Introduction

The teaching performance of an ecotourism professor is more professional when it is based on science (Ferreiro, 2006). That is why it is increasingly necessary to promote the strengthening and links between ecotourism, education and research (Robledano et al., 2018), especially in the globalised world in which we live, where communicative globalisation has transformed educational potentials (Marginson & Dang, 2017). In this sense, it is considered that alternative tourism linked to education and culture can contribute significantly to human development from a socio-economic, political, cultural, and spiritual point of view, in harmony with itself, with nature, and with other human beings (Torres, Zaldivar, & Enríquez, 2013). Based on this, new professionals will be able to transfer scientific-technological knowledge and socialisation of ecotourism principles to local communities (Cujia, Pérez, & Maestre, 2017), and to the tourists with whom they interact.

Evidently, in tourism practice, educational goodwill is not so coherently associated to the quality of the services offered. Recent research reveals that some companies pay little attention to the educational components of ecotours, and concludes that, while almost all tourist guides minimise their educational role or practice, most tourists prioritise education and new learning in their ecotourism experiences. That is why they expect guides to improve their educational role, recognising that this constitutes a contradiction between the expectations of tourists and the understanding of the guides of their role, with significant implications for management and practice of ecotourism (Duong et al., 2019). This study shows two important educational axes for ecotourism; the first relates to the work of tourist guides (and tourist experiences in general) in relation to their educational role and the second regards the teaching of this discipline.

Such a contradiction reflects one of the challenges facing ecotourism education, so a change from the traditional teacher-centred and classroom-based educational practices, to innovative student-centred approaches is necessary (Ramírez & Santana, 2019), with emphasis on strengthening the binomial formed by ecotourism and sustainability education (Piñar, García, & García, 2012). Given this opportunity, some destinations have opted to increase the number of international and national visitors through human resources education, and thus, have a trained and qualified workforce, especially in ecotourism (Thapa, 2019).
Ecotourism and education

Ecotourism is a growing international tourism trend, with demands on natural, cultural, and human resources (Bustam, Buta, & Stein, 2012). Hector Ceballos-Lascurain is credited with coining the term ecotourism and its preliminary definition in July 1983, when he stated that ecotourism involves travelling to relatively undisturbed or uncontaminated natural areas with the specific object of “studying”, admiring, and enjoying the scenery and its wild plants and animals, as well as any existing cultural aspects (Planeta.com, 2007). Since the emergence of this concept in the late twentieth century, the influence of “knowledge and education” on nature tourists’ behavior has been explored in many studies (Moghimehfar, Halpenny, & Ziaee, 2014). Therein, it is recognised that “visitor learning” is the central aim in almost all definitions of ecotourism, which involves a “learning experience” (Walter, 2013; Mondino & Beery, 2019).

Ecotourism has several characteristics. It takes place in natural areas; it sustains local communities; includes wildlife encounters and recreational experiences; and may take on aspects of adventure tourism, community-based ecotourism, volunteer tourism, and outdoor education. According to TIES’s definition and principles of ecotourism, this is conceptualised as responsible travel to natural areas that conserves the environment and improves the wellbeing of local people (TIES Overview, 1990). This definition recognises the scope of “responsible travel”, which supposes the need for an educational perspective. In this chapter, ecotourism is understood as “Travel with a primary interest in the natural history of a destination. It is a non-invasive and participatory form of nature-based tourism that is built around learning, sustainability (conservation and local participation/benefits), and ethical planning, development and management” (Fennel, 2020, p. 20). This definition emphasises the importance of “learning/education” as a central theme of ecotourism.

Based on the previous definitions, it is important to mention that links between ecotourism and education are closely related to the world of tourism and travel, based on which the need for training of different stakeholders arises, either from a professional perspective or from that of general culture. Camargo and Sánchez (2016), argue that good tourism development starts with education. In this order, these authors coincide with the criteria of the Tourism Education Futures Initiative (TEFI), when they affirm that collaborative education and co-creation of knowledge are the basis for creating sustainable tourism (Camargo & Sánchez, 2016), one of the main principles of ecotourism education.

In response to this demand, ecotourism education is offered through different university models and tourism training technicians (Cervera & Ruiz, 2008; Boluk & Corey, 2016), as well as through tourism education and training promoted by UNWTO in response to the needs of employers and tourism professionals (Sancho Pérez, 1995; Fossati, Marín, Pedro, & Sancho, 2003). In the same way, the general formation of the tourist culture of the host community is particularly favored (Alonso, Gallego, & Honey, 1995, 2006), and the experiential learning during tourist trips is inspired (García-Allen, 2019). For this reason, tourism becomes a cognitive and affective-motivational phenomenon for different audiences, which is why this discipline needs to be studied by the pedagogy and education sciences.

Pedagogy is one of the social sciences that studies consciously organised and goal-oriented education (Urías, 2013), as well as unconscious and unintended experiences grouped in the informal education category (Elías, 2016). That is to say, that it studies the formation of the students in all its aspects, in function of which the educational institution as a main factor, the family, and the social organisations intervene. In the opinion of different authors, like Elías (2016), “Pedagogy has a dubious status as a scientific discipline, in conflict, voices inside and outside its domains debating its nature. In this way, it has incorporated theoretical constructs,
methodological focuses and instrumental resources from sciences with a greater degree of consolidation – and recognition – (anthropology, sociology, psychology, among others); at the same time that it has developed its own theoretical and methodological body (Elías, 2016, pp. 33–34). With these approaches, ecotourism education represents the integrated set of knowledge that allows the guidance of the educational process of educational institutions and their environments of influence, as well as of other training institutions.

Didactics is the branch of pedagogy that studies the teaching and learning processes, through which instruction, education, and student development are given (Álvarez de Zaya, 1999; Urías, 2013). This subdiscipline has a dynamic, complex, and multifactorial object of study, at the same time that it involves the active participation of the learner (Ibid.). Hernández, Hernández, Capote, and García (2004) consider that “Education is a very complex sociocultural phenomenon and, for its complete study and analysis, the participation and collaboration of multiple disciplines that explain its different dimensions and contexts are necessary. [So] … nobody doubts that without such concurrence of disciplinary perspectives, the analysis of education would be partial and incomplete” (Hernández et al., 2004, p. 40).

Learning and teaching are conceptual categories corresponding to different disciplinary fields, although connected; so, they assume different objects of study. On the one hand, learning is the process of acquiring knowledge, skills, abilities, attitudes, and values, which are generally obtained through observation, study, teaching, experience, or practice. Due to its complexity, there are various theoretical positions and conceptual meanings regarding its definition, methods, and applications. Depending on these, different learning paradigms and theories have been developed regarding the act of learning, which are mainly linked to the disciplinary field of psychology. On the other hand, teaching is the action and effect of teaching or instructing through the transmission of ideas, principles, beliefs, knowledge, experiences, skills, and habits to another person who does not have them. During this activity, teachers or facilitators interact with their students in a given educational context, through which learning or knowledge acquisition is facilitated. To achieve this goal, several paradigms, models, and approaches related to the act of teaching have been developed, mainly linked to the disciplinary field of pedagogy and education sciences.

When pedagogy assumes tourism in particular as an educational study object, a specific branch of this known as tourism pedagogy or leisure pedagogy is created (Colton, 1987; Galles, Graves, & Sexton, 2018; Zavydivska, Zavydivska, & Khanikians, 2019). Consequently, the didactics of tourism has as a specific study object the teaching and learning processes of tourism and its subdisciplines (like ecotourism), as well as ecotourism experiences (for example, the practice of a tour guide). It therefore covers the study of formal, non-formal, and informal educational events, such as those that result from the daily experience of visitors who come to a destination. In this way, it includes attention to the components of the personal teaching and learning processes -professor and student- and non-personal components such as objectives, contents, methods, means of teaching, and evaluation, among others.

In the opinion of Colom and Brown (1993), the pedagogy of tourism is focused on two main areas that correspond to training for tourism (formal and non-formal) and the educational content of tourism (passing from informality to non-formal education). These perspectives offer the possibility of application in specific areas, such as free time education, education for international and intercultural understanding, among others (Colom & Brown, 1993). Today, tourism academics and educators increasingly accept that education must meet the needs of the industry, and they have begun to wonder what can be done to help students think and learn more broadly and critically (Mair & Sumner, 2017), which contributes to the elevation of quality in tourism training and the improvement of tourism pedagogy.
Different research addresses the pedagogical study of ecotourism incorporating innovative topics such as the pedagogy of climate change, which potentiates the role and responsibility of visitors as key actors in the face of climate change, or the potential use of these sites to promote environmental learning. In addition, social and political actions on climate change are promoted “in situ”, all of which facilitates experimental learning, responsibility, and civic action towards conservation (Jamal & Smith, 2017). In the same way, different authors have incorporated pedagogical research into their daily work with the purpose of examining how sustainable the tourism education of future professionals is, recognising that curricular programs with traditionalist approaches still persist (Cole, 2019), which represents a challenge for tourism pedagogy.

On the other hand, the pedagogy of leisure is considered a specialised branch of the pedagogy that is responsible for the study of leisure or free time of people, in order to promote teaching and learning oriented to the educational or productive use of it (Colton, 1987; Colom & Brown 1993; Teplicancova, Almasiova, Kraska, & Sedlacek, 2017; Hjalmarsson, 2018). In particular, this pedagogical dimension pays attention to the free time of the whole society, since we all have this space of time in different measures, taking advantage of the free time budget due to educational opportunities. In this order, it facilitates from the pedagogical point of view instruction and education in its cognitive-instrumental, affective-motivational, and developmental dimensions, by integrating the components of the teaching and learning processes. Leisure pedagogy is related to school and out-of-school activities through the links that are generated by acting on the same subject. Thus, the first includes the pedagogical projection of the actions carried out in school institutions, while the extracurricular pedagogy includes education of free time in the family, the community, and other institutions.

Conceptualised from this perspective, the pedagogy of leisure focuses its attention on the categories of rest, fun, and development (Miranda, 2006; Ávila, 2017). In such a way, the forms of occupation of free time are becoming an object of study, which has a favourable impact on human behaviours, generating a model for the use of free time based on education, and preparing us for a better socio-environmental performance. It guides us pedagogically to assume the planning, development, and control processes of different ecotourism activities, promoting appropriate didactic approaches to achieve a better efficiency and effectiveness of learning in different contexts of action.

Under this approach, the pedagogy of leisure promotes the fulfillment of basic educational, sociocultural, and recreational functions that allow the personal and intellectual development of those who participate. The fundamental areas of leisure education concern school, cultural institutions, and other leisure-time institutions of an educational nature that develop excursions, urban visits, parties, and evenings out and community activities linked to local popular traditions, folk crafts, gastronomy, painting, photography, yoga, among many others. It also includes activities in parks and open spaces for leisure time, in which there is usually no face-to-face educational intervention, but which incorporate pedagogical criteria as part of the activities that are promoted. For example, the case of summer camps and other types of holiday stays in natural environments, clubs, and other similar spaces where free time activities take place.

There is a substantive base of information on ecotourism guide training (Black, Weiler, & Chen, 2019). This is due to guides having important roles to perform in the ecotourism experience, such as ensuring the safety of the visitor, the interpretation of sites, and modelling appropriate environmental and cultural behavior. However, to be able to perform these roles, guides need proper training that provides them with the necessary knowledge and skills (Black, Ham, & Weiler, 2001). Tour guide training is an adult education activity, but much training is
competency-based with an emphasis on knowledge transmission and skill acquisition; therefore, good training should lead to change, not only in terms of knowledge and skills, but also in attitudes and behaviour (Christie & Mason, 2003). This process makes it possible to develop abilities which could enable guides to communicate and interpret the environment, promote minimal impact practices, ensure the sustainability, and motivate visitors to appreciate the quality of the tourist destination (Skanavis & Giannoulis, 2009). In this way, practical teaching of ecotour guides has a positive impact on their roles and responsibilities (Ballantyne & Hughes, 2001).

On the other hand, host learning and education give them the capacity for local self-determination and control of ecotourism development and management (Regmi, Dev, and Pierre 2016), especially when there is a lack of proper environmental education (Mondino & Beery, 2019). Training local people to be interpretive guides helps achieve not only environmental sustainability, but also economic sustainability; once trained, they may encourage conservation action amongst both tourists and the local community (Skanavis & Giannoulis, 2009).

Ecotourism education process

According to Jafari (2005), tourism is a scientific or academic discipline (Jafari, 2005, pp. 46–55). In this sense, it can be considered that ecotourism is an academic subdiscipline, as this activity becomes an objective of teaching and learning. For this reason, it is necessary to know how to teach and communicate knowledge to students, and how students learn during this education process. The ecotourism education category is understood in this chapter as the teaching and learning processes that take place in different institutions, either formal, not formal or informal, in school or out of school. It is also recognised that there is a dialectical union between instruction and education, through which the student assimilates the content of the teaching, while producing and developing their personality traits, which influences the feelings, development, emotions, values, and so on (Álvarez de Zaya, 1999). It is worth noting that in informal education there are processes that can hardly be referred to as “teaching”, however, there are lessons learned. All these educational processes have the characteristics of a theoretical system composed of concepts, categories, laws, and a particular structure of its components, which determine an internal logic, in which different external conditions to the object itself intervene (Ibid.).

For a long time, traditionalist teaching and learning practises have been characterised by the leading role of the professor, who assumes the function of transmitting information as a part of a rote learning process by reception. Under this approach, the professor explains to the students what they should learn in a unidirectional way, being in charge of the diagnosis of the student’s learning needs, of the organisation and presentation of the content of a particular discipline, and of the reproductive evaluation of the students. On the other hand, the student assumes a role of passive receiver of information, who memorises and repeats the contents to face the evaluation administered by the professor. Under this conceptualisation, learning occurs individually and reproducitively, so that everything is practically reduced to memory.

Such educational practices do not fully conform to the educational needs of the times in which we live, which is why it is necessary to promote alternative educational models and teaching strategies for ecotourism education and training. Based on these, the ecotourism educational process could contribute to the formation and development of cognitive-instrumental, affective-motivational, and axiological knowledge, and in this way, to assume a positive attitude and

Ecotourism and Theories

295
consequently responsible behaviours in each tourist destination. In this regard, it is recommended that the following categories be integrated into ecotourism education:

- Knowing: cognitive dimension.
- Knowing how to do: instrumental dimension.
- Wanting to do: motivational affective dimension.
- Knowing how to be: motivational affective dimension.
- Be willing to do: attitudinal dimension.
- Doing: behavioural dimension.
- Making to know: communicational dimension.

The aforementioned categories are related to the four pillars of education proposed by UNESCO: learning to know, learning to do, learning to be, and learning to live together. It is therefore important to strengthen ecotourism education by incorporating the 10 commandments of learning raised by Pozo (2008), which means the development of teaching and learning processes considering:

1. Interests and motives of the students.
2. Previous knowledge of the students.
3. Adequate dosage of the amount of new information presented in each activity.
4. Suitable appropriation of the basic knowledge that will be necessary for future learning.
5. Diversification of tasks and learning scenarios for the same content.
6. Design of learning situations based on the contexts and tasks in which the learners must recover what they have learned.
7. Organisation and connection of each learning activity with the other one, so that the students perceive the explicit relationships between them.
8. Incentive among students to reflect on their knowledge, helping them to generate and resolve cognitive conflicts that arise.
9. Assignment of learning problems and/or open tasks, and the promotion of the cooperation among students for their resolution.
10. Training of the students to plan and organise their own work.

Theoretical and methodological bases of the teaching and learning processes

The theoretical and methodological bases of the teaching and learning processes have been configured according to the specific conditions and educational proposal of each historical period, so they are the result of the transmission of the accumulated knowledge by humanity, and the assimilation of these for new generations (Labarrere & Valdivia, 1988, p. 164). Regarding each of these historical moments, different scientific psycho-pedagogical theories have been formulated that have promoted the design of models, theoretical frameworks and didactic strategies (methods, techniques, activities), among others, which offer professors the premises to conduct the teaching and learning processes. Learning theories make it possible to understand and develop the processes by which students acquire knowledge, while teaching theories allows scientific guidance of the instructional and educational processes of each academic discipline. Both groups of theories complement each other as part of ecotourism education, based on what the construction and appropriation of disciplinary knowledge of this specific field of knowledge materialises.
Different studies at the international level have assumed the research and operationalisation of psycho-pedagogical theories as a basis for improving the educational and transformative practice that ecotourism educators carry out (Benckendorff & Zehrer, 2017). Kay and Kibble (2016) recognise that educators should understand learning theories and be able to apply them in the classroom (Kay & Kibble, 2016). As a basis for the systematisation of collected information in this chapter, the classification elaborated by Elías (2016) is used, in which the author relates the theoretical proposals corresponding to the psychoeducational and pedagogical dimensions of teaching practice as related disciplinary fields (Table 22.1). Based on this classification, the author identifies theoretical proposals that obey different objects of study, that is, on the one hand, the disciplinary field of educational psychology (learning theories), and on the other hand, the disciplinary field of pedagogy (teaching approaches) (Elías, 2016).

Relevant theories of knowledge and psychoeducational paradigms applicable to ecotourism

The study of the psychoeducational dimension of ecotourism is carried out through two constructs, that of learning theories and that of psychoeducational paradigms as a derived concept (Elías, 2016).

- **Cognitive Learning Theory**

The background of cognitive theories is related to different academic disciplines. This paradigmatic approach is focused on cognition as a way for the search, acquisition, organisation, and use of knowledge. Therefore, it has as its purpose the description and explanation of mental representation as a model of information representation, based on which it incorporates the categories of the cognitive (attention, perception, memory, intelligence, language, thought, among others) for the understanding of the complex mental phenomena that lead to learning (Vega, 1984; Gardner, 2006). In this sense, it takes as an approach the question of how information is processed, and presents learning as the result of the acquisition of knowledge, while considering the possibility of developing the cognitive potential of the subject that learns as a condition for the solution of problems. The proposal of projects and programs “to teach to think” and “to learn to learn” correspond to this paradigm.

Under this paradigm, the professor of ecotourism is responsible for promoting the development of mental representations in their students with the purpose of ordering the information obtained through these representations, and thus promote the formation of learning skills; for this, different paradigmatic positions are assumed as the meaningful learning approach. For their part, the ecotourism student is not a simple subject that responds to external stimuli, but instead becomes an active processor of information, capable of processing representations (models, schemes) that serve as the basis for interpreting and transforming reality.

The ecotourism professor and ecoguide must consider knowledge as symbolic representations in the students’ minds, so it occurs through “experiences” that are stored and retrieved in memory or cognitive structure. For this reason, the educator must be a stimulator of experiences and contribute to the development of the ability to think and reflect. One example of cognitive learning activity in ecotourism education includes (Grade Power Learning, 2020) who asks students to reflect on their experience on eco-tourism trails and identify negative environmental impacts. The professor could encourage them to find new solutions to impacts and promote discussions about the status of the
Table 22.1 Psychoeducational and pedagogical dimensions of teaching practice

<table>
<thead>
<tr>
<th>Learning Theories</th>
<th>Psychoeducational Paradigms</th>
<th>Pedagogical Dimension</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Environmentals</strong></td>
<td>Connectionism</td>
<td>Behaviorist</td>
</tr>
<tr>
<td></td>
<td>Behaviorism</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Contiguous conditioning</td>
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</tr>
<tr>
<td></td>
<td>Operant conditioning</td>
<td></td>
</tr>
<tr>
<td><strong>Cognitivists</strong></td>
<td>Gestalt theories</td>
<td>Humanist</td>
</tr>
<tr>
<td></td>
<td>Information Processing</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Theories</td>
<td></td>
</tr>
<tr>
<td><strong>Interactionists</strong></td>
<td>Psychogenetic</td>
<td>Psychogenetic</td>
</tr>
<tr>
<td></td>
<td>Sociocultural</td>
<td>Sociocultural</td>
</tr>
</tbody>
</table>

Source: Based on the multi-referential vision of teaching practice (Elías, 2016, p. 87).
environment based on these negative impacts. The professor should also help students explore and understand how ideas are connected, and to ask students to justify and explain their thinking. Finally, the professor uses visualisations to improve students’ understanding and recall.

Practical ecotourism learning is a form of meaningful experiential learning in which students interact with real-life experiences through direct observation and interaction with the environment, both personally, interpersonally, and in teams. For this focus, academic study practices play an important role while recognising that experiential learning is very useful for business careers in programs such as business accounting and finance (McCarthy, 2016; Cea, Jorge, Burgos, & Filgueira, 2018). Under this paradigm, professors develop the ability of their students to learn from their own experiences based on a conceptual theoretical framework and well-planned objectives, leading to the development of skills that allow meaningful learning and possibilities of making decisions in new situations. On the other hand, students must assume an active role during the understanding of the setting in which they learn, reflect on the experience, conceptualise the experience, and apply their experiential knowledge to the solution of new problems. Community-based ecotourism (CBET) is a site of experiential learning which may encourage transformative learning for visitors (Walter, 2016).

- **Constructivism Learning Theory**
  Although it is based on several preceding paradigms, derived from the classical theories of learning (sociocultural psychology of L. Vygotsky and the psychogenetic theory of J. Piaget) and pedagogical theories (critical pedagogy of P. Freire, and action-oriented teaching based on the theory of activity formulated by L. Vygotsky and A. Leontiev), this psychological current has a student-centred approach, and is oriented to the question of how knowledge is constructed, that is, how reality is known and how to learn, which reflects a transition from traditional practices of information exposure towards the construction of knowledge and personality. Researchers and academics from different disciplines intervene in this area of study with the purpose of achieving meaningful and cooperative group learning, based on which the professor must create learning situations that allow their development.

  The ecotourism educator must be supported by the presentation of problems and conflict scenarios, which favour the appropriation of working methods for their solution. Under this paradigm, the professor is not a simple transmitter of knowledge, but a facilitator or mediator of the most favourable conditions for the learning of the students. Therefore, the main function is to guide the process in such a way that their students learn; in this sense, the educator must relate the contents of the teaching with the needs, interests, and previous experiences of their students, and promote the conditions for the full enjoyment of this process. On their part, the student is not a passive recipient of information, but an active subject, and at the same time is responsible for discovering and building their own learning, as well as providing meaning to that knowledge in order to transfer it into new learning situations. Some recent studies corroborate that learning is an active experience, so, the ideas that students have on the subject and the subject taught will be part of their learning experience, as learning is socially and culturally rooted (Sithara & Marikar, 2017).

  There are many examples of constructivist activities, which can be used in ecotourism education. Among these are ecotourism debates based on background readings, experimentation tasks that students develop and then bring to class to discuss the results in classroom, discussion on ecotourism business management issues with ecotourism owners, field trips to different ecotourism destinations, interactive business case studies, and elaboration of
monitoring plans for their proposed business. A didactic strategy to put in use during eco-tourism classes could be to present a learning situation through which the students must answer what they know, such as when introducing the study of the Triple Bottom Line Model. In this learning context, students are encouraged to carry out a collaborative teaching assignment for the construction of the model; after some time they expose the obtained product in classroom, and lastly the professor proposes a new task to put into practice the knowledge acquired.

In particular, research projects are very useful because students research a topic and can present their findings to the class (project-based learning). This focus allows students to appropriate knowledge, skills, and competencies through the interpretation and investigation of objects, phenomena, and processes of objective reality, in a way that encourages the relationship of their learning with a situation of tourism (challenge) to which they must find a solution. The basic components of the ecotouristic project correspond to the establishment of an idea or topic which is relevant to the students; the elaboration of appropriate evaluation criteria; the approach of a guiding question or challenge; the presentation of learning activities to be addressed during the development of the project; the final product to deliver; and the audience for the presentation (diffusion) of it (Gobierno de Canaria, 2012).

Sociocultural Learning Theory

This paradigmatic trend recognises the contribution of society to the development of the individual, and highlights the role of the interactions that are established between each subject and the culture of the context in which it operates, which is why cognitive development is carried out collaboratively. Marginson and Dang (2017) point out that Vygotsky’s sociocultural theory is widely used in educational research, and relate this potential to the proposal made by this author regarding the four “genetic domains” to investigate higher cognitive processes, that is, phylogenetic (humans in natural evolution), the historical cultural (social activity of humans), the ontogenetic (individual life expectancy), and the microgenetic (immediate events).

The main focus of sociocultural theory (L. Vygotsky) is sociocultural learning, which recognises that cognitive development cannot be isolated from human development, from the social, cultural, political, and economic conditions in which it is carried out (development unit), highlighting the important function of education for this purpose. The proposal of “Zone of Proximal Development” (ZPD) corresponds to the sociocultural paradigm; this represents the distance between the level of real or effective development of the student, in which it is possible to solve learning problems faced by themselves (comfort zone), and the level of potential development in which they would require guidance or assistance for the resolution of these problems, since they are not yet able to perform them independently. This conception explains that in the learning process, there is always a zone of near development towards which the student’s knowledge will advance under the guidance of the professor, and that such learning can be stimulated and directed from the educational institutions.

Under this paradigm, ecotourism learning is recognized as a social and interactive construction, in which a bi-directional and dynamic relationship between the subject (ecotourist) and the object (ecotourism destination) adjusted to historical-cultural conditions, is established. For this, the main function of the professor is to teach interactively and promote the progressive advancement of the students from their comfort zone (autonomous) to the area of near development (not autonomous), so that the knowledge and skills required are acquired to gain autonomy and self-regulation. At the same time, the students assume an active and leading
role in the construction and reconstruction of their ecotourism knowledge, so they play an important role in the elaboration of procedures that allow the solution of problems. In this way, they are capable of making the ecotourism knowledge their own through a process of progressive internalization from an external plane to an internal one.

Taking into consideration the role of the interactions established among students or visitors and the ecotourism destination, this approach could be applied through for example, environmental interpretation activities. For this purpose, the focus of learning in situ or situated learning could be integrated, which represents a form of cognitive learning that promotes learning in real scenarios, and also the focus of learning by doing, which is represented by a constructivist methodology that assumes learning based on the approach of practical doing as a way to reach knowledge. It is very important to recognize that environmental interpretation is considered an important vehicle for sustainable tourism by creating pro-environmental attitudes and responsible behaviours (Poudel & Nyaupane, 2013); consequently, it is an indispensable tool for achieving the goals of ecotourism (Weiler & Ham, 2000, 2001, 2002; Ham & Weiler, 2002), and a reason why it is recommended to strengthen education oriented towards this goal.

Most of the postulates previously explained by different learning theories, psychoeducational paradigms, educational paradigms, models, and teaching approaches related to the learning and teaching acts (Table 22.1) could be integrated during the ecotourism education processes. The following example (Table 22.2) shows three learning models and teaching approaches that can be integrated through a teaching assignment developed by means of an academic study trip, in which students learn collaboratively, by discovery, and in a meaningful way at the same time.

**Table 22.2 Integration of approaches through an ecotourism teaching assignment.**

<table>
<thead>
<tr>
<th>Collaborative Learning</th>
<th>Collaborative Learning</th>
<th>Significant Learning</th>
</tr>
</thead>
<tbody>
<tr>
<td>Discovery Learning</td>
<td>Collaborative Learning</td>
<td>Significant Learning</td>
</tr>
<tr>
<td>(Piaget &amp; Bruner)</td>
<td>(L. Vygotsky &amp; Bruner)</td>
<td>(D. Ausubel)</td>
</tr>
<tr>
<td>Students must be able to discover the <strong>learning content in a meaningful way</strong>, and solve the practical problems they face in their surroundings, so that they can transfer the learning to new situations and make decisions dependently.</td>
<td>Students <strong>learn collaboratively in small structured groups</strong>, in which two or more members work with the same task or goal to be achieved. The learning is guided, and has a teacher-oriented purpose for the students to learn; participation is promoted through different activities.</td>
<td>Students are able to relate their previous knowledge and the experiences <strong>lived with the new learning content</strong> through a process of readjustment and reconstruction of knowledge, for which they must be motivated to learn by solving problems, and carrying out practical and laboratory activities.</td>
</tr>
</tbody>
</table>

**Teaching assignment “Ecotourism Planning” activity type:** Academic study trip to understand the geospatial approach of an ecotourism destination through the interpretation of the production process of the ecotourist space, as well as the recognition of the model of territorial implantation, the inventory and evaluation of tourism resources. These activities allow students to understand and justify the contribution of the practical learning process to the formation of ecotourism knowledge, incorporating academic study trips to the development of collaborative learning by significant discovery as a strategy and practice of sustainability.
Conclusion

During the last decades, more and more attention has been paid to the theoretical and methodological bases of ecotourism teaching and learning processes. Based on that, the study of ecotourism as a scientific discipline, and the teaching and learning ecotourism education process has been promoted. Such development has become a major challenge for professors, ecotour guides, and other educators who have had to find creative answers to questions such as how to teach and communicate knowledge to students and how students learn during this education process. In the search for answers to these questions it is possible to understand a clear synergy between educationally oriented ecotourism, conservation of environmental resources, and sustainable development (Sander, 2010; Coles, Poland, & Clifton, 2014). In function of these, it is recommended to project clearly the educational aims, curriculum, role of the instructor, teaching assignments, and learning outcomes to optimise the educational use of natural and sociocultural environments during the ecotouristic activities.

Reaching this target, educators should study different learning theories, psychoeducational paradigms, educational paradigms, models, and teaching approaches applicable to ecotourism education. In correspondence with each of these paradigms, educational proposals should be formulated based on their own theoretical-conceptual frameworks. Each of these theories has its own limitations and inadequacies, but their study and understanding serve as a guide to incorporate alternative forms of ecotourism learning during the educational processes, which makes the paradigmatic, conceptual, methodological, and instrumental understanding of each proposal necessary.

References


