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Outdoor environmental education programme leaders' theories of experiential learning

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ABSTRACT

Teachers' practice is based on their beliefs about how student learning should be developed. In the practice of programme leaders in outdoor environmental education centres, experiential learning is considered to be one of the prominent learning theories. This study analyses the ways in which experiential learning is interpreted and transferred into the practice of programme leaders in five outdoor environmental education centres in the Czech Republic. The authors collected qualitative data from interviews with the programme leaders (N = 17) and from observations of five different outdoor environmental education programmes. They identified three distinctive experiential learning theories representing the leaders' beliefs and practices. Further, the implications for future practice are discussed.

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Introduction

What teachers believe about teaching – their conceptions of good teaching and their theories of how learners learn – form the basis of their practice. In light of this, teachers' beliefs about teaching practice is an area with a strong research tradition (Fives & Gill, 2014; Flogaitis, Daskolia, & Agelidou, 2005; Kyung-Ran Kim & Buchanan, 2009; Moseley & Utley, 2008; Organisation for Economic Co-operation and Development, 2009). At the same time, Pajares (1992) has drawn attention to a number of methodological problems in research studies aimed at teachers' beliefs. In a review of the existing research on the relation of teachers' beliefs and practices, Fang (1996) has identified two competing theses. Consistency, where the practice is based on the teachers' beliefs, and inconsistency, where the relationship between these two is more complicated. Consistency has been more prevalent in reading/literacy research, while inconsistency has been more commonly found in research on other topics. Teachers' beliefs regarding the content area, self-efficacy or the learning environment have been repeatedly studied in the context of environmental and sustainability education (Forbes & Zint, 2011; Haney, Wang, Keil, & Zoffel, 2007; Moseley & Utley, 2008; Nikel, 2007; Yang, Lam, & Wong, 2010).

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The beliefs of environmental educators in both the formal and the informal educational environments may or may not be consistent with existing educational theories. The relationship between educational theory and practice tends to be dynamic, and it depends on the particular methods through which theory is facilitated in teacher training as well as on the teachers' pre-formed beliefs (Cincera, 2013a; Clayton, Smith, & Dymont, 2014). Moreover, the actual environmental education practice may differ further from the teachers' beliefs due to perceived constraints (Grace & Sharp, 2000). Teachers' beliefs influence the implementation of the official curriculum when they refuse to fulfil some of the objectives of environmental education (Cotton, 2006). Teaching beliefs are established before the teachers even enter a teacher education programme, mostly as a result of their formative educational experience at school (Wideen, Mayer-Smith, & Moon, 1998). This is true also for environmental education teachers (Begum, 2012), and overcoming it can be a particular challenge for non-formal environmental educators (Taylor & Caldarelli, 2004).

The beliefs of programme leaders in outdoor environmental education centres about how to shape their practice have been analysed by only a limited number of studies. According to Cincera (2013b), the attitudes of these programme leaders towards existing learning theories present a mixture of contradictory feelings. While some of the programme leaders believe in the importance of aligning their own beliefs and practice with the theories, others are suspicious of anything that is not based on their own experience and practice.

Grimwood, Gordon, and Stevens (2018) have found three narratives that are applied by outdoor environmental education leaders in cultivating students' connectedness to nature. The narrative of 'creating the space for nature connection' expresses the programme leaders' belief in the importance of 'creating space where children are encouraged to learn, explore, and make meaning and relationships on their own terms ... to spark authentic interest among children' (p. 32).

The narrative of 'engaging the space of nature connection' expresses the programme leaders' belief in effective strategies for promoting the children–nature connection, such as providing enough time for spending time outdoors, motivating children towards independent investigation and including art-based activities, as well as offering regular opportunities for sharing their feelings in community circles and for enjoying the feeling of solitude in nature. Finally, the narrative of 'broadening the space of nature connection' emphasises the importance of going beyond the children's comfort zones, i.e. motivating them to stretch their boundaries and get dirty from direct contact with nature, or engaging them with uncertainty and the opportunity to make mistakes. As a result, students perceive a transformative impact effectively promoting their nature connection (Grimwood et al., 2018).

Most of the existing recommendations for environmental education assume that it should encourage learning through students' experience in real-world settings (Athman & Monroe, 2001; Lumber, Richardson, & Sheffield, 2017; Monroe, Plate, Oxarart, Bowers, & Chaves, 2017; Rickinson, 2001; Vos, 2001). The importance of experiential learning for outdoor environmental education programmes was recently also expressed by The Real-World Model (2015), which was designed by a coalition of outdoor environmental educators and university scholars.

The concept of experiential learning has been elaborated on by many authors (Morris, 2019). Despite some variation in their definitions, most authors define experiential

learning as utilising students' own experience of learning through the process of reflection and transformation (Johnson & Johnson, 2006; Kolb, 1984; Moon, 2005; Parry & Allison, 2020; Prouty, Panicucci, & Collinson, 2006). All of these authors underscore the importance of cognitive elaboration on the experience in the 'debriefing' sessions consisting of reflection, generalisation and utilisation of the experience (Johnson & Johnson, 2006; Kolb, 1984; Moon, 2005; Prouty et al., 2006). These authors also highlight the infinite (circular) aspect of experiential learning, as the experience may be transformed into a new 'action theory', be further tested and become the source of new experience (Johnson & Johnson, 2006). Additionally, Kolb (1984) and A. Y. Kolb and Kolb (2017) outline the concept of student learning styles, i.e. the relative preferences of students to learn more easily in some parts of the learning process than in others.

The way outdoor environmental education programme leaders interpret the concept of experiential learning in their environmental education beliefs and transfer it into their practice has not yet been adequately investigated. Martin's (2011) auto-ethnographical analysis of the experiential learning approach applied by the Czech non-profit experiential learning centre Prázdňinová škola Lipnice is one of the few studies available to date. However, this study can be seen as an introduction to this particular approach rather than an in-depth analysis of outdoor environmental education programme leaders' beliefs.

Moreover, outdoor environmental education programme leaders' concepts may be rooted in specific cultural traditions and interpretations of experiential learning, as well as in the given native language. In the Czech Republic, these factors are particularly important. In Czech, the English word 'experience' can be translated in different ways: as what is being experienced ('prozitek'); what has been experienced ('zazitek'); and what has been experienced and used for learning ('zkusenost'). The word 'zazitek' is also used as an expression for an emotionally loaded experience, while the word 'prozitek' is rather neutral and 'zkusenost' implies a cognitive benefit (Jirasek, 2016).

The specific outdoor environmental educational tradition in the Czech Republic highlights the role of an emotionally strong experience ('zazitek') in personal development and transformation, an experience that is often facilitated by directive leaders (Jirasek, 2016, 2020; Jirasek & Turcova, 2017; Martin, 2011). This interpretation corresponds with some of the authors who have analysed the meaning of strong experiences in personal transformation. For example, Merizow (1997) discussed the importance of such an experience for starting the process of a 'disorienting dilemma' potentially leading to altering students' 'reference framework', a deep change in their beliefs, feelings and actions. In the context of environmental education, we can find that some authors highlight the significance of strong experiences as a means of motivating students to be actively engaged in the learning process. For example, Sobel (2008) or Van Matre (1990) believed that particular types of activities resonate with students' need to experience the feelings of adventure and mystery. By being provided with an opportunity to experience these feelings, students become open to learning the associated, scientific content. Others stress the role of outdoor experiences in shaping one's environmental values and behaviour (Chawla, 1999).

However, there are also some Czech authors who have questioned this interpretation and emphasised the importance of cognitive elaboration on the experience ('zkusenost') rather than the moment of the experience ('zazitek') itself (Docekal, 2012; Kolar, 2013).

This interpretation corresponds with other approaches associated with experiential learning, such as, for example, ‘adventure education’ (Priest & Gass, 2005; Prouty et al., 2006). In this approach, the learning process seems to be continuous and gradual rather than disruptive and disorienting.

While this discussion might be seen as an example of ‘being lost in translation’, it also reflects a broader issue: How is a particular learning theory, when applied in a particular linguistic and cultural environment, interpreted by the practitioners and transformed into their practice? This question is at the centre of the present study.

More specifically, our study focuses on the following questions:

What are outdoor environmental educators’ (programme leaders’) beliefs regarding experiential learning? What are their theories of effective facilitation of experiential learning in outdoor environmental education practice?

How do the instructional strategies applied in the selected outdoor environmental education programmes (OEEPs) reflect the programme leaders’ beliefs regarding experiential learning? What particular strategies are used and how consistent are they with the leaders’ beliefs?

In light of the aforementioned theoretical background, we assumed the existence of inconsistencies between the educators’ beliefs and their practice. We also assumed that the educators’ beliefs regarding experiential learning would be framed by their effort to connect students with nature. Based on the Czech tradition of outdoor environmental education described earlier, we also expected that at least some of the respondents would interpret experiential learning accordingly, i.e. with the emphasis put on the importance of strong, transformative experiences.

Methodology

To answer the questions asked here, we applied a qualitative research design consisting of a combination of interviews and observations. In the first step, we identified five different OEEPs run by five outdoor environmental education centres in the Czech Republic. While the selection process was constrained by practical aspects (agreement of the centres to cooperate in the research), the selection criteria used for the programmes were that the programmes: a) have similar aims, i.e. shaping students’ environmental attitudes and behaviour; b) are offered for a similar age category of students (9–13 years of age); and c) have a good reputation in the national environmental education community. All of the programmes selected are offered by residential centres allowing students to stay overnight, and they are three to five days long. All of the centres are situated in natural areas: one in the mountains; one at the edge of wetlands; one in a sandstone rock area; one in a forest in a typical Czech rural area; and one in a karst area close to a bigger city. All of the centres have professional programme leaders, although they differ in the number of employees, ranging from two to more than 20. All of the programmes also share some of the basic principles of experiential learning in that they maximise the opportunities for providing students with direct experiences of learning in their respective natural settings and facilitate the process of making meaning based on these experiences.

To obtain data about the ways the selected OEEPs are implemented, each of the programmes was observed twice, each time by an independent observer. The observers

explained to the students and their accompanying teachers that they were there to study the programme, but they did not provide details about what they were focusing on, and they did not interfere with the programme activities.

The observation protocol was partly based on the recommendations of the Real World Learning model, i.e. it focused on the time-ratio in which the activities are conducted in outdoor settings, on whether the students are being motivated to interact directly with nature, whether the programme leaders provide an opportunity for students to reflect on their experience in nature, and whether there are opportunities to transfer the students' learning into their future activities (application) or into their personal lives. In addition, the observers focused on the evidence of the students' involvement during programme activities (what activities or parts of activities, how many students did something other than taking part in the activities, and what measures the programme leaders used to engage them in the activities again), and on the feelings/thoughts reflected upon and shared by the students during debriefing sessions.

To identify the programme leaders' beliefs, we interviewed all of the programme leaders involved in the observed programmes. As the size of the centres differed, the number of respondents varied from two to four. Altogether, we interviewed 17 programme leaders (nine females, eight males). Because the interviewers investigated different types of instructional strategies, the questions that focused on the respondents' concepts of experiential learning varied slightly according to the respondents' previous responses, the programme observations, and the data obtained by the other respondents. The interviews were flexible and were conducted in the natural settings of the centres and their surroundings. For some of the respondents, the interviewers chose rather broad questions, such as:

It is often recommended that an OEEP should be experiential. However, different people understand this in different ways. How do you understand what experiential learning/learning by experience means?

In other cases, the questions were based on the responses obtained from the previous respondents, for example:

There are different opinions on what experiential learning is. For some people, it is crucial to offer students strong experiences that could change them, strong formative experiences. For others, it is not so important how strong the experience is but how students work with it and how they learn from the experience. What is your opinion about this?

The procedure followed the recommendations by Charmaz (2006) and Strauss and Corbin (1998), that is, we tried to be open to the data we obtained and we flexibly developed the originally designed questions to better understand how the respondents construct the investigated phenomena, rather than trying to verify our predetermined theories.

There was the methodological issue related to the above-mentioned language differences connected with the various words used in Czech for the English word 'experience'. To avoid this issue, the interviewers deliberately used all the words ('zazitek', 'zkusenost', 'prozitek') synonymously and informed the respondents that they do not differentiate among them. This decision reflects the fact that the various words are often considered to be synonyms.

All of the interviews were audio-recorded and transcribed. The analysis started with an open-coding procedure, with a gradual creation of broader categories (Saldana, 2015). Soon, we identified the set of categories expressing the respondents' interpretation of experiential learning. For each category, we further identified its properties and dimensions. An overview of the categories, properties and dimensions is provided in Table 1.

During the process of data collection and analysis, we identified emerging patterns occurring in the relationship among the categories/properties/dimensions found in the respondents' answers. For example, we found that when the respondents believed that the students' learning experience should be strong to be meaningful, they also had a tendency to use more directive methods of debriefing and applied it less often: only 'if needed'. Other respondents, those who highlighted the importance of a student-oriented approach to activities, tended to emphasise direct experiences affecting personal competencies and support students in finding their own meaning of an experience in debriefing sessions.

Finally, we identified three distinctive programme leaders' theories of experiential learning. These theories will be further discussed in the Findings.

To protect the anonymity of the respondents and the centres, all of the respondents were anonymised. In addition, we decided not to provide the real names of the centres (as one of the centres did not consent to the disclosure of its name in the research outputs), but instead used different colours to identify each centre. A basic description of the analysed programmes is provided in Table 2. All of the findings were presented to the

Table 1. Overview of the emerged categories, properties and dimensions.

Category	Definition	Properties	Dimensions
Activity	The particular method, procedure or situation perceived by the programme leaders as an opportunity for experiential learning.	Readiness Relationship to programme goals Emotional intensity Directivity	Predetermined/situational Direct/loose High/moderate/low Teacher-oriented/student-oriented
Experience	The presumably meaningful event with a presumed learning potential that occurred during the programme.	Strength Importance of safety Relationship to the world Occurrence Assumed effect	Strong/moderate/weak Strong/weak Direct/symbolic Extraordinary/common Personal competences/ conceptual change/attitudes to nature/group dynamics Instrumental/intrinsic
Debriefing	The particular procedure applied by the programme leaders to elaborate on the learners' experience and so promote the process of learning from the experience.	Function Mode Frequency Perceived meaning	The leader explains the meaning of the experience/the leader supports learners to find their own meaning of the experience Regularly/as needed Elaborating on emotions/ elaborating on understanding

Table 2. Description of analysed programmes.

Programme code	Characteristic	Examples of activities	Respondents
Yellow	A five-day residential programme in a rural environment. Focuses on developing outdoor skills (orientation in nature, starting a fire, cooking on a campfire, etc.) and affinity towards nature.	Field trip, archery, orientation in nature, starting a fire, cooking on a campfire, etc.	Three females, one male
Green	A five-day residential programme in a wetland area. Focuses on developing environmental attitudes and ecological understanding.	Field trip, rafting, cooking on a fire, identification of plants, investigating earthworms	Two females, two males
Orange	A three-day residential programme in a sandstone rock area, with follow-up activities. Focuses on developing environmental attitudes, ecological understanding and behaviour change.	Sensory activities (earthwalks), conceptual activities, magic spot	Two females, two males
Blue	A three-day residential programme in a mountainous area. Focuses on interpretation of the natural heritage of, and developing a relationship to, a protected locality in the mountainous area.	Thematic field trips, teambuilding activities, sensory activities	Two males
White	A five-day residential programme in a karst area. Focuses on developing outdoor skills and encouraging spending time in nature.	Field trip, orientation in nature, cooking on a campfire, caving, identification of plants	One female, two males

participating centres in two workshops, and the programme leaders were asked to provide feedback. The programme leaders' feedback mostly agreed with the presented findings.

Findings

Altogether, we identified three distinctive programme leaders' theories of experiential learning: the theory of authentic learning; the theory of transformative experiences; and the theory of supportive experiences. As the programme leaders' theories could be associated with existing educational theories, we deliberately chose theory labels that are similar to those used in other research studies.

The theory of authentic learning

According to this theory, experiential learning emerges in the process of students' direct interaction with nature, preferably as a result of an interplay among students, time and space. Such a learning experience may be partially prepared by the programme leaders, but mostly it emerges from the specificity of the 'here and now'. Therefore, these programme leaders believe that experiential learning should be highly authentic:

It is strong in that it is real, authentic, that in this part of the programme it is really no game, these are just real situations the children may learn from. (R15, female, white programme)

When we simulate reality, by this or that method, it is just a supplement. But [it is] real life, so that they find a nest, pet an animal, that I am in touch with real nature. (R9, female, orange programme)

In society, where all the things are somehow pre-prepared and we only buy the experience and know how it will go [...], but if it is somehow unpredictable, and we just experience it with the children, then I would say, this authenticity is a value that moves the children [...] much more than [...] a fabricated story. (R16, male, white programme)

Students learn in situations when they need to achieve certain goals, like building a tent or preparing food. The learning experience should not be strong or extraordinary but rather common: the goal of experiential learning is not to transform students, but rather to expand the set of activities they are comfortable with.

I am not sure we are able to guess, as children's souls are fragile, the intensity of the strength of the experience [...] And so we cannot be 100% sure how strong the experience should be [...] because it affects everyone differently. (R9, female, green programme)

Debriefing sessions should be held when needed, but generally irregularly because they are perceived as a potentially artificial element disturbing the flow of the students' authentic experience. When the programme leaders decide to hold a debriefing session, they prefer to use a facilitative style allowing the participants to make their own meaning of the experience rather than providing a straightforward explanation of what happened and what needs to be done.

This theory was strongly applied in the white programme. The biggest part of the programme was based on activities providing opportunities for students' decision-making (planning the route and the food for the trip) or they respected the students' decision not to participate in any activity ('challenge-by-choice principle') they were not comfortable with (e.g. caving, roping) (Priest & Gass, 2005). In contrast to the declared emphasis on authenticity, the programme leaders also applied a set of pre-prepared activities with a presumed emotional impact on students (e.g. caving, a fabricated diary presenting the adventure stories of a fictitious youth club, and so on). Moreover, there was some inconsistency in the leadership teams: while two of the programme leaders were rather in agreement in their beliefs on experiential learning, the third (R17) provided a different interpretation, highlighting the instrumental role of an experience directed rather than facilitated by a programme leader.

The theory of transformative experiences

According to the most frequently mentioned theory in our study, learning is an outcome of exposing students to a strong, emotionally loaded, extraordinary experience. This experience may emerge as an unexpected result of being outdoors, but often it is pre-prepared by the programme leaders in an instrumental way. For example, in the yellow programme, students were encouraged to participate in an adventure-based game in a night-time forest; in the orange programme, students enjoyed a night-time ceremony, experienced solitude in nature, and so on.

For me, an experience is something that does not happen every day, something extraordinary, like a night-time trip in the forest, making a fire somewhere or simply something unusual. (R10, female, orange programme)

According to these programme leaders, the strength of the experience is perceived as its quality because it helps the participants to move beyond their comfort zones (Priest & Gass, 2005; Prouty et al., 2006).

I think [...] that the experience is very important and perhaps the most important part, and that it doesn't need to be positive, as we always say, but it must be strong. [...] Only a strong experience moves us somewhere, so it is also in life. (R1, female, yellow programme)

According to this theory, an experience has transformative potential. Such an experience has a long-lasting impact, and it may deeply change the participants' personal competences or attitudes. Concerning debriefing sessions, these programme leaders prefer organising them only when they feel they are needed, usually after emotionally loaded, 'strong' activities. When a debriefing session is organised, the programme leaders tend to explain the meaning of the experience to the students or to lead them to its particular interpretation:

Raise your hands, who was worried when you entered the forest? Well, I also do not need to go to the forest at night, but we are usually scared of things that are not there, in fact. The forest is the same at night as in the daytime. So, perhaps next time you don't need to be afraid to go there. (A leader of the yellow programme after the night activity, field observation)

In the yellow programme, there seemed to be consistency among all of the programme leaders' beliefs and there was also congruity with the way their programme is implemented. In contrast, we found some level of inconsistency among the beliefs of some of the programme leaders in the orange and blue programmes and some incongruity with the ways their programmes are implemented. Moreover, while some of these programme leaders appreciated some of the strategies applied by their programme to promote experiential learning, others expressed a modest level of criticism.

For example, R11 (female, orange programme) appreciates that the orange programme gives students the opportunity for direct experience with nature, but she misses an opportunity for a deeper reflection on the experience. R9 (female, orange programme) would prefer a less intensive, more flexible programme rather than the highly prepared orange programme – one that would provide more opportunities for unprepared, authentic experiences:

Because the environment always offers something different, and the environment changes. When you can immediately react so that you can change the activity or use another one, you will have much more freedom in how to transfer it to children.

In the blue programme, both of the respondents (R13, R14) expressed their belief in the importance of strong, transformative experiences, while they felt that opportunities for such experiences were not provided in the programme they led.

The theory of supportive experiences

According to other programme leaders, experiential learning mainly plays a supportive role in conceptual learning. Experience supports learning by providing a comfortable, positive learning environment and opportunities for multi-sensory learning, and by helping to make the learned content long-lasting. In light of this, the experience should be comfortable and moderate rather than strong. The experientially based activities should be pre-determined to maximise their benefit for students, and students should not have many opportunities to shape the programme. Reflection on the experiences in debriefing sessions is perceived as an important part of the programme, and it is regularly conducted. This approach was most often applied in the green programme, where the programme leaders regularly lead reflections and try to facilitate students' experience through reflection, generalisation and plans for application in the future (e.g. 'If you make a fire in the future, how would you do this?', a leader in the green programme, field observation).

Interestingly, some of the respondents questioned whether, when they are using experiential activities (like investigating plants or invertebrates with a follow-up reflection) to teach ecological concepts, they really teach experientially. In the interviews, they linked their hesitation with the reflected differences in the meaning of the Czech words for 'experience' (see programme). According to R6 (female, green programme) and R7 (male, green programme), their programme as a whole is not experiential, as it does not focus on providing strong, emotional experiences ('zazitek'), but rather on learning-oriented experience ('zkusenost'). However, while not as the main focus, the green programme also provides emotionally loaded activities (e.g. rafting) with no clear link to the programme objectives. As a result, the programme leaders felt a tension between these two modes of experiential learning, which they perceived as competing rather than complementary:

So we work with everything, with knowledge, we have experiences ('zazitek'), we have personal experience ('zkusenost'), but then, when we do feedback with the children at the end of the programme, so often is mentioned the strong experience ('zazitek'), like [...] rafting or barbecue. And it also is slightly the case with very strong experiences ('zazitek') connected more with a kind of knowledge, like they learn something and also experience it, I mean catching the invertebrates. So sometimes it seems to me [...] what do the children take from here, whether it is the experiences only or also the new knowledge or the experience ('zkusenost') that they tried something, learned a new skill. (R7, male, green programme)

As a result, these programme leaders seem to struggle with two competing experiential learning theories. They perceive the differences between them and feel that different parts of their practice are based on different theories.

Another example of incongruity between the programme leaders' beliefs and practice was found among the respondents in the blue programme. For example, R13 (male, blue programme) tries to create a synthetic model (Vosniadou, 2013), combining the theory of supportive experiences and the theory of transformative experiences:

[I am for the] emotional [interpretation of experiential learning] that it will hit them [students] somehow. That they would learn from it [...] but obviously there is also some information [...] that you are meant to add, and you will learn it and link it with [the experience]. But the experience should simply recall an emotion to help people to remember it for a long time.

Similarly, R14 (male, blue programme) believes that the experience should be strong and not necessarily positive, which reflects the perceived theory of transformative experiences. However, both R13 and R14 think that the blue programme is focused rather on conceptual understanding and the experience is meant mainly as a tool for long-term remembering of the learned concepts. R14 manages this incongruity by highlighting the un-prepared, authentic experience emerging from being outdoors:

That they go outdoors even in this (bad) weather [...] even if it is not always good for them. And when outdoors it is crappy weather, they try to do what we ask them to. Even in this unpleasant weather. That is, I think, the strongest experience of all of it. However, it is not connected with the programme.

Discussion

The findings must be interpreted within the scope of their limitations. First, the distinction between the identified experiential learning theories seems to be blurred, as some of the respondents hold contradictory assumptions. In some of the cases, the lack of congruity between the programme leaders' theories and the particular programme they lead can be easily explained by the fact that the programme leaders were not involved in designing the programmes and were simply supposed to lead them, regardless of their beliefs.

While we deliberately did not mention it in the Findings, the programme leaders' theories of experiential learning often reflect existing educational theories or a combination of them. The theory of transformative experiences could be associated with both the concept of transformative learning (Kitchenham, 2008; Merizow, 1997) and with some of the principles of adventure education (Priest & Gass, 2005; Prouty et al., 2006). In both of these theories, we could find theoretical support for providing strong, memorable experiences with a transformative potential. However, both of these theories also highlight the significance of cognitive elaboration of the experience perceived as an important part of the transformation process or learning (Merizow, 1997).

In light of the rather sceptical approach to debriefing sessions expressed by some of the programme leaders, the theory of transformative experiences should be linked to the interpretation of experiential learning as formulated by the Czech scholar Jirasek (2016). The programme leaders' theory corresponds with Jirasek in the belief that the experience should be strong (and even unpleasant) and that it has a transformative potential even without its further reflective processing. However, a possible effort to apply the principles formulated by Jirasek leads to a contradiction between the different elements of the programme leaders' beliefs and between their beliefs and practice. While Jirasek draws his theory from the practice of non-formal outdoor educational programmes focused on personal development and targeting mainly adolescents and adults, the outdoor environmental education programme leaders must shape their practice for different aims, participants and educational contexts. Because of this, while some of the programme leaders believe in the importance of providing strong and potentially uncomfortable experiences, they have to provide mostly pleasant and moderate experiences to avoid the frustration of their target students and the teachers accompanying them. In addition, some of the programme leaders may be expressing concerns connected with the risks of pushing students beyond their comfort zones (Brown, 2008).

The belief in the importance of strong experiences in OEEPs may be supported from other perspectives, too, for reasons other than for their possible impact on personal transformation. Some authors have described how children perceive a strong and attractive experience as one containing the elements of adventure or ‘magic’ (Jirasek & Turcova, 2017, 2020; Sobel, 2008; Van Matre, 1990). These experiences allow students to interpret the programme as significant, and they remember them a long time after their participation in the programme (Cincera & Johnson, 2013; Johnson & Cincera, 2015; Wohlers & Johnson, 2003). As a result, this type of strong experience may also increase students’ immediate satisfaction with the OEEP. The formative effect of a significant life experience on shaping humane pro-environmental professional careers has been discussed by Chawla (1999) and others.

There are many authors who could be linked to the programme leaders’ theory of authentic learning. The idea of learning from one’s direct contact with nature, with limited guidance, and providing opportunities for students’ independent, nature-based investigation, can be associated with Sobel (1993, 2008) or Louv (2005). This idea also corresponds with the concept of learning in the ‘real world’, as recommended by many authors (Athman & Monroe, 2001; Lumber et al., 2017; Monroe et al., 2017; Rickinson, 2001; The Real World Learning, 2015; Vos, 2001). Such an experience, alongside a cultural background, is supposed to shape children’s intuitive understanding of nature (Ross, Medin, Coley, & Atran, 2003). In the Czech context, it can be further supported by the work of the Czech outdoor educator Jaroslav Foglar (Jirasek & Turcova, 2017, 2020). The dissonance between the programme leaders’ belief in the idea of authentic learning and their practice in which the direct nature experience is often facilitated with the help of pre-prepared, rather artificial, activities, can be again explained by practical reasons, such as lack of time in multi-day programmes or the expectations of the accompanying teachers (Grace & Sharp, 2000).

The programme leaders’ theory of supportive experiences likely reflects their rather narrow perspective on experiential learning. It is interesting that while the approach observed in the green programme (investigation in nature with follow-up reflection) aligns with the principles of experiential learning (Kolb, 1984; Johnson & Johnson, 2006; Moon, 2005; Prouty et al., 2006), the programme leaders do not associate it with it. The programme leaders’ lack of understanding of the basis of their work may, in the long term, undermine their practice.

To sum up, the antagonistic drivers that can cause cognitive dissonance, as was seen in the case of some of the respondents (Cincera, 2013a; Clayton et al., 2014), include the practical constraints compromising the chance to run the programme in agreement with the leaders’ beliefs (Grace & Sharp, 2000), the contradictory assumptions they hold, and, in some cases, the incongruity of the leaders’ views with the theoretical background of their programmes. To manage this, the programme leaders create synthetic models (Vosniadou, 2013), allowing the co-existence of more, partially contradictory, concepts of experiential learning.

This issue was noticed in most of the observed programmes. Among the most striking findings was the programme leaders’ sceptical (or hesitating) approach towards debriefing sessions, which, in most of the observed programmes, was accompanied by rather inadequate debriefing methods, based on simple ‘learning by doing’ or ‘learning by telling’ approaches (Priest & Gass, 2005). A possible explanation of why some of the

respondents questioned the importance of regular debriefing or why a directive mode of debriefing was applied in some of the observed programmes may be traced to the prevailing teacher-directed tradition of the Czech educational practice. It is possible that the programme leaders are simply influenced by the educational environment in which they grew up (Wideen et al., 1998) and, because of this, they unintentionally prefer strategies highlighting teacher-directed experiential activities to student-directed processes of elaborating on the experiences. To a certain degree, their beliefs may be also influenced by their formal pre-service teacher training, which might not have reflected the requirements of outdoor environmental education, a relatively specialised field.

Our findings suggest that outdoor environmental education practice seems to be rather eclectic instead of being based on particular approaches. Such findings are also likely reflected in the analyses of Grimwood et al. (2018), whose narratives of ‘engaging the space of nature connection’ and ‘creating the space for nature connection’ express what we identified as ‘the theory of authentic learning’, while the narrative of ‘broadening the space of nature connection’ partly corresponds with ‘the theory of transformative experiences’.

However, while these theories may be considered to be complementary in practice, they are clearly contradictory in some of their elements. It is possible that a better integration of the theoretical principles of experiential learning with the programme leaders’ beliefs could, as a result, improve their practice.

Moreover, the identified incongruities between the programme leaders’ conceptions and their practice highlight the need for further discussion of how OEEPs should be shaped and what approaches to support experiential learning may work best, given the limitations imposed by the time constraints, perceived expectations and educational aims of the programmes. We believe that more ‘theories’ may provide sound support for practice; programme leaders may benefit greatly if they are able to identify them, their possible contradictions, incongruities and implications for other elements of programme leadership and programme design. The eclectic approach and the respondents’ tendency to create their own, however contradictory, theories may reflect their need for a theoretical framework suitable for their practice and consistent with the focus of their programmes.

Last but not least, our study provides an example of how the process of ‘translating’ a particular learning theory into another socio-cultural environment may lead to a broad spectrum of the theory’s interpretation by practitioners, and how it may be applied in often contradictory ways. Linguistic and cultural traditions clearly shape the way the local scholars and practitioners think about experiential learning; the outcomes could be considered as both challenging and beneficial. In light of this, it may be argued that any process of inter-cultural sharing of educational theories is a ‘translation’ in which some of the meanings are changed and others are negotiated by local stakeholders. However, our study offers only one possible perspective on this broad and crucial issue.

Conclusion

While all of the outdoor environmental education programme leaders we interviewed believed that experiential learning is an important approach to OEEPs, they differed in their conceptions of what it means to learn experientially and how experiential learning should be facilitated in practice. Moreover, we identified incongruities between the

programme leaders' beliefs and practices and between the beliefs of the different leaders cooperating on leading the same programme (Cincera, 2013b; Fang, 1996). Therefore, while we thought that none of the programme leaders' theories was wrong and each could be used as a basis for a sound OEEP, the lack of congruity may hamper the quality of the programmes provided and it may compromise the effort invested by the programme leaders in the theories' implementation.

Tackling this issue opens an opportunity for new challenges for both theory and practice. Firstly, we assume that one of the reasons for the identified inconsistencies was that the programme leaders were not involved in the process of designing the programme. This assumption calls for another look at the ways in which the programmes are designed. Likely, more involvement by programme leaders would help.

Secondly, we found that programme leaders were not always able to identify the incongruities between their beliefs and practice on their own. In light of this, an elaborated system of in-service programme-leader training focused on developing their competence in reflecting on their practice could remedy this issue.

Finally, critical examination of the experiential learning theories informing the practice of outdoor environmental education programmes might greatly benefit the field. One interpretation of our findings could be that this area of practice lacks a clear and accepted theoretical framework consistent with the area's specific needs. To achieve this, an open dialogue between practitioners and researchers is necessary.

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References

- Athman, J. A., & Monroe, M. C. (2001). Elements of effective environmental education programs. In A. J. Fedler (Ed.), *Defining best practices in fishing, boating and stewardship education* (pp. 37–48). Washington, DC: Recreational Boating and Fishing Foundation.

- Begum, S. (2012). A secondary science teacher's beliefs about environmental education and its relationship with the classroom practices. *International Journal of Social Sciences and Education*, 2(1), 10–29.
- Brown, M. (2008). Comfort zone: Model or metaphor? *Australian Journal of Outdoor Education*, 12(1), 3–12.
- Charmaz, K. (2006). *Constructing grounded theory. Practical guide through qualitative analysis*. Thousand Oaks, CA: Sage.
- Chawla, L. (1999). Life paths into effective environmental education. *The Journal of Environmental Education*, 31(1), 15–26.
- Cincera, J. (2013a). Managing cognitive dissonance: Experience from an environmental education teachers' training course in the Czech Republic. *Journal of Teacher Education for Sustainability*, 15(2), 42–51.
- Cincera, J. (2013b). *Střediska ekologické výchovy mezi teorií a praxí* [Environmental education centres between theory and practice]. Praha: BEZK, Agentura Koniklec a Masarykova univerzita.
- Cincera, J., & Johnson, B. (2013). Earthkeepers in the Czech Republic: Experience from the implementation process of an earth education programme. *Envigogika: Charles University E-journal for Environmental Education*, 8(4), 1–14.
- Clayton, K., Smith, H., & Dymont, J. (2014). Pedagogical approaches to exploring theory – Practice relationships in an outdoor education teacher education programme. *Asia-Pacific Journal of teacher Education*, 42(2), 167–185.
- Cotton, D. R. E. (2006). Implementing curriculum guidance on environmental education: The importance of teachers' beliefs. *Journal of Curriculum Studies*, 38(1), 67–83.
- Dočekal, V. (2012). Prožitkové, zážitkové, nebo zkušenostní učení? [Experiential, experiential, or experiential learning?]. *e-Pedagogium*, 12(1), 3–11.
- Fang, Z. (1996). A review of research on teacher beliefs and practices. *Educational Research*, 38(1), 47–65.
- Fives, H., & Gill, M. G. (2014). *International handbook of research on teachers' beliefs*. New York, NY: Routledge.
- Flogaitis, E., Daskolia, M., & Agelidou, E. (2005). Kindergarten teachers' conceptions of environmental education. *Early Childhood Education Journal*, 33(3), 125–136.
- Forbes, C. T., & Zint, M. (2011). Elementary teachers' beliefs about, perceived competencies for, and reported use of scientific inquiry to promote student learning about and for the environment. *The Journal of Environmental Education*, 42(1), 30–42.
- Grace, M., & Sharp, J. (2000). Exploring the actual and potential rhetoric-reality gaps in environmental education and their implications for pre-service teacher training. *Environmental Education Research*, 6(4), 331–345.
- Grimwood, B. S. R., Gordon, M., & Stevens, Z. (2018). Cultivating nature connection: Instructor narratives of urban outdoor education. *Journal of Experiential Education*, 41(2), 204–219.
- Haney, J. J., Wang, J., Keil, C., & Zoffel, J. (2007). Enhancing teachers' beliefs and practices through problem-based learning focused on pertinent issues of environmental health science. *The Journal of Environmental Education*, 38(4), 25–33.
- Jirasek, I. (2016). Doxa a episteme zážitkové pedagogiky [Dox and epistem of experiential pedagogy]. *Pedagogika*, 66(2), 154–178.
- Jirasek, I. (2020). Transformative experience as a change of horizon. In J. Parry & P. Allison (Eds.), *Experiential learning and outdoor education. Traditions of practice and philosophical perspectives* (pp. 112–129). New York, NY: Routledge.
- Jirasek, I., & Turcova, I. (2017). The Czech approach to outdoor adventure and experiential education: The influence of Jaroslav Foglar's work. The Czech approach to outdoor adventure and experiential. *Journal of Adventure Education and Outdoor Learning*, 17(4), 321–337.
- Jirasek, I., & Turcova, I. (2020). Experiential pedagogy in the Czech Republic. In J. Parry & P. Allison (Eds.), *Experiential learning and outdoor education. Traditions of practice and philosophical perspectives* (pp. 8–18). New York, NY: Routledge.

- Johnson, B., & Cincera, J. (2015). Examining the relationship between environmental attitudes and behaviour in education programmes. *Socialni studia*, 12(3), 97–111.
- Johnson, D. W., & Johnson, F. P. (2006). *Joining together. Group theory and group skills*. Boston, MA: Pearson.
- Kitchenham, A. (2008). The Evolution of John Mezirow's transformative learning theory. *Journal of Transformative Education*, 6(2), 104–123.
- Kolar, J. (2013). *Práce s reflexí u lektorů osobnostně sociálního rozvoje* [The application of reflection by the leaders of socio-personal development]. Brno: Masarykova univerzita.
- Kolb, A. Y., & Kolb, D. A. (2017). *The experiential educator. Principles and practices of experiential learning*. Kaunakakai: Elbls.
- Kolb, D. (1984). *Experiential learning. Experience as the source of learning and development*. Englewood Cliffs, NJ: Prentice Hall.
- Kyung-Ran Kim, & Buchanan, T. K. (2009). Teacher beliefs and practices survey: Operationalising the 1997 NAEYC guidelines. *Early Child Development and Care*, 179(8), 1113–1124.
- Louv, R. (2005). *Last child in the woods: Saving our children from nature-deficit disorder*. Chapel Hill, NC: Algonquin Books.
- Lumber, R., Richardson, M., & Sheffield, D. (2017). Beyond knowing nature: Contact, emotion, compassion, meaning, and beauty are pathways to nature connection. *PLoS ONE*, 12(5), 1–25.
- Martin, A. J. (2011). The dramaturgy approach to education in nature: Reflections of a decade of international vacation school Lipnice courses, Czech Republic, 1997–2007. *Journal of Adventure Education and Outdoor Learning*, 11(1), 67–82.
- Merizow, J. (1997). Transformative learning: Theory to practice. *New Directions for Adults and Continuing Education*, 74, 5–12.
- Monroe, M. C., Plate, R. R., Oxarart, A., Bowers, A., & Chaves, W. A. (2017). Identifying Effective Climate Change Education Strategies: A Systematic Review of the Research. *Environmental Education Research*, 25(6), 791–812.
- Moon, J. A. (2005). *A handbook of reflective and experiential learning. Theory and practice*. New York, NY: Routledge.
- Morris, T. H. (2019). Experiential learning – A systematic review and revision of Kolb's model. *Interactive Learning Environments*, 1–14. Advance online publication. doi:10.1080/10494820.2019.1570279
- Moseley, C., & Utley, J. (2008). An exploratory study of preservice teachers' beliefs about the environment. *The Journal of Environmental Education*, 39(4), 15–30.
- Nikel, J. (2007). Making sense of education 'responsibly': Findings from a study of student teachers' understanding(s) of education, sustainable development and education for sustainable development. *Environmental Education Research*, 13(5), 545–564.
- Organisation for Economic Co-operation and Development. (2009). *Creating effective teaching and learning environments. First results from TALIS*. Paris: OECD publications.
- Pajares, M. F. (1992). Teachers' beliefs and educational research: Cleaning up a messy construct. *Review of Educational Research*, 62(3), 307–332.
- Parry, J., & Allison, P. (Eds.). (2020). *Experiential learning and outdoor education. Traditions of practice and philosophical perspectives*. New York, NY: Routledge.
- Priest, S., & Gass, M. A. (2005). *Effective leadership in adventure programming*. Champaign, IL: Human Kinetics.
- Prouty, D., Panicucci, J., & Collinson, R. (2006). *Adventure education. Theory and applications*. Champaign, IL: Human Kinetics.
- Real World Learning. (2015). *Real world learning model*. Retrieved from <http://www.rwlnetwork.org/rwl-model.aspx>
- Rickinson, M. (2001). Learners and learning in environmental education: A critical review of the evidence. *Environmental Education Research*, 7(3), 207–320.
- Ross, N., Medin, D., Coley, J. D., & Atran, S. (2003). Cultural and experiential differences in the development of folkbiological induction. *Cognitive Development*, 18(1), 25–47.
- Saldana, J. (2015). *The coding manual for qualitative researchers*. Thousand Oaks, CA: Sage.

- Sobel, D. (1993). *Children's special places. Exploring the role of forts, dens, and bush houses in middle childhood*. Tucson, AZ: Zephyr Press.
- Sobel, D. (2008). *Childhood and nature: Design principles for educators*. Portsmouth, NH: Stenhouse Publishers.
- Strauss, A., & Corbin, J. (1998). *Basics of qualitative research: Techniques and procedures for developing grounded theory*. Thousand Oaks, CA: Sage.
- Taylor, E. W., & Caldarelli, M. (2004). Teaching beliefs of non-formal environmental educators: A perspective from state and local parks in the United States. *Environmental Education Research, 10*(4), 451–469.
- Van Matre, S. (1990). *Earth education: A new beginning*. Greenville, WV: Institute for Earth Education.
- Vos, K. E. (2001). Recommended educational practices for youth environmental education from a 4-H youth development perspective. In A. J. Fedler (Ed.), *Defining best practices in fishing, boating and stewardship education* (pp. 157–172). Washington, DC: Recreational Boating and Fishing Foundation.
- Vosniadou, S. (2013). Conceptual change in learning and instruction. The framework theory approach. In S. Vosniadou (Ed.), *International handbook of research on conceptual change* (pp. 11–30). New York, NY: Routledge.
- Wideen, M., Mayer-Smith, J., & Moon, B. (1998). A critical analysis of the research on learning to teach: Making the case for an ecological perspective on inquiry. *Review of Educational Research, 68*(2), 130–178.
- Wohlens, L., & Johnson, B. (2003). A programmatic approach: Purposeful experiences. *Zeitschrift Für Erlebnispädagogik, 23*(5/6), 14–22.
- Yang, G., Lam, C.-C., & Wong, N.-Y. (2010). Developing an instrument for identifying secondary teachers' beliefs about education for sustainable development in China. *Journal of Environmental Education, 41*(4), 195–207.