and Mao's classification itself has not been resumed in other research cases so far either. Instead, most scholars focus on scientific tourism that is destined for students or professors travelling with the priority of conducting research, not with the priority of engaging in touristic activities (Buzinde et al., 2020; Izurieta et al., 2021; Laarman & Perdue, 1989; West, 2008). Therefore, little is known about cultural scientific tourism and its effects on environmental behaviour.

2.4. Museums and educational talks

Sometimes, environmental learning activities include visits to museums or visitor centres and educational talks carried out by specialists in a specific field (Borges de Lima & Green, 2017; Walter, 2013; Zeppel, 2008). Here, interpretative materials are used to convey information, which is why the activities go more toward category 1. However, they can be complementary to categories one to three. Furthermore, a differentiation should be made between environmental talks and guiding, as the former tend to be held by specialists and go more into detail (Borges de Lima & Green, 2017; Powell & Ham, 2008).

2.5. (Information Giving)

As seen before, simply providing information does not lead to a change in behaviour among participants of the respective activities. It does not fall under the spectrum of our definition of environmental learning activities, which are considered to further environmental values and the corresponding behaviour. Nevertheless, information giving can be part of the activities offered in wildlife tourism. I have therefore classified it as well to not exclude it categorically from this research. Information giving is carried out by the tour guide during the experience. A lot of importance is given to the communication process, which should be effective in making sure the tourists enjoy and, at the same time, understand the given message (Powell & Ham, 2008). It can also be personalised according to the visitor's characteristics, increasing its effect (Wolf et al., 2019). It is important to note that educational talks carried out by specialists might also fall under the definition of information giving in case no illustrative material is used and the speech does not provoke the auditor or stimulate thought in any way.

The following table summarises the five types of activities that have been identified, listing the criteria used to differentiate them:

Organiser of the activity	Role of the organiser	Role of the tourist
1. Interpretative activities		
Tour guide	Explanations, storytelling Use interpretative material Provoke, stimulate thought	Understand information Question things
2. Problem-solving and stimulating activities		
Tour guide	Propose thinking activities Stimulate participation Trigger emotions	Contemplate Solve problems Use (all five) senses Feel emotions
3. Participatory, hands-on, and scientific activities		
Scientist / Specialists (Option: tour guide)	Show scientific activities Explain scientific activities Assist tourist participating	Learn about scientific activities Participate in scientific activities
4. Museums and educational talks		
Signage in museum Professionals in a specific field	Explanations Use interpretative material	Understand information
5. (Information giving)		
Tour guide	Give information	Receive information

(Table 1: Environmental learning activities retrieved from literature review)

At this point, it is crucial to distinguish between information giving and interpretative activities. In existing research, authors generally do not clearly define the difference between both activity types. They refer solely to interpretation when looking into learning activities, unanimously saying that simply giving information does not trigger a learning effect and that interpretation should be the chosen approach instead. However, in the context of this thesis, making the difference between both concepts is indispensable. This research focuses on the types of existing activities and aims to understand how stakeholders determine the kind of experiences they offer. Information giving is included in the classification to allow for an exhaustive list of possible activity types. After obtaining the results, I will analyse them to see if information giving is among the offered experiences and how stakeholders refer to it.

Two types of activities that I exclude from the scope of the research are wildlife volunteering and scientific tourism explicitly designed for students or researchers. Indeed, both concepts would fall under the given definition. However, they tend to involve people for at least a few weeks, enabling them to get more insights into nature and wildlife. This research focuses on

environmental learning activities designed for people on holiday who have only a short destination experience.

3. Possible factors determining environmental learning activities in tourism

We have repeatedly seen that simply communicating information is insufficient for learning processes to be effective. Orams (1994) has emphasised that it will unlikely lead to behavioural change. As a consequence, alternative environmental learning activities are advocated. Looking into current research, many arguments are in favour of the development of such activities. Nevertheless, several barriers can also be identified.

3.1. Incentives for the inclusion of environmental learning activities in tourism

Regarding the inclusion of environmental learning activities in tourism, researchers agree that it has a strong potential to improve the visitor's experience (Borges de Lima & Green, 2017; Garrod & Gössling, 2008; Kuo, 2002). They argue that the educational aspect leads to greater enjoyment (Garrod & Gössling, 2008; Kimmel, 1999; Kuo, 2002) and satisfaction (Kimmel, 1999; Li et al., 2021; Wolf et al., 2019). This satisfaction, in turn, will help distinguish the respective suppliers and might increase the number of tourists they receive in the long run (Price, 2003; Wolf et al., 2019).

Besides bringing such positive outcomes for tourists and suppliers, environmental learning in tourism is beneficial for conservation efforts (Vaughan, 2000; Wolf et al., 2019; Zeppel, 2008). More precisely, it can reduce negative impacts on the natural environment caused by tourists on-site (Borges de Lima & Green, 2017; Garrod & Gössling, 2008; Kimmel, 1999; Kuo, 2002; Wolf et al., 2019). Due to this characteristic, it is also considered an important management strategy within natural (protected) areas (Borges de Lima & Green, 2017; Garrod & Gössling, 2008; Kuo, 2002; Lück, 2003; Orams, 1994; Reisinger & Steiner, 2006; Van der Merwe et al., 2020). Kuo (2002), for its part, calls it a 'soft visitor management strategy' as opposed to 'hard visitors management strategies', including restrictions of access and prohibitions (p. 89). He argues that *"hard visitor management strategies cannot achieve long-term effects when applied alone. To render visitor management more effective, soft strategies like information provision and interpretation should be used in support of the restrictions placed upon visitors"* (p.97). Besides, soft strategies can make the tourist's experience more enjoyable (p.99). However, for them to achieve their objective, it is indispensable for involved professionals to be well-trained in communication (Garrod & Gössling, 2008, p. 198).

When looking at long-term consequences, environmental learning can create or foster pro-environmental attitudes and increase awareness about the importance of nature conservation among visitors (Borges de Lima & Green, 2017; Lück, 2003; Powell & Ham, 2008). Some scholars even argue that it can lead to behavioural change and more conservation actions being taken, thus actively contributing to conservation efforts (Garrod & Gössling, 2008; Van der Merwe et al., 2020; Walter, 2013).

Lastly, some scholars have also looked into the wants and needs of tourists and have found that there is indeed an (increasing) demand for getting more information about wildlife and nature during tours to natural areas (Ballantyne et al., 2011; Christie & Mason, 2003; Lück, 2003). This aspect, however, has been given less attention by researchers than the ones mentioned here-above.

4.1. Barriers to the inclusion of environmental learning activities in tourism

Even though there are strong arguments in favour of providing environmental learning activities in nature and wildlife tours, the conditions to do so are not always given. In this regard, most scholars mention the importance of well-trained guides. There is unanimity that tour guides nowadays should not only have the necessary knowledge in their speciality (in this case, nature and wildlife) but also competencies in interpretation and education. Only if they have acquired these skills will their communication be effective and can environmental learning be achieved (Ballantyne & Packer, 2002; Borges de Lima & Green, 2017; Christie & Mason, 2003; Reisinger & Steiner, 2006; Van der Merwe et al., 2020). However, there are not enough guides having this required competence at the current state. Even though guides are knowledgeable enough in their expertise, they lack the interpretation skills they would need to provide high-quality environmental learning activities for tourists. The demand for training such guides is high but remains unsatisfied for now (Christie & Mason, 2003; Kimmel, 1999).

There is also a possibility that the lack of interpretation and education skills is structural, starting already within the tour operator. According to Price (2003), not all operators have the skills to develop well-thought-out interpretation programmes (p. 145). This suggests that knowledge cannot be passed on to the hired tour guides either. Furthermore, as indicated by Kimmel (1999), guides can be young and little professional, as their salaries and working conditions are not competitive (p. 41).

Concerning the inclusion of scientists in the tourism activity, as suggested in category three of environmental learning activities, almost no research has been conducted on researchers' ability to bring across information to visitors. However, Ilyina and Mieczkowski (1992) point out that there might be a language barrier, as scientists are not necessarily trained in foreign languages and might be unable to communicate their knowledge to tourists (p. 328).

To a lesser extent, the possible difference in the visitors' backgrounds and initial knowledge about the place they visit have been mentioned in former research. While people might desire more or less in-depth information according to their prior experience in the field, the guide's speech must not exclude any of the visitors by going too much into detail, nor bore any of them by not giving enough explanation. Finding a way to include every visitor, no matter their background, can become a significant challenge (Garrod & Gössling, 2008; Kimmel, 1999).

As we see from the above, different incentives and barriers to developing environmental learning activities in tourism have already been identified in current research. While these aspects give us an initial idea about the circumstances under which environmental learning activities are prone to be developed, they do not tell us which types of activities are most likely

to be chosen and why. However, they are a valuable basis for identifying factors influencing activity types.

5.1. Other general factors influencing activity choice

To give a more exhaustive list of possible factors of influenced, I have looked into a more general context outside of environmental learning tourism. Having done so, I further identified the price range of a product as an essential factor. Some people are more sensitive to the price than others, but in any case, it is an important aspect they look into before booking something. Therefore, service providers need to consider the costs and the respective price they can offer for the activities they develop (Masiero & Nicolau, 2012).

Lelloltery et al. (2021) have conducted qualitative research on the role of stakeholders in developing ecotourism products. Looking at their study, more possible factors of influence could be retrieved, namely the level of interest in innovation of the developers of new products and their level of independence in the process of creating. Their research also touches on the educational background of stakeholders, possibly influencing their work. This aspect goes hand in hand with the skills to develop interpretational activities, which has briefly been mentioned above.

In the following table, I have used the information retrieved from current research to suggest a list of possible factors influencing the types of environmental learning activities chosen by service providers.

Demand side	Supply side
Level of enjoyment	Functionality as a visitor management tool
Demand, interests	Guides' level of interpretation skills
Visitor Profile	Scientists' level of interpretation skills
Initial knowledge in the respective field	Product developers' skills in developing interpretational activities
Degree of heterogeneity of tourist group	Costs and respective prices of activities
	Level of interest in innovation
	Level of independence while developing products

(Table 2 : Factors determining environmental learning activities retrieved from literature review)

Research problem

As seen above, environmental learning activities have the potential to further conservation efforts and are thus a considerable tool when it comes to protecting biodiversity. Various other reasons for developing such activities have been identified, even though barriers certainly exist. However, there is a significant research gap regarding different types of environmental learning

activities. No previous research giving a classification of different activity types could be retrieved throughout the literature review. It would be interesting to identify the available options and their utility for conservation and to understand the reasons service providers offer their current activities, not others. This knowledge could consequently be used as a basis to forward product development and tackle possible barriers, which could lead to greater conservation efforts through tourism.

Furthermore, research on environmental learning activities in tours in the jungle, let alone the (Peruvian) Amazon, is extremely scarce. The marine environment and national parks in habitats other than the rainforest have indeed been studied before. However, these studies cannot be transmitted to the context of the rainforest. The setting is entirely different, as wildlife is more abundant in the Amazon, and the natural environment differs from other places on earth. Thus, tourists also have a different experience here than in other protected areas, seeing completely different species and learning about the great importance of the Amazon's biodiversity and its threats.

To tackle the lack of research, this thesis will try to understand what kind of environmental learning activities are currently offered in the Peruvian Amazon and how they are chosen. The research question resulting from this is: What factors determine the types of environmental learning activities offered to tourists by service providers in protected areas? – The case of the Peruvian Amazon.

Methodology

1. Research site

The present study focuses on environmental learning activities offered by service providers in the Peruvian Amazon. The Amazon basin spreads over six million km² in seven countries of South America, namely Brazil, Peru, Bolivia, Colombia, Ecuador, Venezuela and Guyana (Espinoza Villar et al., 2008). No other tropical forest on planet earth is more extensive than the Amazon (Da Silva et al., 2005). Primary forests still broadly characterize this jungle (Lindell et al., 2010). According to calculations made in 2005, it is home to an estimated 40,000 plant species, 427 species of mammals and 1294 species of birds (Da Silva et al., 2005). Although these numbers might have changed within the last few years, they make the Amazon the most biodiverse place on earth (ter Steege et al., 2016). However, this biodiversity is not equal in all parts of the jungle, meaning that most species cannot be found in all regions of the Amazon. Instead, the jungle is divided into different areas, each of which holds its own variety of animal and plant species. Moreover, many parts of it remain yet to be explored. Apart from being a hotspot for biodiversity, the Amazon plays a vital role in storing carbon, thus being closely linked to the stability of our climate and planet. (Da Silva et al., 2005).

In Peru, the Amazon makes up 60% of the country, thus covering the greatest part of its surface. Peru holds the most significant part of the Amazonian jungle after Brazil (Ministerio del Ambiente, Peru, n.d.). The regions consisting entirely or mainly of jungle are Loreto, Ucayali,

Madre de Dios, Amazonas and San Martín. The forest here is divided into high and low forests (Barrantes & Glave Testino, 2014). About 70% of the world's biodiversity can be found in Peru, most of it in the jungle (Ministerio del Ambiente, Peru, n.d.).

However, as previously mentioned, biodiversity is declining at an alarming rate, especially in Latin America. Concerning the Amazon, *“we have already lost 17% of the original extent of the forest, and an additional 17% has been degraded. The latest research indicates that we are rapidly approaching a tipping point beyond which our largest tropical rainforest will no longer function”* (Almond et al., 2022, p. 10). Reasons for forest and biodiversity loss are climate change (Almond et al., 2022) and deforestation. Large parts of the surface of the Peruvian Amazon have already turned into farmland or been burnt (Lindell et al., 2010). Ethnic communities living in the Peruvian jungle are also threatened by outside influences (Barrantes & Glave Testino, 2014).

Tourism development in such fragile areas can help protect nature and support local communities by providing work as park guards or in tourism in general. Thus, people need not engage in illegal logging or mining but can obtain an official job in tourism (Wiratno et al., 2022). At the same time, we have seen before that wildlife tourism can help increase environmental awareness and thus possibly contribute to the conservation of the Amazon and nature in general (Vaughan, 2000).

2. Research methods / Data collection

In the following, I will present the methods used to identify the factors determining the environmental learning activities offered in tours by service providers in the Peruvian Amazon. Whereas the effects of environmental learning have been studied more abundantly by academics, there is a lack of research about the types of learning activity offered and aspects of influence. Therefore, no specific previously used methods could have been retrieved to serve as a basis for this case study. However, as it is an exploratory case study, purely qualitative methods have been used. More specifically, I have chosen two research methods: semi-directive interviews and participatory observation.

2.1. Sampling

Initially, I considered all providers offering touristic activities in the Peruvian Amazon as possible interview partners, as all of them might be involved in developing environmental learning activities. However, due to the limited scope of this thesis, not all providers have been interviewed or contacted. First, I have requested to interview the partners of the company where I work (RESPONSible Travel Peru) because, knowing me in person already, they were most likely to accept. The other agencies interviewed were retrieved through the snowball effect. In total, I interviewed nine organisations. Four of these organisations were subject to participatory observation, as well.

2.2. Interviews

Semi-directive interviews

Before conducting any interviews with service providers, I did a test interview with my employer about a jungle tour that he used to offer in Peru, using the first draft of my interview guide. Thanks to that, I identified some flaws and changed some of the questions and their order. Using the improved guide, I conducted one-on-one interviews with people who have already spent some time in the respective company or non-profit organisation. In most cases, it was the owner or a manager. This was important, as the interviews were not only about current activities but also about their development and past events. All interviews were carried out in Spanish.

The first six interviews were held in Cusco, Peru, or online. In a second step, I went to the Tambopata province in Madre de Dios to conduct further interviews and observations on-site. I chose this order because work obligations allowed me to go on-site only at a later stage, so I had to start conducting interviews before travelling to the jungle.

Before each interview, I reviewed each provider's website content to get an initial idea of their offer and objectives. Thus, during the interviews, I could ask about aspects found on the websites in case the providers did not mention them. This strategy helped me retrieve more complete information.

The interview guide (annexe 1, translation from Spanish original) was elaborated using the literature review findings. First, I wanted to find out how the participants define environmental learning activities to see if they have a similar idea as defined in the thesis and if it is a subject, they are familiar with. Only then, I gave them my own definition as determined in this thesis. This step was necessary to make sure all providers were aware of the exact subject and would answer me according to what I wanted to find out. If every person interviewed had talked to me about environmental learning activities in their own sense, the results might have been more biased. Therefore, I also elaborated the definition a bit further, giving an example of environmental learning activities (as determined in the literature review) to clarify the subject before asking questions about it.

In the next step (section 1), the participants were asked about the profile of their clients, as different types of visitors might be interested in different kinds of activities. Therefore, finding out what clients look for when booking with the respective provider was also important.

Having retrieved this information, I entered the essence of the research and asked about the environmental learning activities offered by the respective provider (section 2). If they did not mention any activities I had previously found on their website, I asked them about them to determine if the provider considers it an environmental learning activity.

As a tour guide most often carries out environmental learning activities, the interviews also contained some related questions (section 3). As seen in the literature review, previous research has shown that good tour guides can be scarce or lack interpretation skills, which could influence the current offer. Therefore, this interview guide section is dedicated to discovering

more about guides and their competencies in the Peruvian Amazon. In the case of collaboration with scientists, it was also important to understand their role and competencies when carrying out touristic activities (section 4).

The final section (section 5) is about developing new activities. First, I asked about the strengths and weaknesses of the current offer to understand what the provider possibly wants to improve. If the provider did not mention it themselves, I also asked them about their clients' feedback. This question was initially asked in section 2. However, after a few interviews, it became clear that the feedback was closely related to strengths and weaknesses. Thus, I finally grouped both topics together. Then, I asked about the process of developing new activities and who is in charge to try and find out about possible internal factors influencing the offered activities. Next, I tried to understand if providers would like to offer any more activities in the future. I then asked directly about any obstacles they are facing in the development of future activities, as there is a possibility that providers are willing but not able to realize all projects considered. The mentioned obstacles are likely to be important factors determining the available environmental learning activities.

Limits in interviews

As mentioned before, many providers operate in the Peruvian Amazon, whereas only a small percentage of them have been interviewed in this research. Interviews have not been conducted until saturation, so the results are not exhaustive. This is due to a lack of time and the exploratory nature of this research. Consequently, the results retrieved are not representative of the situation in the Peruvian Amazon and cannot be generalized. This is especially the case because the majority of the participant are partners of RESPONSible Travel Peru. Specializing in sustainable and community-based tourism, the agency works with specifically selected providers in the Amazon. Thus, an initial selection has been made, which is reflected in the sample chosen for this research.

Conducting the interviews, some further limits soon became apparent. One of them is that Spanish, the language in which I carried out the interviews, is only my fourth language. Even though I have a level between B2 and C1, my limited language skills might have downgraded the interview quality. Two interview participants also have a different mother tongue than Spanish (namely English and Dutch), which could have also influenced their way of explaining.

Furthermore, despite giving the definition and further explanations of environmental learning activities to each service provider, some were struggling to provide answers according to that definition. Sometimes, participants would talk more about activities as such and lose track of the definition of environmental learning activities, which made retrieving the information I was looking for more difficult. Another aspect that was difficult to understand only by conducting the interviews was how exactly environmental learning activities are carried out on the field. Certainly, a section about guides and scientists was included. However, answers were not given by the guides and scientists themselves but by the developers of the activities. The point of view of the latter might differ from the one of the guides and scientists who are in constant contact

with the clients. To reduce the bias resulting from talking only to the developers of the activities, the on-site observation was crucial, as it gave access to different points of view.

2.3. Observation

Direct participatory observation

While it is crucial to talk to people involved in the development of activities to get a more holistic idea of the factors determining environmental learning activities offered, it is also necessary to understand the on-site implementation better. Carrying out direct participatory observation allowed me to retrieve information that the interviews did not provide and was essential to this research. As mentioned above, I had already conducted interviews before going on-site to do more interviews and observations. Although this was the procedure for practical reasons rather than a choice of methodology, it allowed me to understand better what information was difficult to obtain during the interviews. This helped me decide what I would focus on during my subsequent visit to complete and possibly verify the information previously given by the participants.

To make on-site observations, I went to the Tambopata Province from the 21st of November to the 2nd of December. During that time, I participated in three programmes of three different providers that lasted four days respectively. Additionally, on one free morning, I could pay a visit to the non-profit organisation participating in my investigation. Here, I joined one of the volunteer programmes, which is also open to tourists. On the day of my visit, two tourists were participating in the activity next to the long-term volunteers. It was, therefore, a good opportunity to understand their role and if the activities are adapted to their presence. It is important to note that no guide was present on this visit, unlike the three four-day programmes mentioned above. Instead, activities were carried out solely by a scientist.

Annexe 2 shows the observation guide I was using. It was elaborated mainly with the help of *table 1*, showing the initial categorization of environmental learning activities. The aspects shown in this table are easier to retrieve during the observation process than during the interviews, so they were given priority here to complete the information.

As shown in the observation guide, the main aspect I was focussing on was the behaviour and techniques used by the tour guide (or scientist). They are the key people carrying out the activities, bringing across information and (possibly) increasing the visitor's environmentally conscious values and behaviour. Therefore, it was important to observe whether they engaged more in explanations and storytelling, offering thinking activities or stimulating participation. Their use of interpretative material also falls under this section.

On all three multi-day tours I participated in, one guide (and in one case two) was assigned to the group for the four days and carried out all tour activities, meaning that the guides did not vary throughout the same programme. This situation allowed me to understand better how this guide, in particular, tends to organise his tours. In one of the programmes, I also participated in two activities carried out by a scientist.

The guides and the scientist did not know about my thesis project. In case the interview participants of the respective organisation were on site - who already knew about my research before because I organised my visits with them - I asked them not to reveal this information to the guides and scientists without my consent. Thanks to that, my presence weighed less heavily on their behaviour, and there is a probability that the situations observed were more natural. However, I did take some notes during the tours, which the tour guides sometimes remarked, sometimes not. When they did, they did not make any comments about it. Concerning the morning visit to the NGO, the scientist knew that I was conducting my research on environmental learning activities. Here, my presence might have had more of an effect on natural events.

Secondarily, I focused on the reaction of the participating tourists triggered by the guide's techniques. More specifically, I was trying to see whether the guide made the participants use all of their senses and contemplate things. Another aspect of interest was the emotional reaction of tourists. To avoid being limited in the observation, I decided not to define beforehand which emotions I would focus on. Instead, I was open to any emotional reaction caused.

Finally, I was also looking into possible obstacles throughout the tours and the client's interest. Any aspect that was surprising or shocking to me was also written down.

Besides observing the guides' behaviour during the activities, I also had a small conversation with two of them at the end of two multi-day tours. Only at this point I revealed to them that I was conducting research and then asked them if they would be willing to answer some questions. Talking to the guides aimed to find out how they adapted to the group of tourists participating in the tour and why. I did not record the guides because I wanted to avoid them feeling too observed, as they might not be used to giving interviews.

In one of the programmes, time did not allow me to converse with the guide, as it was a tour organised by my work and the programme was quite tight. However, in this case, I managed to participate in a scientific talk and a citizen-science activity and talk to the scientist organising it afterwards. I recorded the person because, working in science himself, he might understand the need for recordings better than a guide. When visiting the NGO mentioned above, I could also talk to the scientist who carried out that day's activity. I did not record the conversation because it was sporadically carried out during the activity. In the case of the scientists, I tried to find out their role in tourism activities, how well they are prepared for it and managing it, and to what extent they are interested in participating.

Generally, talking to the guides and the scientists helped obtain more relevant information from the people directly involved in carrying out the activity, instead of just talking to someone involved in the development of activities but not working on the field.

In summary, as part of the observation, I participated in three four-day tours, spent one entire morning participating in the scientific activities of the NGO and interviewed two guides and one scientist of the four-day tours and the scientist of the NGO.

Limits in observation

In the case of the interviews, we have already seen that only a small number of possible participants were part of this study. Concerning the observation, the same limit applies. Only four out of nine providers were part of the observation method. I could not participate in more programmes due to lack of time. Therefore, concerning the five providers I did not visit on-site, I did not make observations to verify or complete the information given in the interviews. In these cases, data is less exhaustive than for the other providers. Furthermore, even when I paid a visit, I could not participate in all the activities offered by the respective provider, and the idea I got of their offer was not holistic. The fact that I only followed the activities with one of the various tour guides working for the respective organisation contributes to this effect. The environmental learning activities and techniques might vary depending on the guide and the group of tourists. Thus, the observed situations are not representative of the general functioning during tours. That is why conversing with the guides after the tours was crucial to better understand their behaviour and how it is embedded within the overall activity of the agency.

It is further important to mention that the observation method does not deliver completely objective results. Participating in the on-site activities, I had personal thoughts about everything I saw: the guide's behaviour, the tourists' reactions and other aspects. For example, the emotions I think people are feeling might not be what they actually are feeling. Therefore, it is essential to not only give my personal impression in the data analysis but to describe the situation as best as possible.

Lastly, one has to consider that most providers were still recovering from the Covid 19 pandemic at the time of the investigation. Hence, the tours might not have been carried out precisely as they did before the pandemic due to the difficulties tourism organisations are still facing. Environmental learning activities might have suffered from this, as other aspects were prioritised. This is a fact that has been confirmed during some of the interviews, as well. Taking into account all of the above, the sample observed is not representative of the overall situation and only gives a small insight into the functioning on-site.

Data analysis

1. Thematic analysis

Verbatim transcriptions and results drawn from the observation have been categorised in a thematic analysis approach. The information obtained from both methods has been collected in the same grid to get a holistic idea of the environmental learning activities and determining factors identified in the research process. Even though some aspects had already been retrieved from the literature review, I classed the results using a solely inductive approach. I used this approach to get a clear look at my data without being influenced by prior information.

The verbatim transcriptions, notes taken during the observation process, and the grid categorising all the information retrieved are handed in separately as PDF documents and are available only to the evaluating professors and assistants.

2. Sample characteristics

2.1. Service providers

In total, I interviewed nine providers whose identity is kept anonymous. Their characteristics are described here-below. For better illustration, they have also been summarised in the table in annexe 3 and have been attributed a number from 1 to 9. As noted in the table, four of these providers have been visited on the field so that observations could be carried out. The table also indicates in which cases I conversed with a guide or scientist on-site.

Eight providers operate in the Madre de Dios region and one in the Amazonas region. They are all for-profit organisations except for one. Six of them are partners of RESPONSible Travel Peru. Moreover, six of them are organisations that were initially founded to operate in tourism. Among the other three, two focus primarily on volunteering and conservation activities, one specialising in providing learning experiences. The third one focuses on conservation in general. Tourism activities are a secondary activity for these three organisations.

The type of activity offered to tourists is relatively conventional in the case of two organisations. Two providers offer scientific tourism as their main activity, including the NGO. Another agency engages both in conventional and scientific tourism. Other two focus on community-based tourism, one specialising in mindfulness simultaneously. Only one agency is active in conventional, scientific- and community-based tourism at the same time. The last one offers mainly birdwatching activities. In this case, activities are carried out in the biological stations of the agency, where scientists conduct research. Nevertheless, only birdwatching, and not scientific activities, are among the priorities of this agency.

Most providers are in the intermediate budget range, whereas two are in the lower and one in the luxury range. Four organisations are somewhat new to the touristic activity (two, three, five and seven years of operation). The first one of these is the NGO, which has previously worked with volunteers for 13 years and only started welcoming tourism in 2021. The five-year-old one is the sister organisation of an NGO that had already been operating before the creation of the associated tourism agency. The seven-year-old one has been operating for 14 years but only for seven years as a juridical person. Two other organisations have been operating for 16 and 19 years, respectively. The 16-year-old one had already worked in tourism for 26 years, with programmes accessible only to scientists, before initiating tourism accessible for any type of client. The last three organisations are the oldest ones (28, 33 and 48 years of operation).

The three younger organisations have only one or two people working in operations. The NGO has most people working on-site rather than in operations. The 16-year-old organisation has about 30 people working in operations, and the 19-year-old one has about 13. The 28- and 33-year-old ones have only a handful of people working in operations, showing that the older ones are not necessarily bigger. However, the oldest one currently employs about 500 people in total, 100 of which work in the office. Three organisations work with employed guides, whereas the rest work with freelance guides, always trying to hire the same guides for their services.

In terms of clients, the youngest organisations still have not so many per year. This also included the NGO, which receives significantly more volunteers (about 180) than tourists (about 50). The other agency specialising in volunteer work registers more tourists than the NGO (about 200 per year). The 33-year-old agency has already passed its peak, now reaching about 100 per year, compared to 600 before. The agency operating for 28 years is among the ones with the highest number of clients, although having reduced significantly during the pandemic (250 clients in 2022). The agencies operating for 16 and 48 years stand out with noticeably higher numbers of clients than the others. They are the only agencies reaching four- and five-digit numbers, with 7.500 and 28.000 clients, respectively, in 2022.

I carried out observation at the NGO for one morning and the three other organisations operating for 28, 16 and 48 years throughout participation in their four-day programmes.

2.2. People interviewed

Among the nine people interviewed for each of the above-described organisations, four are the founders, other four are managers and one works in administration. Two of them are about thirty years old (31 and 29), four are in their forties (40, 42, 41, 41), two are in their fifties (52, 51), and one is 63 years old. Seven people are from Peru, one from Great Britain and one from the Netherlands. Five people are feminine, and four are masculine. Six people are professionals in tourism, one of them (the 63-year-old person) having studied biology but having worked in tourism all her life. The founder of the NGO is a professional in conservation and environmental management. The manager of ecotourism of the oldest service provider is a biologist and professional in administration. The last person has studied administration, as well. The founders and two other people have worked in their respective organisations since the beginning. The other three have been in their organisations for 11 out of 19 years, 17 out of 48 years and four out of 28 years. Three of the nine interview participants have had some previous experience in environmental learning.

Results

To increase or enhance environmental learning activities in tourism, it is crucial to understand all factors influencing their development. In the following, all relevant results to the research question will be presented: What factors determine the types of environmental learning activities offered to tourists by service providers in protected areas? – The case of the Peruvian Amazon.

The results chapter is divided into two parts. First, all possible environmental learning activities retrieved from the interviews and the observations will be listed. In the second phase, all potential factors will be mentioned.

Citations from the interviews will be given as a translation to English in the text. These citations are enhanced for clarification. The respective original statements in Spanish are provided as a foot note.

Where I identified a relevant difference between the functioning of different service providers, I will mention it at this point. In case no comment is made about the organisations or interview participants, it is because no noticeable difference has been found.

The analysis of the results will be treated separately in the discussion chapter, where I will revive several statements from the results chapter and further look into them.

1. Environmental Learning Activities

When carrying out the interviews, I gave an explanation about environmental learning activities, as defined in this thesis, to each service provider before asking questions. In this explanation, I clarified that environmental learning activities refer to the strategies implemented to bring across information effectively. However, it is difficult to distinguish between activities and strategies and to determine when a concept can be considered a learning activity. Due to this difficulty, the following list contains both activities as such, as well as implemented strategies. More information about this topic will be given in the discussion chapter.

1.1. Observation

When talking about environmental learning in the interviews, some service providers mentioned observation as a type of activity. Especially making my observations, it became clear that observing the jungle and, above all, its animals is one of the main activities carried out in jungle tours. Some activities are explicitly designed to maximize animal spotting, such as caiman searching or visiting a clay lick site. During these activities, explanations and other techniques used by the guides were scarce and carried out on request rather than as an integral part of the activity. Instead, the guides focused on finding animals to point them out to the visitors.

Different techniques can be used to facilitate animal sightings. In the case of the organisation specialising in birdwatching (number 6), they try to reduce the distance clients need to walk to spot birds, as explained in the interview. Birdwatchers are often older, already retired people, which increases the importance of facilitating observation. Apart from that, both the interviews and the observation show that binoculars and telescopes are indispensable in enhancing the visitor's experience in all kinds of tours. During one of the two caiman search activities I participated in (number 7), our guide also showed us the skull of a caiman to explain what the animal looks like and help us identify it better in the water. Enabling and motivating the client to keep their eyes open can be seen as a technique to improve observation activities.

1.2. Guiding techniques

(Environmental learning) activities are generally carried out by a tour guide or a scientist. The case of scientists participating in tourism will be seen later. Here, I will look into the techniques used by the guides, which are likely to be a type of environmental learning activity.

Explanations

Various providers mention the guide's explanations as an environmental learning activity. These explanations can deal with different topics, one being the jungle and its biodiversity in general. In the interviews, providers mentioned that such explanations should go far enough to give a holistic idea of the jungle and its interconnections.

*"We always want to understand, help people understand better the habitat they are in. (...) Because many tourists see the water and think that the river is always like that. But no. And we explain that to them. The parts of the riverbank. We mention, 'One week ago, the water level was here.' And they look and say, 'Nooo, impossible.'"*¹

"Not just, 'This is a tropical rainforest', but how is the ecosystem of this tropical rainforest? Right? We have monkeys here but what type of monkeys? Right, explain a bit more, go a little bit further (...)." ²

"No, no, the idea is that the guide does not just say, 'This animal is called this', but, for example, if you are looking at the howler monkey, whose screaming is abundant in the lodge, that he also explains why he is screaming. Right, what is the sense of this ecological framework?" ³

Apart from giving a general idea of the jungle, the speech can also contain parts about conservation efforts, reserved zones and their importance, and the correct behaviour to adopt to visit a protected area respectfully.

¹ *Nosotros siempre queremos, queremos entender, dar a entender mejor el, el hábitat que en que están. (...) Porque, muchos turistas ven el agua y piensan que el río siempre es así. Pero no. Nosotros le, les explicamos no? Entonces los partes de... partes... del "riverbank", no? La orilla, les mencionamos, "Ah, el agua hace un mes estaba aquí." Y miran, "Nooo, imposible." Entonces, queremos entender que el río es muy dinámico y cambia fuertemente.*

² *No solamente, "Eso es una selva tropical lluviosa", sino cómo es el ecosistema de una selva tropical lluviosa? No? Ya, acá hay monos pero qué tipos de monos, no? No, explicarse, ir un poquito más allá, (...)*

³ *<Eh> no, no es la idea que el guía no solo dice, "Este animal es tal, y se llama así", sino, por ejemplo, si estás mirando el mono aullador, el cotomono, no, que, que, en el lodge es abrumante como, como gritan (riéndose un poco). Entonces, que también explique por qué gritan. No, cuál es el sentido en ese marco ecológico, no?*

Considering the three four-day tours where I made observations, one agency stood out, namely number 9. This is the oldest agency in the sample, with the most visitors annually. Here, more explanatory experiences were given during the tour compared to the other two tours. It is worth mentioning that in the case of this agency, guides have a permanent contract and receive various workshops – in biodiversity and guiding – per year (outside of the context of the pandemic). Workshops are scarcer in the case of the other service providers that participated. Furthermore, the guide leading the group had been in the agency for 15 years. One of the other two agencies I visited (number 8) also works with employed guides. However, fewer explanations were given throughout this tour. This observation will be further looked into in the discussion chapter.

Stimulating contemplation before answering

During the observation process, some guides asked tourists questions before giving them the respective answer, thus stimulating contemplation. This method was used in the case of the two agencies that have employed guides (number 8, 9), especially the oldest one (number 9). In the tour of the agency working with freelance guides (number 7), the method could not be observed.

Stimulating participation

Another technique identified during the observation was general stimulation of participation. An example would be involving the tourists in counting how many different plant species can be found in one square meter of forest ground or following the roots of a tree to understand their enormous length better. The only case where a guide carried out such activities was during the tour of the oldest service provider (number 9).

Triggering surprise

Although I was attentive to any emotions triggered by the tour guides, the primary emotion stimulated was surprise. This technique could only be retrieved from observation and has not been mentioned as such in any interviews. Again, only one guide of the oldest service provider (number 9) addressed these emotions.

Use of interpretative material

In all three four-day tours, the guides had field guides with them. These field guides display different animals that can be seen in Tambopata and their names in different languages. They were mainly used while spotting animals to show the tourists in more detail what the respective animal that can be seen looks like. When animals were not present, the field guide was not used. Three interview participants also mentioned field guides as part of their programmes. In the case of the oldest service provider (number 9), tourists can also buy informative material and checklists in the on-site shop so that people can have them with them at all times (outside the context of the pandemic). The same provider also explained the importance of checklists for birdwatchers.

Triggering the use of all five senses

On various occasions during this research, the tourists' use of senses during the tour came up.

According to the agency specialising in birdwatching (number 6), listening to the jungle is important to identify birds. The agency operating in community-based-tourism and mindfulness (number 1) also tries to get across different bird noises using recordings.

During the observation, the tour guides of each four-day tour applied listening exercises. These exercises took different forms: having a moment of silence to listen to the sound of the jungle, listening to imitated noises to get a better idea of an animal (through the use of a phone application or imitations by a guide), and listening to one specific sound coming from the jungle and understanding what animal it is.

In two of the tours, the group also got to smell certain products of the jungle. Again, the guide of the oldest agency (number 9) engaged most in activities touching all five senses. He carried out comparatively more activities of smelling and listening and was also the only guide triggering the use of the senses 'feeling' and 'tasting'.

Knowledge exchange

In tourist groups where one participant already has lots of knowledge about the jungle, knowledge exchange can be an environmental learning activity. The educated person shares their knowledge with the group, can interact with the guide and contribute to the learning process. This information derives from the interviews and the conversation with one guide carried out during observation.

Demonstration and prohibition of harmful practices

During the interviews, participants mentioned that they demonstrate and prohibit harmful practices during tours to increase tourists' awareness. When demonstrating such practices, they are not carried out on purpose to be shown to the tourist. Instead, when third parties engage in harmful activities that tourists can observe during a tour, the guides point that out and explain the problem and possible alternatives.

"When going to Manu (one of the provinces of Madre de Dios), they (the tourists) very often pass by a lodge that has these feeders (water with sugar to attract hummingbirds, allegedly harmful to the birds). As it's not our lodge, we don't tell them not to use those; we are impartial, right? But the tourists come with us and live the other experience, and we explain to them the motives. And they really take consciousness and say, 'Wow, never again will I go to these places where they give water with sugar', right?"⁴

⁴ (...) ellos al ir al Manu, muchas veces pasan por un albergue que tiene estos "feeders" (agua con azúcar para atraer colibrís). Como no es nuestro albergue, tampoco podemos decirles, "No usen"... estamos imparciales ante esto, no? Pero vienen y viven la otra experiencia y explicamos los motivos. Y realmente toman un poco de conciencia, dicen, "Wow, nunca más quiero ir a estos sitios donde están dando agua con azúcar", no?

During the observation at provider 9, the guide also talked about harmful practices, such as mining and logging, and their negative consequences on biodiversity.

Role play after the experience

Only one provider (number 5) mentioned role plays as a possible environmental learning activity to recap what has been learned during the tour.

“Because at the end of the trip, we always did like a role play, right? ‘You are the owner of the jungle, you are someone who wants to make a plantation here’ or something like that. And then we see the attitude of each person.”⁵

Reflection on learning after the experience

A similar aspect mentioned by only one provider is the possibility of engaging in a thinking activity with the tourists after their activity to reflect and reinforce what they have learned. This suggestion comes from the person working in the agency specializing in learning activities (number 3), who explains that learning also means reflecting internally instead of always listening to what the guide says.

“Yes, as we use the methodology of the learning experience, what’s missing is complementing each activity with the question ‘What have we learned today?’, right? We need to take the leadership from the guide and have the main activity among the visitors, right? Because that is what the learning experience is about, the professor (guide) steps aside and the tourists and biologists can start debating about problems and what they have learned.”⁶

1.3. Other environmental learning activities

Next to the guiding techniques, other environmental learning activities were identified during this research.

Interpretative centres

According to the interviews, interpretative centres help give visitors orientation and provide them with information they can retrieve autodidactically. They can be seen as an add-on to the activities in the jungle itself.

⁵ Porque, al final del viaje siempre hacíamos así un, un juego de roles, no? Como para, “Tú eres el dueño de la selva, tú eres alguien que quiera hacer una plantación de no sé qué” y, no? Y ver entonces, cuál es la actitud de cada uno.

⁶ Si, <eh> cómo utilizamos la metodología del “learning experience”, este, falta complementar en cada actividad la pregunta es “Qué hemos aprendido el día de hoy”, no? Este, falta como, falta quitar la, el liderazgo del guía y tenerla la.. la mayor actividad entre los invitados, no? Porque el “learning experience” es eso, no, es que el profesor se haga a un lado y que sí los, los turistas o los biólogos puedan empezar a debatir problemas y qué es lo que han aprendido.

Such centres can present interpretative signage, which is the case at the oldest agency of the sample (number 9). They can also display samples of animal bones or animals preserved in a chemical solution. Service providers 8 and 9 have such displays at their lodges. During the observation at provider 9, the guide showed us the samples and explained which animals we could see. Provider 8 explained that seeing the samples and the work carried out by scientists incites visitors to participate in the agency's scientific activities, which will be presented later. In general, tourists can visit interpretative centres with or without a guide.

Finally, interpretative signage can also be displayed as part of a trail, providing on-site information. This last idea comes from the founder of the agency operating for three years (number 4) and has not been concretised yet, which is why the respective information is still limited.

Practising spirituality

Providers 1 and 5 expressed their will to help tourists connect with nature and practice spirituality as an environmental learning activity. Both are women and seem to have a personal interest in this spirituality, which might be the reason they use these methods in tours.

*"So, it's about feeling during the journey, for example, feeling the leaves, smelling, or feeling with the feet, or simply observing and listening is also important to us. And, for example, in this particular route that you read about, where we want to have that relationship with nature, the client receives a small tree on the first day. So, this tree we give you will accompany you for the five days of the journey. So, what we want is that you express your intention and gratitude about what you will be learning every day or what you will be discovering about yourself or maybe during the journey with the group, and also about taking care of something."*⁷

*"(...) it's doing yoga but at the same time going for the walks, doing meditations, walking. Right? And really feel, learn to feel the energy of nature."*⁸

Visiting a bio-garden or local farm

Tourists can visit bio-gardens or local farms to learn more about local life in the jungle. Such activities complement more conventional ones (such as animal observation) and can help give a holistic idea of the jungle.

⁷ Entonces es durante el recorrido el sentir, por ejemplo el sentir la, las hojas, el oler o el sentir con los... con los pies, o simplemente el estar mirando y escuchando también es importante para nosotros, y en esta ruta especial en la que has leído por ejemplo donde queremos <ehhm> tener esa relación con la naturaleza es el primer día el cliente recibe un arbolito. Entonces este arbolito que nosotros te damos te acompaña los cinco días <eh> del viaje. Entonces, nosotros lo que queremos es que pongas tu intención y tu gratitud cada día de lo que vas aprendiendo o lo que vas descubriendo de ti misma o quizás en el... en el viaje con el grupo y, y también el cuidar no?

⁸ (...) es hacer yoga, pero a la vez también hacer las caminatas, hacer meditaciones, caminando. No? Y, y realmente <ehm> sentir, aprender a sentir la energía de la naturaleza.

“Am I explaining myself? So, you have to go to the farm, and you have to see, ‘Oh, ay, but why do they burn this?’ ‘No, well, let’s see, look, go and have a look; what is happening is that there is an invasion of plants in this type of farm, right.’ Like, burning really saves you so much time. So, you really have to go, like, see it. To understand the whole, I think. That’s a little bit how we see it, right? Like, the protected natural area exists for that reason. And at the same time, the farm exists for that reason because the majority of the locals who have farms, for example, come from the communities, you understand?”⁹

1.4. Environmental Learning Activities with Communities

Some service providers engage in activities involving local communities and refer to those as environmental learning activities. The experiences they offer are presented in the following.

Explanations and conversations

In community activities, the community members themselves typically give explanations to the tourists or engage in conversations with them. To service providers, explanations from the community are indispensable to give tourists a different but valid perspective of the jungle.

“(…) and when you hear them speak and they tell you where they come from and what they did to be where they are and how much it cost them to put up a farm.. and how little the farm gives them maybe, and the problems they have day in, day out, like, for example, the river flooding their terrain and you can’t do anything to change that. I think all of this is eye-opening, right? And these are things that people don’t always realize until you talk about it with a person who is living this reality. Right, so, yes, I think that interaction with the communities is really important. (...) Right, so I think you shouldn’t miss this contact with the people from there. Like, you shouldn’t miss this. Because if you miss this, you miss the reality, right, you really miss why, for example, we also need to do conservation.”¹⁰

⁹ *Me explico, entonces tienes que ir a la chacra y tienes que ver y, “Oh, ay, pero por qué quema?” (inaudible). “No, pues, a ver, mira, anda, mira, lo que es que haya una invasión de, de flora, no, en este tipo de chacra”. O sea, realmente quemar te ahorra tiempo de una manera satánica. No, entonces, tienes que ir, tienes que ir, o sea, ver. Para, para entender el “whole”, me parece a mí. No, es como nosotros lo vemos un poco, no? O sea, existe el área natural protegida por este motivo. Y al mismo tiempo existe la chacra por este motivo porque la gran mayoría de locales que tienen chacras, por ejemplo, vienen también de, de comunidades, me explico?*

¹⁰ *(…) y cuando los, los, los escuchan hablar y te cuentan de dónde vienen y qué es lo que han hecho para estar donde están y cuánto les ha costado poner una chacra... y cuán poco quizás la chacra les de, y con los problemas que ellos tienen en el día a día, como por ejemplo que el río te come el terreno y que no puedes hacer nada al respecto. Todo eso yo creo que es “eye-opening”, no? Y son cosas que a veces uno no se da cuenta hasta que no los hablas con una persona que está viviendo. No, entonces, este, sí creo que la interacción con comunidades es sumamente importante, no? (...) No, entonces, este, yo sí creo que ese contacto con el ser humano de allí, no lo puedes perder. O sea, no lo puedes perder. Porque si no, pierdes, pierdes lo que es la realidad, no, pierdes, este, realmente por qué, por ejemplo, también tenemos que conservar.*

“It’s like educating about how to have a vision of the forest that is sustainable. Because the way the forest was used before, it was working, right? This was a sustainable use of the things. Fishing, hunting, all of it on a sustainable level, right? You didn’t do it to sell or export or send it to anyone, but to survive, so this is a type of education when it comes to culture.”¹¹

Participation in the community’s activities

Next to receiving verbal information, tourists can also participate in the community’s traditional activities to get a more hands-on experience.

“And apart from that, we maintain some activities, right, for example, making arrows. (...) So, this way, for example, we are maintaining and educating through tourism. (...) It’s an activity with a lot of interaction with the visitor. Because after making the arrow, they show you how to target shoot, where everyone participates (...).”¹²

Demonstration of the reality

One interview participant (number 8) also mentioned that activities in the communities are essential to show the reality of the jungle, which can be considered a learning activity.

“We had passed by the howler monkeys, and he (a member of the local community) said, ‘Uy, I will put an arrow into this one and eat it’, but, of course, I mean, no matter how much of a healer he is, he is a healer from the jungle. They eat monkeys, right? This is something where the tourists will say, ‘Ay, how.., how...’ But how will you say anything to the man who has lived all his life in the jungle? It’s a very strong contrast, but this is completely authentic, right? It’s real. And this is a way of environmental education as well; it seems crucial to me not to hide anything but to show it the way it is.”¹³

¹¹ *Al, a la, es como educar en cómo tener una visión del bosque que es sostenible. No, porque de la manera que era utilizada en ese tiempo funcionaba, no? Era usos sostenibles de las cosas. Pesca... caza... todo a un nivel de, de sostenibilidad no? No lo hacías para vender ni para exportar ni mandarle a nadie, sino para sobrevivencia, no, entonces ese es un tipo de educación ambiental en cuanto a cultura, no?*

¹² *Y aparte de eso se rescata, no, las, algunas actividades como, por ejemplo, el tema de hacer flechas. (...) Entonces, ahí, por ejemplo, se está rescatando y está enseñando, no, a través del turismo. (...) Es una actividad que tiene mucha interacción con el pasajero. Porque después de hacer la flecha, les enseñan a un tiro al blanco, donde están participando todos (...)*

¹³ *Habíamos pasado por, por los kotos y decía, “Uyy a ese le pf, tiro con mi flecha, me lo como” pero claro pues. Por muy curandero que sea, es curandero del monte. Ellos comen monos, no? Ese es algo que sí, los turistas le van a saltar, no, “Ay, cómo, cómo..” Ya cómo vas a decir esto al señor que todo su vida comía mono en el monte, no? Es como un contraste fuerte pero es totalmente auténtico, no? Es, es real. Así es. Y esa es una manera de educación ambiental también, me parece clave, no, que no estoy disfrazando nada, estás siguiendo tal cual.*

Complementation between guide and community

According to the interview participants, an official guide should be present to manage and improve the activity given by communities. As community members are not tourism professionals and can be shy towards visitors, the guide can function as an intermediate, thus adding value to the experience.

*"(...) you have to let the local guide come out of his shell. But that's difficult because the communities are a little shy. They don't open up just like that even though they have lots of knowledge. So, the guide has to help with this, for the community members to open up. (...) And now, as the guides go (on tours) more often, they are already becoming friends. (...) as they (the community members) already trust the official guide. I think that's one of our advantages. As we always send the official guides there, the communities open up more."*¹⁴

"So, me (interview participant who formerly was a guide), for example, I was accompanying a client, I walked to him, translated what I could understand (from the community member), right? Because they have a very onomatopoeic language, 'Ah, ah', where they are not even trying to really say a word, but it's more like expressing a feeling or something like that, right? So, this communication is key as well."

¹⁵

1.5. Scientific environmental learning activities

Various providers offer scientific activities for tourists. At this point, next to the three four-day visits I carried out (at provider 7, 8, 9), the NGO (number 2) also comes into play, where I could participate in their scientific activities for one morning.

Participating / Following the scientific activities

The first scientific activity identified during the interviews and observations is participating in and following the scientific activity. This includes monitoring, setting up and evaluating camera traps and learning to identify animal species. The aim is to make people understand a scientist's work in the jungle and its importance. This category is part of the programme of the NGO (number 2), as well as the agencies offering scientific tourism (number 3, 8, 9).

¹⁴ (...) tienes que dejar que, que el guía local de la comunidad salga a flote. Pero ese es difícil porque las mismas comunidades son un poco tímidas. No, no se abren así nada más, no, a pesar de que tienen un montón de conocimiento. Entonces, el guía tiene que ayudar también a eso, no, a que salga. (...) Y ahora, como van más frecuentes, ya se hacen más amigos. (...) como ya tienen esta confianza con el guía oficial, eso también creo que es una ventaja nuestra. Como los llevamos siempre ahí, ya los conocen más, y se abren más.

¹⁵ Entonces, yo por ejemplo le acompañaba (nombre del cliente), le hablaba, y traducía lo que pudiera, este, entender, no? Porque hay cosas que hablan ellos muy onomatopéyico como lenguaje, no, "Ah, ah", que ni siquiera está tratando de decir en realidad una palabra, sino es como expresar un, un sentimiento, una cosa así, no? Entonces, esa comunicación es clave también, no?

“And there, what surprised them (the tourists) a lot was having birds in their hands; the biologist, the investigator, was having birds in his hands... and you can explain and identify the difference between this individual and this individual, which are different species but at first sight they are identical. So, they were surprised that very tiny characteristics differentiate one species from the other. (...) So, this whole scientific explanation about why they are so similar and differing only in one characteristic was very interesting to them.”¹⁶

Complementation between guide and scientists

Again, the presence of a guide is very important, according to the interview participants engaging in scientific tourism. Scientists do not necessarily have a feel for what to explain to the tourists about the jungle. They are often focused on other aspects and, being used to seeing the jungle every day, do not identify the points of interest for a tourist. A guide, however, has the respective education and knows much better how to interpret the jungle and its importance. He can also help explain the scientist’s work while the scientist is carrying it out. Another plus is the guide’s English skills, which a scientist is not necessarily expected to have. Especially scientific names of species can be translated by the guide.

Scientists also tend to have a schedule that does not always match the tourists’. The former might take breaks throughout the day, whereas the tourists might want to continue exploring the jungle during that time. This is where the guide can help fill the gap. The same applies when tourists lose interest during scientific activities, which can be pretty monotonous. Here, the guide can offer them to leave the activity and explore something else.

It is worth mentioning that during the visit to the NGO (number 2), two tourists were present next to the long-term volunteers. However, exceptionally, they were not accompanied by an additional guide. The importance of hiring an extra guide, as mentioned during the interviews, was confirmed during my visit. The scientist carrying out the activity gave only some basic explanations about the activity. The section about factors influencing environmental learning activities will provide more detail about this topic.

Scientific activities explicitly adapted to tourism

As opposed to letting tourists join in exclusively scientific activities, the latter can also be adapted to tourism to increase learning outcomes. This option has been retrieved from the interviews and observation but only in the case of one provider: the agency, which has been operating in tourism for 16 years but has been active in tourism for scientists for 26 years already (number 8). The agency describes its target customer as adventurers.

¹⁶ *Y ahí lo que les sorprendió mucho era tener aves en la mano, el biólogo, el investigador, tenía aves en la mano.. y se puede explicar y identificar la diferencia entre este individuo y éste individuo que son diferentes especies pero a simple vista son idénticos. Entonces, les sorprendía mucho que... que... habían... características MUY pequeñas que diferenciaba a un especie del otro. (...) Entonces toda la, la explicación científica de por qué son similares y por qué difieren solamente en una característica. Para ellos era muy interesante.*

Their concept consists of using scientific activities that scientists have already carried out for a certain amount of time and adapting them to make them more accessible to tourists. This means they are easy to explain and understand, can take place close to the lodge and involve active participation from the tourist. In this case, tourists undertake the activity only with a scientist and without an extra guide serving as an intermediate. Therefore, the scientist is expected to have good communication skills or otherwise will be trained in this field to carry out the scientific activity with tourists effectively.

It is worth remarking that other providers have mentioned such adapted activities in the interviews. Nevertheless, they see them as possible future activities that they have not yet implemented.

Scientific talks

Tourists also have the option to listen to scientific talks, an activity mentioned in interviews and also seen on-site. These talks are held by the scientists themselves and deal with the jungle, its biodiversity and scientific projects.

Conversing with scientists and volunteers

Three providers mentioned during the interviews the possibility of conversing with scientists or volunteers outside the activities. Agency 8 also said that visiting the scientist in the laboratory and speaking with them in this environment helps motivate clients to participate in the scientific activities adapted to tourists.

Having conversations with volunteers only applies to the case of the NGO (number 2), where the long-term volunteers can help bring across information to the tourists because they have spent more time at the research station and have already gained valuable knowledge.

Demonstration of the reality

As in community-based tourism, one service provider mentioned the importance of demonstrating the reality through scientific activities in the interviews. Only the founder of the NGO (number 2) made this statement, explaining that the functioning of the scientist is vital, as opposed to the importance of the guide mentioned before:

“Because in that case, things are really like... maybe a bit more truthful for the tourist. It’s not adapted to the tourist. Like the guide does it. The guide adapts and gives you what you want to hear many times. Our biologists are not like that. They will tell you: ‘The things are like that because they are like that!’ And it can be ugly. We tell the tourists, ‘You know, maybe you will see animals that are not good. Something has happened to them in the environment; they are... ill. And so, we want to understand why this bird or this animal is ill.’”¹⁷

Participating in reforestation

Participation in conservation activities like reforestation allows a hands-on experience where environmental knowledge and the significance of participating are brought across.

“Because apart from the passengers interacting 100%, getting their hands dirty, grabbing the plant and the soil and all of that, the guide and the local host explain to them why they do this. And why they are planting their plant there and how much of the forest they are conserving this way.”¹⁸

1.6. Other activities mentioned

During the interviews, providers also mentioned some other experiences, such as leisure activities, workshops, fishing and photography. Considering the definition of environmental learning activities set up in this thesis, it is questionable whether these activities can have a learning outcome. This problem derives from the fact that providers have not given further details on what information is given during these activities and how it is transmitted, which makes classifying them difficult. In any case, this situation shows that, despite providing the definition at the beginning of each interview, service providers tend not to make a clear distinction between environmental learning activities and other activities. Moreover, looking at the definitions given by the providers before receiving mine, no clear pattern could be identified. To go into more detail on this topic, it will be elaborated on in the discussion chapter.

¹⁷ *Porque allí realmente están las cosas digamos... quizás para el turista es un poco más verídico. No, no masticado. Como el guía. El guía mastica y te da lo que quieres escuchar muchas veces. Nuestros biólogos no son así. Te van a decir: “La cosa es así porque es así!” Y puede ser feo. Si les decimos a los turistas, “Sabes, quizás vas a ver animales que están mal. Algo les ha pasado en el ambiente, están... mal de salud. Y entonces queremos entender por qué está mal de salud este ave, o el animal.”*

¹⁸ *Porque aparte de que el pasajero interactúa al 100%, ensuciándose las manos, agarrando la planta y la tierra y todo esto, <eh> el guía y también el anfitrión local, les explica el por qué hacen esto. Por qué están dejando sus plántulas ahí, y cuánto de bosque están conservando con eso.*

2. Factors determining environmental learning activities

The above-mentioned environmental learning activities, and such that have not been developed yet, are under the influence of many different factors. The latter are the core of the research question and will be presented in the following section.

2.1. Interest of the tourists

Learning vs. observation

First, the tourists' interest affects environmental learning activities, as they determine what providers need to offer to meet the demand. During the interviews, various providers explained that tourists are interested in learning about the jungle. However, some say that, even though learning is among the objectives, it is not the priority for visitors. Instead, many come to experience and observe the jungle, especially its fauna.

“So, the vast majority of the market that you will see in Manu, almost, I'd say 75% of all visitors, of all agencies, go to see fauna.”¹⁹

“See the jaguar. See. The. Jaguar. Eeeveryone comes to see the jaguar. Because that's the first thing, they have in mind, right?”²⁰

This information was confirmed during the observation. When rare animals were sighted throughout the tours, people generally got excited and took out their phones to record. At the biological station of the NGO (number 2), one tourist also stated that they liked their stay so far, as they could see many different animals. However, questions about the jungle coming from tourists were generally scarce.

Local communities

Some visitors are also interested in interacting with the local communities, as mentioned in some interviews. Agency 3, specialising in community-based tourism, explains that most people go to Manu to experience the jungle and see the fauna. However, there is a smaller part of visitors who want to engage with communities.

Scientific work

Another activity of interest is learning about the biologists' day-to-day work in the jungle, as retrieved from the interviews and the observations.

¹⁹ *Entonces, la gran mayoría del mercado que vas a ver en Manu, casi, yo le doy un 75% de todos los pasajeros, de todas las agencias, van a, a ver fauna.*

²⁰ *Ver el jaguar. Ver. El. Jaguar. Toodos vienen a ver el jaguar. Porque es lo primero que tienen en la cabeza no?*

Others

Other interests mentioned in the interviews are birdwatching, visiting a little-developed touristic place, photography, leisure and comfort.

Lack of interest

Despite everything, interviews and observations show that some visitors are less interested in (learning) activities. For example, during one of my conversations with a guide, he pointed out that his explanations were scarce because the group's interest was intermediate. In one of the other tours, two tourists preferred to skip the night walk tour because they were not interested in seeing mostly insects during the activity.

2.2. Visitor profile

What becomes clear, both from the interviews and the observations, is that interest depends on the visitor profile. One example given in the interviews is that Peruvian travellers are generally less interested in learning about the jungle than North Americans. According to that profile, the speech must be adapted to enhance the visitor's experience and, at the same time, maximize learning outcomes. For example, information can be brought across in a more direct way or, on the contrary, in a more subtle or amusing way:

"(...) I was very strict at the beginning, like five years ago, meaning that, 'Ok, you don't want to do experiential activities', so, I automatically recommended another local travel agency, of which I know they would handle this very well. But after a while, as I have learned, read and seen more things, I realized like... no! Why tell them not to come? Instead, you can come, go on the journey, and, in a subtle way, I can transmit the information about conservation and what it means to share with the local people, right?"²¹

"(...) for example, this type of information, you have to transmit it in a different way to someone who comes from Lima than to someone who comes from... elsewhere, right? They need a bit more comedy (...)."²²

²¹ (...) yo era muy estricta al inicio como hace cinco años en el sentido de; "Ok, no haces actividades vivenciales" entonces, automáticamente los recomendaba con otra agencia de viajes local con la que, la que yo conozco y sé que lo maneja muy bien. Pero después ya entre lo que vas estudiando y leyendo y viendo me di cuenta como... no! O sea por qué decir no a ellos y decir ok, sí puedes venir, haces el viaje y sutilmente te puedo transmitir la información de lo que es conservación y lo que es compartir con la gente local no?

²² (...) por ejemplo, ese tipo de información a alguien que viene de Lima, tienes que también transmitirlo de otra manera que a alguien que viene de... De otro lado, no? Necesitan un poco más la, la comedia (...)

During the observation, such adaptations to the group were also seen. During the four-day programme with provider 8, I participated in different activities with the whole group. One time, I went on a jungle walk alone with one guide when I was the only person willing to participate. During the personal experience, explanations about the jungle were abundant, whereas, in the group setting, they were sporadic or given when animals were spotted.

The guide of provider 7 and the scientist of provider 8 also confirmed that they must adapt to the type of group they have and accordingly engage more or less in learning activities.

As we can see, the visitor profile determines the visitors' interest, which in turn influences the environmental learning activities that can and should be carried out accordingly.

2.3. Objectives of the providers

Environmental education and behaviour change

Developing learning activities is among the objectives of service providers. Various of them also claim in the interviews that they do not only want to offer such activities but design them to provoke a long-term change in the tourists and render them more environmentally conscious.

*"(...) and that their journey doesn't end when our tour ends but that they can also go and discover their place of origin with what they have learned. So, investigating or trying to recover or involving themselves in activities or actions carried out in their surroundings."*²³

*"But when I was a guide, the people tended to write me, like, 'This really changed my idea of the world we live in', and this has always been really important to me. That I could achieve that."*²⁴

The founder of the NGO (number 2) and the manager of the agency focussing on learning activities (number 3) agree that learning outcomes are minor in short-term tourists than in the long-term volunteers they work with (as will also be seen in 'time available to the tourists'). Nevertheless, they believe that change can happen to a certain extent, even if the visit takes only a few days:

²³ (...) y que su viaje no termine cuando termina nuestro tour sino que también puede con lo que ha ido aprendiendo pues puede ir descubriendo su lugar de origen. Entonces investigando o tratando de recuperar o involucrándose en actividades o acciones que se realicen dentro de su entorno.

²⁴ Pero cuando guiaba, así, la gente me escribía, no? Como, "Realmente me ha cambiado, me ha cambiado la idea de, del mundo, de donde vivimos" y para mí era muy importante eso, no? Que podía lograr eso.

“And the objective of both the guide and the scientist is to convert the tourist into an ambassador of Manu. So, this means that the tourist must leave and then do something for the planet. For himself, his family, his society, his country. It doesn’t matter what, but he has to do something. And they do leave with this awareness to become involved.”²⁵

“A tourist that comes for two or three days, you can give them only a little bit, hoping that they will come back or hoping that they will look for more information. Let’s say, more scientific information, not only from the press but something more scientific, so that they understand better.”²⁶

Others

Other objectives providers pursue are giving tourists a holistic vision of the jungle, making operations as sustainable as possible, conserving the local culture, and supporting local communities.

2.4. Guides

As we have seen before, guides are the main people carrying out environmental learning activities. Accordingly, various aspects related to the guides have been identified as factors influencing these activities. The following information is derived solely from the interviews.

Guide’s capacity to motivate tourists

First, guides can help motivate clients to learn more about the jungle. The manager of provider 8 (the agency offering scientific activities explicitly adapted to tourism) explains that the guide plays a vital role in incentivizing tourists to participate in these activities and thus achieve more significant learning outcomes.

Number of high-quality guides available

Six of the nine providers strongly disagreed when asked whether or not it is easy to find high-quality guides. Agencies hiring freelance guides, as well as the ones working with employed guides, have said this. They claim that a fair number of guides are available, but not all of them are good. This leads to a shortage of guides. When working with freelance guides, this shortage occurs above all in the high season. Only two service providers affirm that good guides are available and that they do not experience any shortages.

²⁵ *Y... y el fin y el objetivo tanto del guía como del científico es convertir al turista en un embajador del Manu. Entonces, esto significa que: el turista tenga que salir y hacer algo en pro del planeta. Para él, para su familia, para su sociedad, para su país. No importa qué, pero tiene que hacer algo. Y salen con esa conciencia de tener y poner esto en acción.*

²⁶ *Un turista que viene por dos o tres días, le puedes dar sólo un poquito, con la esperanza que ellos van a volver o con la esperanza que van a buscar más información. Digamos, más científico, no solamente prensa, sino algo más científico para que lo entienden mejor.*

*"(...) I think that being a guide is also one of these careers where you might want to be a guide, for example, ok, 'I want to be a guide, I want to be a guide.' But if your temperament or, like, if you are moody and you can't stand anyone... I had to dismiss people like that, where in all the surveys of the clients I received answers like 'I would have liked that he smiled at me, I would have liked that he had been a bit more emphatic.', you understand? And I had no chance but to tell them, 'Look, I understand that you are the best in birding and that you are really good, but you are not made for these trips', right?"*²⁷

*"So, there are a number of guides, like, for example, there are about 20 guides. But of these 20, only seven are good ones, right? So, everyone wants that these ones guide their groups."*²⁸

*"No! No, it's not at all easy (to find good guides). It's not at all easy, and not only that. But there are not enough guides. During the high season, like, there is a shortage in guides."*²⁹

Below, some more details are given about the complications that can occur when hiring guides.

Age, experience and duration

First, guides are often young and inexperienced. As soon as they gain more experience on the field, they tend to move on to other activities or to guiding in other places. To reduce this effect, agency 9 works only with guides that stay with them for at least two years.

Family situation

The guide's family situation also came up as a factor of influence. If guides have a family, they can be less flexible at their workplace. One agency even affirms that they try not to hire married guides because being constantly on the field can cause family problems, resulting in a drop in concentration at work.

English skills

Whereas finding Spanish-speaking guides is easier, finding English-speaking ones can be more difficult, according to two providers. One of them is provider 1, operating in the Amazonas region, which is less touristic than the Madre de Dios region.

²⁷ (...) yo creo que el ser guía es una de esas carreras en las que tú puedes querer ser guía, por ejemplo, no? "Quiero ser guía, quiero ser guiar." Pero si tú temperamento, o sea, si tú eres un malhumorado, que no le aguantas, este, pulgas a nadie, y que por más de que... tú sigues... que me ha pasado! Que he tenido que dejar ir a chicos así, no, que, que recibía en todas estas encuestas de los viajeros como "Me hubiera gustado que me sonríe, me hubiera gustado que sea un poco más como enfático", me entiendes? Y les tenía que so and so, "Mira entiendo que eres el mejor en aves y que la destruyes, pero no te estás poniendo relacionar con el viaje", no?

²⁸ Entonces, hay bien específicos contados, o sea, por ejemplo, hay unos 20 guías. Pero de los 20 guías siete son buenos, no? Entonces, todo el mundo quiere, quiere que guía sus grupos.

²⁹ No! No es nada fácil. No es nada fácil y no solo es eso. Sino que no hay suficientes guías. <Eh>, la... durante la temporada alta hay una, o sea, faltan guías.

Professionalism and friendliness

One provider affirms that they have stated a lack of professionalism in guides occasionally. The latter have a different relationship with women than in Europe, where many tourists come from. This can be reflected in their behaviour and negatively influence the tourist activity. Another provider explains that they would like some of their guides to be more friendly and open towards passengers.

Requirements of the guide

Not being able to pay what a guide demands can be another difficulty. One interview participant states that guides can be more interested in earning the highest possible amount of money than in gaining experience on the field.

“Yes, the guides, right now, many... many are focused on the money. More than... in... in filling their heads with knowledge. Because they have been studying for five years and now they want to earn money. So, they are more focused on that. So that it’s a bit difficult to separate that and say, ‘You know, if you will learn with us, this will be worth a lot for you.’”³⁰

2.5. Other factors determining environmental learning activities

Degree of heterogeneity of the group

As seen before, the tourists’ interest can influence the environmental learning activities carried out. What adds to that is that the level of interest can vary between participants of one group. This is a situation the guide must adapt to, and learning techniques can be changed according to that.

“The same thing is not going to work for everyone, right? Because there are people very interested, and others not, it depends a lot on the age group; within one group, there can be people who are interested or not. So, everything cannot be centred on this (learning) because it’s not the idea of many visitors, right?”³¹

³⁰ *Mhhh, sí los guías, ahorita, los guías, muchos... muchos están enfocados en el dinero. Más que... en... en llenar sus cabezas de conocimiento. Porque, han estado estudiando por cinco años y ahora quieren ganar dinero (riendo ligeramente). Entonces están más fijados en esto. Así que es un poco difícil de separarlos y decir, “Sabes, si vas a aprender con nosotros, te va a valer mucho.”*

³¹ *No va a funcionar para todos lo mismo, no? Porque hay gente que le interesa, hay gente que no, depende mucho de las edades, dentro de un mismo grupo puede haber gente que le interese y que no. No, no puede ser tampoco todo centrado en eso (el aprendizaje) porque no es la idea de muchos pasajeros, no?*

On the other hand, one of the guides consulted during the observation process affirmed that it is important always to give the necessary information to the most interested visitor and that other participants would have to respect that. In that regard, the opinions of the guide and office staff diverge.

The degree of heterogeneity of groups and its consequences will be further discussed in the discussion chapter.

Harsh conditions in the destination

The tourists' interest goes hand in hand with the harsh conditions of the jungle. Various providers explain that tourists suffer under the circumstances, like humidity or mosquitos, and need time to rest in between activities. Even provider 8, describing their clients as adventurers and wanting to experience the jungle at its maximum, is no exception to this.

During the observation process on the field, this could be confirmed. Tourists generally seemed glad to get some rest after the activities. When guides stopped on a tour to give some explanations, mosquitos would approach the tourists, so the guides tried to make it short and continue walking. One guide confirmed that he could have given more explanations or stimulated contemplation before giving an answer but did not do so because he felt that the conditions were harsh for his group of tourists. The circumstances of the visited destination can therefore pose a limitation to the implementation of environmental learning activities.

Time available to the tourists

Three service providers explained in the interviews that limited time is to be considered. Among these are the two providers having set their main activities on volunteering (number 2 and 3). Comparing their tourist activities to volunteering activities, they notice that learning activities and their outcome are lower in the case of the former due to lack of time. During the observation process, the scientist working for the NGO (number 2) agreed on this.

“So, we see a transformation of habits in their new lives after visiting us, as well. (...) in the longer programs. In the short programs, yes, there is also an appreciation of what we do but not something more profound than that, really. Because it's the time as well, right, the time is very short to show everything we would like to do.”³²

³² *Entonces, hay un tema de transformación también de una costumbre a su vida nueva después de, no, de visitarnos. (...) en los programas más largos. En los programas cortos, sí también hay valoración de lo que hacemos pero no, no algo más profundo que eso, no, realmente. Es que es el tiempo también, no, es muy corto el tiempo como para mostrar todo lo que quisiéramos hacer.*

*“(...) tourists who have two or three days... who can only learn a certain amount in this time. (...) Because when people write to me and say, ‘I want to learn about the jungle’... I tell them, ‘Ok! If you give me three months of your life, I will teach you... a lot. Not all of it, but I will teach you a great deal about what the jungle is. (...)”*³³

Interest/Time available to the service provider

Looking at the providers’ perspective shows that environmental learning activities also depend on their willingness and time to work on their offer. One interview participant, having another job next to managing the agency (number 5), states that she does not wish to engage in developing any more activities due to lack of time.

Willingness of the agency not to harm nature

Some providers explained in the interviews that they prefer to refrain from the development of certain activities because the latter can be harmful to the environment.

*“Actually, what I see as one of the problems, in this second community where I worked in tourism: They were... 20 people? It was a new community. 20 People. But, because I was offering them work, they called their relatives from the other side, from Urubamba. In the end, they were 70. And I’m like, ‘What am I doing?’ I want to protect the jungle. But now, there are three times more people.”*³⁴

*“Which is what I was commenting about Pantanal (swamp area in Brazil), right? Where rare species, like the 30 jaguars left there, are distributed in a very small area, right? Of course, there you will see one in any case. But this is not ecotourism. This is not conservation. This is not the right way to see them. Who does this just wants to ensure the photo. Right? But it’s not ecotourism, right?”*³⁵

As these extracts show, prioritising nature protection can be an obstacle to offering more activities. On the other hand, choosing not to engage in these activities and communicating the reasons for it might be considered an environmental learning activity in itself. As seen before, demonstrating and prohibiting harmful practices are among the environmental learning activities identified in this thesis. Therefore, the willingness not to harm nature could be an obstacle and an incentive to environmental learning at the same time.

³³ (...) turistas que sólo tienen dos o tres días... que... solo puedes aprender cierta cantidad en este tiempo. (...) Porque cuando la gente me escribe y dice, “Yo quiero aprender del bosque”... Yo le digo, “Ok! Si tú me das tres meses de tu vida, yo te enseño... mucho, no todo, pero te enseño una gran parte de qué es el bosque.” (...)

³⁴ Pero, de hecho, lo que yo veo como uno de los problemas, en ese segunda comunidad donde yo trabajé con el turismo: Ellos eran... 20? Personas. Era una comunidad nueva. 20 personas. Pero por el hecho que yo les estaba ofreciendo trabajo, ellos llamaban a sus parientes del otro lado, de Urubamba. Al final eran 70. Y yo que, “Qué estoy haciendo?” Yo quiero proteger la selva. Pero ahora, hay más, tres veces más gente.

³⁵ Que es lo que comentaba de Pantanal (región pantanosa en Brasil), no? Que son espacios así que queda reducido, entonces, los 30 jaguares que quedan están en un rango bastante pequeño, no? Claro ahí vas a ver de todas maneras, vas a ver. Pero eso no es ecoturismo. Eso no es conservación. Eso no es, este, la manera de verla. Quien lo hace es el que quiere asegurar la foto. No? Eso no es ecoturismo pues, no?

Prioritization of profits of the agency

According to some interview participants, as opposed to the agencies trying to reduce their negative impact to the minimum, others tend to prioritize profits over the protection of nature and learning outcomes. Such behaviour is harmful to wildlife and, at the same time, deteriorates learning activities.

*"(...) they treat them like livestock, not like passengers, like people, but it's more about... the money. So, they devastate the destination by doing that, right, because the tourist leaves with another vision; yes, they have seen fauna, yes, they have enjoyed the climate, seen the flora. But... this experience in groups, from my point of view, is not good, right? Because, you see: They go in groups of about ten people, which is about the normal group size for these agencies. Or even more. But on a jungle Trail, you can't go with more than five or six people in your group. Because the sixth or fifth person already isn't going to see what the one at the front sees."*³⁶

Amount of fauna present

As seen before, tourists coming to the jungle have a strong interest in animal observation. This activity clearly depends on the amount of fauna present. Service provider 8 has lodges located deep in the jungle, which facilitates animal observation. Others have less convenient locations. Service provider 9 mentions that sightings of fauna have drastically decreased, which is why they need to find solutions.

*"I remember that ten years ago, I used to cross paths with anteaters. For example. I could see many more sloths... almost every day. I crossed paths with groups of monkeys. And now, this is a lot more difficult. Right, so, if you have some passengers who have seen that all their lives on television, or who come from less disturbed jungles, for example, where the fauna is all over the place, or who compare the tropical jungle with the African savannah, then you have to manage this."*³⁷

Nevertheless, there is a possibility that the lack of fauna is not entirely negative, as will be commented on in the discussion chapter.

³⁶ (...) los agarran como ganado, no los tratan pasajeros, como personas, sino más es... dinero. Entonces, malogran el destino con esto, no, porque ya el turista sale con otra visión, sí ha visto fauna, sí ha disfrutado del clima, de la flora. Pero... esta experiencia en grupo como que no, desde mi punto de vista que no es bueno, no? Porque mira: Van entre diez personas, digamos, un grupo normal de estas agencias puleras, salen con diez, más o menos. Si no es más. Entonces, en una trocha en la selva, no puedes ir más de cinco o seis personas en tu grupo. Porque el sexto o el quinto ya, ya no ve lo que ven los de adelante.

³⁷ Este, yo recuerdo que diez años atrás, yo me cruzaba con osos bandera. No, por ejemplo. Este, podía ver perezosos mucho más... casi que a diario. No, es que me cruzaba con bandas de monos. Y ahora es mucho más difícil. No, entonces, cuando tú tienes unos viajeros que toda la vida han visto en la televisión o vienen de selvas que son un poquito menos perturbadas, si quieres, no, donde la fauna sale por todos lados, o están muy, comparando mucho lo que es la selva tropical con la sabana africana; ahí tienes que manejarlo.

Unpredictability of the destination

Hand in hand with the amount of fauna one can see during a visit goes the fact that the jungle, as such, is unpredictable. Heavy rains, for example, can make operations difficult and thus impact the feasibility of activities in general, be it leisure activities, learning activities or others.

Availability of labour force, material and space

According to some interview participants, a lack of labour force, materials or space can hinder environmental learning activities from being carried out. Sometimes, employees with a specific skill are needed, for example.

“But with tourists, let’s say a tourist wants to come and do wildlife photography for two days, which exists; there are people who want this. The problem is that sometimes, the specialist is not on-site. (...) And the tools, sometimes. Now, we say to the tourists, ‘ Please, take your camera, take it, but I’m not guaranteeing you that someone will be there to explain things to you.”³⁸

“Yes, because, for example, we have to consider the number of boats that we have and boat drivers. If you have activities that include taking the boat, you have to take care that it doesn’t overlap with other groups who have another activity.”³⁹

“Like, there isn’t much left to exploit in the zone we are in. Do you understand? Like, I can’t go further back because if I go there, I will arrive at the road at some point. You know? And I can’t get too far away via the river either because I don’t want the visitor to spend hours in the boat. Right, so the zone we are in is quite small. So, we must use our imagination and see which other aspects we can exploit there, right?”⁴⁰

Legal requirements and security

In other cases, providers must comply with legal requirements and security obligations to engage in certain activities.

³⁸ *Pero, con turistas, digamos un turista que quiere venir hacer, hacer unna practica de... de “wildlife photography” por dos días, y existen, hay gente que quiere. El problema es que a veces, no tenemos el, el especialista. (...) Y las herramientas, a veces. Ahorita lo que decimos a los turistas que traen, “Ya, trae tu cámara, tráele, pero no te garantizo que vas a tener alguien que te va a explicar.*

³⁹ *Si es que, porque, por ejemplo, hay que tener en consideración de la cantidad de botes que tenemos y, y motoristas. Que si son actividades que requieren bote, tienes que tener cuidado que no se cruce con otros grupos que tienen otra actividad.*

⁴⁰ *O sea, ya no hay mucho de lo cual puedas tú sacar de la zona en la que estamos. Me explico? O sea, ya, no me puedo ir para atrás porque si me voy para atraaas en algún momento, me voy a encontrar con una carretera. Me entiendes? No me puedo alejar tampoco mucho porque no voy a tener al viajero horas en un bote. No entonces, ya como la zona en la que estoy me está quedando chica (pequeña). Entonces, hay que usar más la imaginación y ver qué otros aspectos podemos explotar ahí, no?*

“And have a specific area that we will have to build, right? The ‘drone learning area’, I don’t know what it will be called. But a specific area with signages and everything that makes it... safe.”⁴¹

“And, actually, obtaining licences or permits to have more boats is a problem, as it’s a national reserve, you can’t have a person of your team work in there.”⁴²

Pandemic and budget

Lastly, even though not all providers have mentioned it, the pandemic has clearly hit tourism organisations all over the globe. Some interview participants say that they have a limited budget to work on the development of further activities, which might, among other things, be a result of the pandemic.

One provider also mentions the costs that the client must pay, explaining that some agencies might not engage in certain activities to keep the tour price minimal.

2.6. Factors determining environmental learning activities with communities

When involving local communities in tourist activities, the provider must adapt to these new circumstances, as yet other factors can influence the environmental learning activities offered.

Knowledge about tourism and responsibility

Two providers working with communities point out that the latter do not have the necessary knowledge about tourism to take on responsibility and ensure the correct implementation of their job. Hence, the providers cannot entirely rely on their cooperation, which makes it challenging to offer community-based activities to tourists.

“It’s the organisation with the communities. (...) because sometimes the communities don’t have a clear concept of tourism yet. So, making sure they comply with certain things is impossible sometimes. Impossible.”⁴³

⁴¹ Y tener un área específico que vamos a tener que construir, no? El “drone learning area”, no sé cómo se va a llamar (riendo un poco). Pero un área específica <eh> con señalización y todo para que... para que sea seguro.

⁴² Y en realidad obtener licencias o permisos para más botes es un problema, como es una reserva nacional, tú no puedes tener a una persona interna trabajando ahí adentro.

⁴³ Es el tema de la organización con las comunidades. (...) porque a veces <eh> las comunidades, el concepto que tienen de turismo aún no es claro para ellos. Entonces, hacer <ehh> que cumplan ciertas cosas a veces no da. No se da.

*“Like, I can’t control what the local person does, in the end. Like, I can do that to a certain extent, right? I can have an oral contract like ‘This is what I expect from you, this is what I need’, but in the end, if the locals want to do what they want to do, they will do it. (...) Try and work with the local inhabitants of the national reserve. They don’t take care of our boats; sometimes they lend them. We arrive, and our boat is not there. It’s a mess.”*⁴⁴

Shyness and lack of English skills

Providers also realize that community members are not entirely able to bring across all their knowledge due to their shyness and lack of English skills.

It needs to be mentioned at this point that the effects of these aspects can be reduced thanks to an official tour guide. As seen before, the complementation between guide and community is vital for community-based activities to be successful.

Envy and requirements

Another provider has had problems due to envy between communities working and not working in tourism. Furthermore, their requirements can go up significantly once they figure out how much money they can make by engaging with people from outside the community.

*“But the surrounding people (not working in tourism) were very... very jealous. And they wanted this income and... in the end, they said (to the community members working in tourism), ‘If you continue with tourism, your children won’t be allowed to school anymore.’ So, they called me and said, ‘I am sorry, but we can’t continue with you because the education of our children is more important.’”*⁴⁵

*“(…), but one of the children was singing in an event where the best singer would be the winner. And he received three thousand soles (the Peruvian currency). So, after that, he said to me, ‘No, but I want you to pay me three thousand soles.’ He had a different idea about that by then. So, I stopped that (the collaboration with the community), as well.”*⁴⁶

⁴⁴ O sea, yo no puedo controlar lo que haga el local al fin. O sea, puedo hacerlo hasta cierto punto, no, tener como un contrato hablado “Esto es lo que espero, esto es lo que yo necesito” pero a la hora de la hora si el local quiere hacer lo que quiere hacer, lo va a hacer. (...) Anda tú a trabajar con los pobladores de la reserva nacional. No, entonces, no nos cuiden las embarcaciones que tenemos, a veces las prestan. Llegamos y no tenemos embarcación. O sea, es un desmadre.

⁴⁵ Pero la gente en los alrededores tendía mucho... estaba muy celoso. Y querían los ingresos y... <eh> no, al final, ellos decían, “Si, si... tú sigues con este turismo, tus hijos ya no pueden ir al colegio.” Entonces me llamaban y decían, “Lo siento que... que nada. No podemos seguir porque la educación de nuestros hijos es más importante.”

⁴⁶ (...) pero, uno de los niños cantó en, en un evento con <eh>... <ehh, ehhh> había como, como ganadoooores de los mejores cantantes. Y recibió como tres mil soles. Entonces, después me dijo, “No, pero yo quiero que me pagues tres mil soles.” Tenía otra idea sobre esto. Por eso dejé esto también.

2.7. Factors determining scientific environmental learning activities

The inclusion of scientists in touristic activities leads to yet another context and another element that can have consequences on environmental learning activities, as will be presented in this section.

Interest of the tourists

As seen before, some tourists certainly have an interest in scientific activities. However, scientific tasks can also be quite monotonous and trigger boredom.

“As it is science, you have to do things in the same way... you can't vary a lot because you don't want to influence... you have other factors, right? So, it can be a little boring for a person who doesn't understand or has no experience with scientific processes.”⁴⁷

During the observation process, it also became clear that not all tourists wanted to participate in all scientific activities, as on some occasions, they opted for an alternative instead.

It is also worth mentioning the case of the agency specialising in birdwatching (number 6). Here, tourists are housed at scientific stations, where scientists conduct their work. However, the provider explained during the interview that tourists show a lack of interest. They book with the provider solely to do birdwatching and rarely to get to know the scientific activities.

Priorities of the scientists

The interviews and observations also show that the scientists' interest in participating in touristic activities is another factor of influence. It is possible that they cannot carry out their work correctly when taking tourists with them or that their projects are unsuitable for tourists' participation. In such cases, scientists can prioritize the quality of their investigation over tourism.

“Like, when they are elderly, for example, and the activity usually takes two hours, with the older people, it can take them four hours. Right, and they are not very happy with that because they have objectives for their scientific work for the day that they won't finish in the two hours.”⁴⁸

⁴⁷ Como es ciencia tienes que hacer las cosas de la misma forma... no puedes variar mucho porque no quieres influir... tienes otros factores, no? Entonces, es un poco, puede ser aburrido para una persona que no entiende, o no está experimentado en los procesos científicos.

⁴⁸ O sea, si son viejitos, por ejemplo, y su actividad va a durar dos horas, con viejitos esta actividad puede durar hasta cuatro horas. No, y no están muy contentos con eso, no, porque tienen objetivos de trabajo científico en el día que no va a ser completado en las dos horas.

“Like, if your project requires, for example, a lot of silence and hours and hours of being sat down in a blind, waiting for something... you won’t go with seven children. Right, so maybe this is not the most accessible project, you understand?”⁴⁹

During the observation at the NGO (number 2), the researcher also explained that the activities are generally not adapted when tourists are present. This is because the scientific work scheduled for a day needs to be done and cannot be delayed or changed. The activity I participated in with the NGO required complete silence, which is why explanations were reduced to the minimum before and after the activity. Adapting it to increase the learning outcomes for the tourists was not an option considered.

Again, the agency specialising in birdwatching (number 6) is a particular case. We have seen above that the tourists coming here are more focused on birdwatching. Therefore, despite being housed at the scientific stations, the only scientific experience offered here is listening to a scientific talk about the projects carried out at the stations. Tourists can also use opportunities to talk to a scientist when crossing paths with one another. Apart from that, there is no interaction planned between scientists and tourists. Instead, so the provider, scientists are more interested when receiving people who have some scientific knowledge and can be a helping hand. This shows that in this agency's case, there is a lack of interest from both the tourists and the scientists.

In contrast, another agency (number 9) affirms that tourists with no prior knowledge *can* also help by participating in scientific activities. However, in their example, the tourist carries out the activity with the help of a guide (not the scientist), who had been previously informed about the scientific project.

“So, they (the scientists) asked the guides to take a checklist with them each time they went with a group of tourists and to fill out this checklist. And after a month, this checklist or all of the checklists will be sent (to the scientist). You understand, and so this scientist can return home with all of this information, right? So, he also used us in a way.”⁵⁰

⁴⁹ O sea, si tu proyecto requería, por ejemplo, mucho silencio y horas y horas de estar sentado en una, este, “blind”, no, esperando a que... no te vas a ir con siete niños. No, entonces, tal vez ese no era un proyecto que estaba disponible, me explico?

⁵⁰ Entonces, les pedían a los guías que cada vez que salen como un grupo de viajeros lleven un, una como un “checklist” y vayan como apuntando este “checklist”. Y que después de un mes, ese “checklist” o todos los “checklists”, los mandemos. Me explico, y ya ese científico venía a su casa con toda esa información, no? Entonces, también nos han usado.

Scientists' competencies in guiding and interpretation

Whether a scientific activity is carried out successfully also depends on the scientists' competencies in guiding and interpretation. There can be a lack of understanding of what tourists are interested in and how to bring across valuable information. This claim was confirmed during the observation at the NGO (number 2). Here, no additional guide, but only a scientist, was present. The scientist's way of bringing across information was more formal and dull compared to how the guides did it on the other tours I participated in. The other scientist I talked to during one of the four-day tours affirmed that he initially had difficulties interacting correctly with tourists because he is a scientist and not a guide.

Similarly to community-based programmes, scientific activities can be enhanced by hiring a scientist and a guide that carry out the activity together, as seen in the list of environmental learning activities. Complementation is essential to have both the scientific and interpretative skills to bring the information across.

Priorities of the agency

Next to the interest of tourists and participating scientists, the agency itself and the priorities it sets also determine environmental learning activities. Despite all obstacles and incentives mentioned before, engaging in scientific activities might just not be their field of interest, even though the possibilities are given. During this research, the only agency where this was the case was the one focusing on birdwatching (number 6). The latter is interested in operating birdwatching tours for tourists, working with volunteers and students and spreading awareness about conservation among local communities. Developing scientific activities for tourists is not one of their objectives.

Necessity of available data

Lastly, agency 8 has mentioned the necessity of having scientific data available before developing any tourist activity in line with the respective project. To recall, this agency is the only one having developed scientific activities explicitly adapted to tourism, making them easier to participate in. The provider explained that such experiences are only possible when the scientists have already worked on a project for various years before opening it up to tourism.

"So that there is data available. So that there is something... yes, something clear. A clear work, right? Welcoming a volunteer when you are still in the process of understanding things yourself... is not going to work, right? Almost every time, there were only the biologists first, right? Or with their assistant, and two or three years passed like that before developing the activities, right?"⁵¹

⁵¹ *Para que haya data. Para que haya, sí, algo... claro. Un trabajo claro, no? Traer a un voluntario cuando tú mismo estás viendo recién qué está pasando... no va a funcionar, no? Casi siempre primero estaban sólo el biólogo, no? O con su asistente y así se han pasado dos, tres años antes de que se armarán bien las actividades, no?*

2.8. Necessity of analysing the effects of activities

Noticeably, only one provider briefly mentioned that before engaging in future projects, it is important to analyse the effects of different activities to decide which ones are useful and should be focused on. This topic will be taken up in the discussion chapter.

3. Conclusion

The listing of all the findings shows that environmental learning activities can take many more forms than indicated in the literature review. Many activities are observation experiences or techniques carried out by the tour guide. Various scientific activities have been identified, but also community-based tours, which had not been retrieved in the literature review. Generally, the results also show that it is difficult for service providers to draw a clear line between environmental learning- and other activities.

Environmental learning activities are determined both by the demand side – what the consumers are looking for – and by the supply side – the providers' objectives. They also depend on the guides, which generally carry out the activity, their characteristics and their behaviour. When it comes to community-based and scientific tourism, yet another context needs to be considered, and other factors come into play. The results show that various aspects need to be considered depending on the activity a provider wants to offer. Therefore, which activities can and will eventually be offered depends on a complex interplay of different factors.

Discussion

Some topics in the results chapter are more controversial than others and need further clarification. There is also room for further research to dive deeper into the matter. These aspects will be presented in the following section.

1. Degree of heterogeneity of groups

According to the literature review, having groups of people with different backgrounds and initial knowledge can be challenging, as the right balance needs to be found to include everyone in the activity.

In the results retrieved in this research, the heterogeneity of groups has also been identified as a factor of influence. Service providers said in the interviews that the touristic activity could not be centred only on learning if not all group members wish so and that the speech might have to be more basic if the group needs it. However, other providers say that heterogenous groups do not necessarily represent a problem; having one person in the group who has more knowledge than the others can have a positive influence on the learning activity. As mentioned in 'Guiding techniques -> Knowledge exchange', the educated person can contribute to the

activity with his knowledge and add value to the learning activity. This suggests that heterogeneous groups can influence the learning activity positively but also negatively.

Furthermore, as seen in ‘Other factors determining environmental learning activities -> degree of heterogeneity of group’, one of the guides consulted during observation stated that it was necessary to always explain everything to the most interested person. The other group members would have to be patient and wait.

Saying this, the guide’s opinion differs from the one of the service providers, who say that learning can be reduced if not all group members are interested. This observation implies that the perception of the guides might generally be different than the perception of the office staff. As the guides carry out the actual activities and work directly with the tourists, it might be important to consult them to get first-hand information.

2. Employed guides vs. freelance guides

In former research, investigators have found that high-quality guides are difficult to find, which can negatively affect the implementation of environmental learning activities. In this research, the scarcity of good guides could be confirmed. Moreover, there are indicators that there is a difference between employed guides and freelance guides.

In the presentation of environmental learning activities, we have seen on various occasions that the guide of the oldest service provider (number 9) engages more in such activities than others. This information has mostly been retrieved from the observations, comparing the experiences of the different four-day tours I participated in. The service provider in question has been operating for 48 years and works only with employed guides rather than freelance guides, who stay with the agency for at least two years and receive training multiple times per year. This information suggests that working with employed guides offers more opportunities for workshops and improving guiding techniques.

Nevertheless, the agency operating for 16 years (number 8) also works with employed guides, yet techniques used by the guides were scarcer during this tour. This suggests that not the employment status and training of the guides, but other factors have led to the respective behaviour of the guides.

First, the interview participant of provider 8 affirmed that the group of tourists participating in this tour was relatively uninterested in the jungle and the activities. Thus, the full potential of the tour guides might not have been fully exploited during the whole tour. The fact that significantly more explanations were given when I went on a private jungle walk with one of the guides supports that claim.

Moreover, the manager of agency 9 mentioned that fewer animals are present at their lodges compared to former times and that physical space is also restricted. Due to that, the provider said that “(...) *we have to use our imagination and see which other aspects we can exploit there (...)*”, as seen before. Agency 8, on the contrary, operates lodges located a lot further in the jungle, where wildlife is abundant.

Considering these circumstances, one might argue that environmental learning activities could be more abundant when less fauna is present and less space available. In the results chapter, scarcity of fauna has been presented as a rather negative influence factor. However, when leading to more creativity to develop learning activities, it should not be considered negative in all ways. Instead, it can give incentives to find alternative activities, which could possibly lead to greater learning outcomes.

Returning to the guides' employment status and training, these aspects could certainly have been a factor of influence. However, as the other factors described above play a role simultaneously, determining to what extent employment status and training are significant is difficult. This implies that when various factors are present and the situation is more complex, determining the importance of only one of them is a challenge. In future research, one could further investigate whether the guides' employment status influences their training, which in turn could be reflected in environmental learning activities.

3. Interest of tourists

As seen in the results chapter, seeing fauna is a priority for visitors. They were often observed videoing animals when spotted, whereas questions were very scarce. This suggests that seeing and capturing animals is more important for them than learning.

To continue this research, it would be interesting to look into ways of sparking more interest among tour participants in the future, thus possibly achieving higher learning outcomes. It is worth recalling, at this point, that interest certainly depends on the tourist profile, among other things. We have seen, for example, that national tourists seem less interested in learning activities than travellers from North America. According to the level of interest, certain environmental learning activities might work well for some profiles but less well for others. Therefore, it would be essential to understand the different profiles better and then look into ways of adapting activities accordingly to increase interest.

4. Scientific activities

One example of scientific activities given in the literature review is joining scientists during their work, participating in experiments or collecting data (Borges de Lima & Green, 2017; Ilyina & Mieczkowski, 1992; Zeppel, 2008). Another one is activities explicitly adapted to tourism, as of the definition given by Bourlon & Mao (2011): *“organised educational, structured tours elaborated according to a scientific subject”*. The literature review also states that *“such activities effectively spread awareness about the importance of conservation and field research”* (Borges de Lima & Green, 2017).

However, Borges de Lima & Green (2017) have not assessed whether an attitude- or behaviour change has occurred in people who have participated in scientific tourism. Neither have Bourlon & Mao (2011). As of this research, the effectiveness of scientific activities can be disputed.

In the present investigation, it has been found that tourists show interest in scientific activities. On the other hand, activities can be pretty monotonous and not very captivating, as explained by the founder of the NGO (number 2) and observed during the visit to their biological station. According to the principles of Tilden, however, activities should be provocative to trigger a learning effect (Tilden, 1977). Therefore, one can conclude that scientific activities must not have a more significant learning outcome than other activities. Whether or not they are successful in leading to a behaviour change depends on the nature of the activity:

First, a guide should be present to serve as an intermediate between scientists and tourists. Second, activities are likely more captivating when explicitly adapted to tourists. Throughout this research, we have seen that one agency proceeds this way; provider 8. In this case, instead of following scientists on their daily scheduled programmes, scientific projects have been enhanced to be more accessible for tourists and enable active participation. Such an activity would be more in line with Tilden's definition of interpretation. It also corresponds to the definition of Bourlon & Mao (2011) as it is organised, educational and structured.

Agency 8 had already welcomed scientists as tourists in their station for ten years before working with conventional tourists. Furthermore, the interviewed person, who is involved in developing touristic activities, is educated in tourism. In the case of the NGO (number 2), the responsible person has education in other fields, such as conservation and environmental management. Considering these characteristics and the outcomes of each organisation in terms of touristic activities, one could argue that a good combination of scientific experience and knowledge in tourism is crucial to developing successful scientific tourism. This also confirms the claim made in the literature review that the product developers' skills in developing interpretational activities are an influencing factor.

5. Learning outcomes

The literature review mentions the importance of clearly distinguishing between information giving and learning activities. This aspect has not been resumed until now, but it is a crucial topic that needs clarification to give better meaning to all the results and discussions presented so far.

The fact that other researchers have not made the difference between information giving and interpretation clear has been criticised in the literature review. However, this research has confirmed the difficulty of making this distinction, which might be the reason why former scholars have not done so.

The interviews indicate no consensus among providers on what exactly environmental learning activities are. Ideas varied greatly from provider to provider and were generally not very precise. This was also reflected in the answers the providers gave when asked about environmental learning activities. They referred to all types of experiences as environmental learning activities. This includes explanations from guides or scientists and informational talks, for example. Whether these activities can be considered learning activities or just information giving can be disputed. There seems to be a very thin threshold between both concepts.

Providers also mentioned leisure activities during the interviews. Here, it is also difficult to determine if they can be classified as learning activities. In this thesis, they have not been included in the list of environmental learning activities, as they diverge too much from the given definition. Even observation has come up various times, being one of the main activities, although no explanations at all are given in this case. These findings suggest that providers do not question when an activity can be considered environmental learning, indicating that increasing learning might not be a priority.

To clarify this problem more, it is helpful to go back to the definition of environmental learning activities as set up in this thesis: *Activities taking place in the natural environment, actively involving the participants and leading to the development of environmentally conscious values and behaviour among them.* Taking this into account, the effects of each activity on the participants must be studied to identify which activities fall under the definition and which do not. This statement is in line with Zeppel (2008), who has found that there is a significant lack of evidence about the long-term effects of environmental learning activities in tourism. She explains that even though they can improve on-site behaviour, the long-term effects have not yet been studied. However, as seen in the results chapter, only one of the providers interviewed mentioned the importance of analysing the results of different activities. This topic seems to be little present among providers until now.

It is also worth mentioning that there is a possibility of learning effects depending strongly on the person. An activity working well for one person must not necessarily lead to a change in values or behaviour in another person. This goes hand in hand with the fact that different profiles need to be treated in different ways. Therefore, an activity might be considered a learning activity in one case but not in another case. When studying the effects of activities, it would thus be crucial to make the distinction between different visitor profiles.

Conclusion

This thesis has given an initial idea of the various environmental learning activities offered by service providers. They can be techniques used by tour guides, other general activities, scientific experiences, or involving local communities. However, due to the exploratory nature of this research, the results are not exhaustive. Many more activities could be retrieved by expanding research in the future.

It has further been found that a clear consensus about the meaning of environmental learning activities is missing. Service providers do not have the habit of analysing the results of their offer to understand whether or not experiences lead to a behaviour change among visitors. This problem makes defining environmental learning activities a challenge.

Developing environmental learning activities is subject to a complex set of factors that can have an influence. While some factors are more general, others are more specific to certain types of activities, such as scientific and community-based experiences. Again, many more factors might be identified when looking into the subject in more detail. However, the information

given in this thesis can be an approach to better understanding the challenges and incentives and using them to increase environmental learning activities in the future. This, in turn, can help raise environmental awareness and behaviour among visitors and contribute to biodiversity protection.

Annexes

Annexe 1: Interview guide

Introduction question

- How would you define environmental learning activities?

Explanation before interview:

This interview deals with environmental learning activities.

The definition of environmental learning activities I have established as part of this thesis is the following: **Activities taking place in the natural environment, actively involving the participants and leading to the development of environmentally conscious values and behaviour among them.**

It is important to remember that during the interviews, when we talk about environmental learning activities, I do not refer to the activity itself (e.g. kayaking, canopy walk etc.), but to the strategies implemented (by the guide or person carrying out the activity) destined to increase environmental consciousness.

An example could be the use of interpretative material to illustrate an explanation. In your organisation, you can have your own manners of carrying out activities to render the traveller more conscious of the importance of the natural environment and its biodiversity.

Do you have any questions about any of this before starting?

1/ Clients

- First of all, could you describe your clients' profiles to me?
 - o Where are they from?
 - o What is their average age?
 - o Do you know in which sectors they work?
- How would you evaluate the initial knowledge of your clients about biodiversity and conservation?
 - o Are there significant differences between this initial knowledge between different clients?
- What expectations do your clients have when booking tours with you?

2/ Activities

- Could you explain the activities you currently offer to achieve a major learning effect about biodiversity and the jungle?
(If necessary, clarify the definition of environmental learning activities again)
 - o If the organisation works with communities: What are the activities involving communities, and what is their role in environmental learning?
- If necessary: On your website, I found "description of the activity". Would you classify this experience as an environmental learning activity and why?
- How would you describe the role of the tourist during the activity?
 - o More passive or active?

3/ Guides

- Do you work with freelance guides or employed guides?
- For how long have your guides been working with the organisation?
- When hiring guides, what are the competencies they should definitely have?
- Do you provide your guides with any training after hiring them?
 - o What type of training?
 - o Who gives this training?
- How easy is it for your organisation to find high-quality guides for the environmental learning activities you offer?
- Are you satisfied with the work of your guides?
- (If applicable: You told me before that you can have groups with diverging initial knowledge about biodiversity and conservation. How do your guides manage such a group of tourists?)

4/ Scientists

- Do you work with scientists?
- What is the role of the scientists in the environmental learning activities you offer?
 - o Do scientists guide tourists or have an active role in tourist activities?
 - Why? / Why not?
 - o Do the scientists have any qualifications in guiding?
 - o Did the scientists receive any training in guiding?
 - o Are the scientists interested in guiding and being part of the touristic activities?

5/ Development of new activities

- Which strengths do you see in your current offer of activities?
- Where do you see possible weaknesses?
- What do your clients say about the activities after having participated?
 - o Is there anything that they do not like?
 - o Is there any activity they like more than others / any activity that is very popular?
- Do you try to increase environmental learning in existing tours?
 - o How?
- Are you planning on developing further (environmental learning) activities in the future, or are you already doing it?
 - o Which ones?
- Can you explain the process of developing new activities within your organisation?
 - o Who is the person in charge?
 - What is their academic education?
- What obstacles do you face when developing new activities?
- Did you already face situations where you had to refrain from developing certain activities because it was not feasible?
 - o Which ones?
 - o What were the reasons why you had to stop the respective project?

Descriptive questions

About the organisation

- How would you describe your range? (budget, intermediate, luxury)
- How many employees work for the organisation (in the offices and on the field)?
- What is the educational and professional background of the employees?
- How many clients participate in your tours per year?

About the interview participant

- How old are you?
- What is your academic education?
- For how long have you been working for the organisation?
- What is your function in the organisation?
- Where are you from?
- Before starting to work for this organisation, did you have experience in environmental learning (activities)?
- Gender (not asked but noted)

Annexe 2: Observation guide

Primary focus

- Techniques of the guide
 - o Explanation vs storytelling
 - o Use of interpretative material
 - How is it used?
 - o Thinking activities
 - o Stimulation of participation and interaction
- Techniques of scientist
 - o Show scientific activities
 - o Explain scientific activities
 - o Assist tourists participating
- Vs. information giving
- Competences in interpretation vs. knowledge about his field

Secondary focus

- Reaction/Role of the tourist
 - o Use of all five senses
 - See, smell, touch, taste, hear
 - o Question things, contemplate
 - o Emotions triggered

Tertiary focus

- Any obstacles to the implementation of activities identified
- Clients' interest
- Any other aspect that I remark / that surprises me

Conversation with guide after tour

- How did this tour go these last days?
- Do you always do your tours like this?
- How did you adapt your speech to the people? And to their initial knowledge in conservation/biodiversity?
- Do all guides do the tours like you, or are there differences?
- Where did you study? What type of teaching did you get there -> biodiversity/interpretation

Conversation with scientist after tour

- How did this tour go today / the last days?
- Do you always do your tours like this?
- How did you adapt your speech to the people? And to their initial knowledge in conservation/biodiversity?
- How do you like participating in tourism?
- Do you feel able to get across information despite not being a guide?

Annexe 3: Sample characteristics

Attributed number of the provider, date and place of interview

Number	1	2	3	4	5	6	7	8	9
Date	28.09.2022	03.10.2022	12.10.2022	28.10.2022	02.11.2022	07.11.2022	23.11.2022	27.11.2022	15.12.2022
Place	Online	Cusco	Cusco	Cusco	Cusco	Cusco	Tambopata	Tambopata	Online

Organisation

Organisation type	Company	NGO	Company	Company	Company	Company	Company	Company	Company
Region	Amazonas	Madre de Dios	Madre de Dios	Madre de Dios	Madre de Dios	Madre de Dios	Madre de Dios	Madre de Dios	Madre de Dios
Partners RTP	Yes	No	Yes	Yes	No	Yes	Yes	Yes	No
Main objective	Tourism	Volunteering, Conservation	Volunteering, Conservation, Learning	Tourism	Tourism	Conservation	Tourism	Tourism	Tourism
Main touristic activities	Community-based tourism, mindfulness	Scientific tourism	Scientific tourism	Community-based tourism	Conventional tourism	Birdwatching (at biological stations)	Conventional tourism	Conventional, Community & scientific	Conventional & scientific tourism
Range	Intermediate	Low	Intermediate	Low - intermediate	Intermediate	Luxury	Intermediate	Adventurers	Luxury
Years of operation	7 (14 as non-judicial person)	2 (13 only volunteering)	19	3	33	5	28	16 (26 only for scientists)	48
Number of Employees	2	8 (+ 4 in high season)	35 in total 13 office 22 field	1 person 2 assistants	4	18 in total 2 office	34 in total few in office	200 in total 12 office ~ 15 remote	500 in total 100 office
Guides	Freelance	Freelance	Employed	Freelance	Freelance	Freelance	Freelance	Employed	Employed
Clients/year	180 (in 2019)	50 (tourists) 180 (volunteers)	200 (only tourists, no volunteers)	17 (in 2022)	600 (before) 100 (now) 1000 (best year)	1800 (clients/night)	750 (before pandemic) 250 (2022).	13.600 (2019) 7.500 (2022)	35.000 (before pandemic) 28.000 (2022)
Observation carried out	No	Yes (one morning)	No	No	No	No	Yes (4-day tour)	Yes (4-day tour)	Yes (4-day tour)
Conversation	No	With scientist	No	No	No	No	With guide	With scientist	With guide

Person interviewed

Function	Founder	Founder	General manager	Founder	Founder	Operations manager	Administrator	Commercial manager	Ecotourism manager
Age	42	51	52	40	63	31	29	41	41
Nationality	Peruvian	British	Peruvian	Peruvian	Dutch	Peruvian	Peruvian	Peruvian	Peruvian
Gender	Feminine	Masculine	Masculine	Masculine	Feminine	Feminine	Masculine	Feminine	Feminine
Education	Bachelor's Tourism	Ecology, Environmental Management, Conservation, PhD	Bachelor's Tourism	Bachelor's Tourism, Master's Tourism Management	Biologist (but has always worked in tourism)	Bachelor's Tourism	Administration	Bachelor's Tourism & Hospitality Master's Ecotourism	Biologist, Master's Business Administration
Years in organisation	Founder	Founder	11	Founder	Founder	5 (since the beginning)	4	18 (since the beginning)	17
Experience learning act.	No	Yes	No	Yes	No	No	No	Yes	Yes

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