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Outdoor adventure education in a formal education curriculum in Finland: action research application

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Adventure . . . it is real life,
it is more than life,
it is an experience to know
that life is not too simple a thing!
(a pupil, a boy of 12 years).

Adventure in school culture may seem quite a contradiction. In this paper I will present arguments on the idea that outdoor adventure learning contributes to formal education and is compatible with school practice and goals. This paper is based on research conducted for my thesis. The doctoral degree was completed at Oulu University, Finland, in 2005. The study aims to develop and to enhance outdoor adventure education and experiential learning as an alternative teaching method in formal school culture. The main purpose of the study is, first, to report on implementing outdoor adventure-based education, and, second, to describe the learning experiences of pupils who have undertaken outdoor adventure-based education during a school year (40 weeks) in public schooling. All the pupils were of average intelligence, but they had problems with their behaviour and motivation for learning. The general purpose of the study is to introduce an applied qualitative action-research approach and methodology concerning outdoor adventure education. The research was designed, conducted, and implemented by myself as a teacher-as-researcher to improve teaching in my own classroom culture. The findings and ideas that came up during the research are linked with recent literature on educational reform, which encourages teachers to be collaborators in revising curriculum, improving their work environment, professionalizing teaching, and developing policy. As a qualitative researcher, I am an ‘insider’, who has the chance to participate in the life of the focus group as a member of the group and researcher. At the same time, the teacher as a researcher is the primary instrument for data collection and analysis into a series of representations, including field notes, interviews, conversations, photographs, recordings and memos to the self. The findings of the study would appear to show that the idea of using nature as a context for learning and the development of ecological awareness will be increasingly essential in the future

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challenges of education and that outdoor adventure education can be included in the public school curriculum as a supportive and holistic pedagogic and teaching method, which maintains motivation and well-being in the school day. According to the study, especially for pupils with special needs, it can be implemented as a rehabilitative method without massive costs or resources.

Keywords: *Experiential education; Outdoor adventure education; Erlebnispädagogik; Reflective and constructivist pedagogy; Action research; Qualitative research*

1. Introduction

Concern over the apparent separation between formal education and the real social world and environment has a long tradition, especially among the ages of childhood and adolescence. In fact, the knowledge-focused, effective technological innovations and modernization of formal school education seem to wipe out many valuable issues of humanity in school culture, such as awareness of the self as a member of social and environmental reality. Over the last few years in the 1990s I was concerned about the fact that the things in the formal school education in Finland were not proceeding as the official goals suggested, even though the OECD PISA (Programme for International Student Assessment, 2010) results showed that the Finnish education system scored the highest rates. Schools have traditionally offered pupils a lot of academic knowledge using lectures, textbooks, videos, computers and other kind of mediated lessons as forms of direct instruction to transmit information to students. According to Statistics Finland's Education Statistics (2009) the number of pupils attending part-time special education has grown year by year and, for example, by 1600 in 2009. There are a number of pupils who are not satisfied or who do not enjoy academic schooling without experiential activities, or they have negative motivation and are getting out of the educational path to exclusion. In 1998 I began to plan an idea of implementing new initiatives of experiential education activities, especially an outdoor adventure education type of approach in the formal educational curriculum.

The focus group was my own teaching group ($N=6$, 4–6th graders, boys aged 10–12 years, with social-emotional difficulties classified by school psychologists of the local Social and Health Organization). The research project was conducted during the years 1998–2005. The fieldwork action research cycles of planning, realization, observation, reflection and other data collecting took one school year (40 weeks) in 1998–99. Afterwards, the evaluation, interpretation, analysis of the data, and the writing of the report took 5 years.

In the following sections I will examine the study and take a look at: (a) theoretical backgrounds, purpose and methodology, (b) findings and conclusions, and (c) the limitations of the research.

2. Theoretical backgrounds and purpose

The reason why I chose action research is that I wanted to develop a method of adventure-based outdoor education and change some of the traditional

knowledge-based attitudes and practices in the school culture, but I was unsure how to do it effectively. I started to read literature and to study further and learn more about action research, and joined a follow-up research work group in Oulu University. I studied books on the theoretical basics of experiential education and learning, especially adventure-based outdoor education and its practical solutions and findings, to understand the theoretical backgrounds and its practice better—not only what I was doing, but also the factors that affect what I do and how well a specific intervention was implemented as planned. In general, the present study is both visionary and realistic, a kind of pioneer in the Finnish experiential education concept. Unfortunately, in the late 1990s and the beginning of the year 2000, the ideas of modern outdoor adventure education were remarkably unknown in Finnish culture. However, in the school practice there have always been outdoor physical education activities, which include adventures and experiential learning. In youth work non-formal nature expeditions and outdoor camping culture called ‘erä’ have a long tradition, with a close and deep relationship to nature.

The aim is to generate the understanding of a school classroom group culture through representation of what might be described as ‘rich information’ or the ‘insider’s point of view’ (Lincoln & Guba, 1985, pp. 294–298). According to MacLean and Mohr (1999), traditional educational researchers are considered to be objective outside observers of classroom interaction. However, when teachers become teacher-researchers, the traditional descriptions of both teachers and researchers change as they raise questions about what they think about and observe in their teaching and their pupils’ learning.

In the present research the data was largely based on interviews, discussions, observer notes, logs and daily diaries. The conversations on the discussions and reflections afterwards with the focus group were recorded on tape. Field notes, observations and tape recordings were written down as narrations or stories, and analysed by using the method of analytic induction (section 3.6). Later, the findings were categorized and the outcomes were presented in thick, rich descriptive language that vicariously puts the readers in the heart of the actual situation, and gives them the responsibility for interpretation and transferability (Priest, 1999b, p. 21). The data collection process was done during the school day as part of the ordinary day curriculum or lessons. The reflection of each adventure session was easy to include in the formal day schedule: for example listening to others, communication and conversations about the experiences were part of language, history or science lessons. The additional data was to be found in items such as unpublished school-documents, written memos of meetings with parents, unusual behaviour, acting-outs or drawings. Using these data sources as a foundation, the ethnographer relies on a cultural frame of analysis. This can be achieved through participative observation, which simultaneously combines documentations, interviews of the informants, field notes of direct participation and observation, and introspection (Guba & Lincoln, 2005a, p. 105).

In this paper I will present arguments on the idea that outdoor adventure learning contributes to formal education, and is compatible with school practice and goals. The purpose is to describe and examine the idea by reflections and experiences of

the pupils. The question is: How do pupils experience outdoor adventure teaching, and what impact will outdoor adventure activities have on pupils of school age?

3. Methodology, collecting data and analysis

In the research process I collected the findings, data and information through several sources of data, as Kemmis and McTaggart (2005) have proposed. The action research includes the elements of the process of qualitative research design, previous literature concerning outdoor adventure education, participatory action research, triangulation, participant observation, documents, field notes, structured interview, unstructured interview and, finally, inductive analysis of documents and material. In the social sciences, *triangulation* is often used to indicate that more than two methods are used in a study with a view to double (or triple) checking results. One of the commonest forms of triangulation is to combine interviews with observation. Observation will test and fill out accounts given in interviews, and vice versa (Denzin, 1978). In the present study I used a combination of (a) field notebook, (b) participatory observation, and (c) interviews:

A lot of research data has been obtained from the field diary notes (123 pages), the written work of the pupils (59 pages), and from the private school documents concerning the pupils. Also the literature dealing with adventure and experiential pedagogy is a part of the research data (mainly in German and English), plus the source material. After recording all the interviews (10 tapes x 60 minutes), I transcribed the tapes so that, in all, there are 28 pages of text from the focus group to classify and categorize in the inductive analysis (Field book, p. 90; Karppinen, 2005, pp. 102–104).

3.1. *Review of literature*

This study aims at enhancing the understanding of outdoor adventure education as an alternative teaching method in school. I examine the adventure outdoor experiences, narrations and ‘voices’ of the pupils from pedagogical and experiential education perspectives, trying to present these outcomes in a way that the reader can personally identify with and, consequently, apply to their own situation (Priest, 1999b, p. 21). The main theoretical concepts to develop my arguments and to support the research are based on experiential learning and experience-based pedagogical approaches. In constructing analogies, abstractions, concepts, hypotheses, and theories from details, it was fundamentally necessary to reflect and draw comparisons between outdoor adventure literature and practical research findings (Miles & Priest, 1999; Priest, 1999a). Unfortunately, it was hard to find any corresponding and trustworthy academic research studies dealing with adventures or adventure education evaluation and its outcomes. McKenzie (2000) has found that most of what is accepted as important to the process of achieving outcomes is based on theory, not research. Surprisingly many of the past research studies on outdoor adventure education have had a poor design and lack of rigour as Priest (1999b) points out: ‘research has jumped to the upper levels of attempting to predict changes in human

behavior and trying to “prove” that these changes are caused by outdoor adventure’. According to Priest, the pattern of sequential enquiry process is not being followed (to the extent it should be) in the field of outdoor adventure. He adds that ‘treating the outcomes as gospel has the potential to harm the profession by incorrectly communicating results in the popular literature’ (Priest, 1999b, pp. 14–16).

However, there was no problem in finding literature, handbooks and information concerning qualitative research and methodology or any type of action research processes (Carr & Kemmis, 1986; Denzin & Lincoln, 2005). In the 1990s, it was a more challenging task to find literature dealing with concepts such as experiential education, adventure education or outdoor education, or Kurt Hahn’s *Erlebnistherapie*. Prouty (2007, p. 6) states that even though the history of modern adventure education begins with Kurt Hahn, in addition, there are many others before and after him, who have helped the field to embrace active learning as the natural centrepiece of any good educational experience. In fact, Hahn has been quite an unknown developer in the reform-pedagogical literature or progressive movement in the 1920s, no matter how famous he is for his *Landerziehungs* schools in Salem, Germany, and, later, for the Outward Bound Institute in Scotland (Heckmair & Michl, 2002, pp. 24–25; Karppinen, 2005, pp. 28–34; Scheibe, 1999, p. 112). An interesting detail is that Kurt Hahn stated ‘*Die Pädagogik soll die Hindernisse nicht beseitigen, sondern nur überwindlich machen*’ (Education is for not avoiding risks, but for making them to be conquered) (Hahn, 1958, p. 9). In his alternative school principles he hardly ever mentions educational solutions of ‘Learning by doing’ or of Dewey’s book *Experience and Education* (1937/1951). Unfortunately, no books (on adventure outdoor education or *Erlebnispädagogik/therapie*) were published in Finland and/or in the Finnish language at the time the present study was carried out in 1998–2005. Today in 2010, the situation is better with more and more publications and studies available even in our own language. It was possible to get acquainted with literature and publications in English and German. Translating ideas and meanings from English or German interpretations into Finnish had to be done carefully as the concept is strongly linked with languages, semantics, cultural realities and social constructions (Berger & Luckmann, 1995). A presentation of Darst and Armstrong (1991) was a useful book with ideas about how to use ‘low risk adventure activities for school education’. In this book I found many realistic and practical activities to use in the formal school education with my pupils. According to them, if the low-risk experiences of outdoor education could be modified to fit within the more traditional school curriculum, it would add great value to the educational system (Darst & Armstrong, 1991, pp. 3–4, 44).

It appeared to me that most outdoor adventure learning basics and backgrounds are to be found from the ideas of progressive and reform pedagogical movements around the years 1890–1933 (Oelkers, 1996; Reiners, 1995; Scheibe, 1999, pp. 116–117). I found two main pedagogical approaches—the German semantic concept of *Erlebnispädagogik/Erfahrungslernen* and the English/American semantic concept of Experiential Education/Learning—which have theoretical basics to understand outdoor adventure (Kolb, 1984; Heckmair & Michl, 2002, pp. 87–104). It is worthwhile reviewing the literature concerning ‘emotional experience’ (in

German: *Erlebnis*) and ‘experiential learning’ theories. To find out the theory of experience is challenging, as a matter of fact, because the meaning of ‘experience’ has different definitions in English, German and Finnish, and their semantics. According to Hopkins and Putnam (1993, p. 87), *Experience* has a ‘problematic nature’, as it is a general concept that comprises knowledge of, or skill in, or observation of something or some event gained through involvement in or exposure to that thing or event. The German terms *Erlebnis* or *Erfahrung* are often translated into English as ‘experience’, and have a slightly different implication, referring to the coherency of experience of life or mental experiences (Heckmair & Michl, 2002, p. 89). In Finnish, ‘experience’ can be translated as ‘*elämys*’ (emotional, either conscious or unconscious experience), and ‘*kokemus*’ (experience that has a constructed meaning).

One of the most important basics of the study is based on John Dewey’s ‘Learning by doing’ process applied to outdoor adventure education. Dewey says that once we have a theory of experience, then as educators we can set about progressively organizing our subject matter in a way in which it takes account of the pupils’ past experiences, and then provides them with experiences which will help to open up, rather than shut down, a person’s access to future growth experiences, thereby expanding the person’s likely contribution to society (Dewey, 1937/1951).

Another theoretical concept to support the research is based on experiential learning processes applied by Kolb (1984), who suggests that there are four stages in learning which follow from each other: Concrete experience is followed by Reflection on that experience on a personal basis. This may then be followed by the derivation of general rules describing the experience, or the application of known theories to it (Abstract conceptualization), and hence to the construction of ways of modifying the next occurrence of the experience (Active experimentation), leading in turn to the next Concrete experience. Breaking adventure outdoor learning processes down into ‘steps’ or stages is complicated and problematic to understand, because activities and experiences often include elements of danger or risk and uncertain outcomes (Ewert & Garvey, 2007, p. 22). The processes of teaching or ‘holistic’ learning especially in the adventure outdoor education are complex, including many uncontrollable variables, social-emotional feelings, constructions and reconstructions, interpretations, misunderstandings or definitions to be planned beforehand (Boud, Cohen, & Walker, 2000, pp. 8–17). For example, according to Berger and Luckmann (1995, pp. 48, 68), people construct their reality through language and its interpretations, which provide the fundamental superimposition of logic for the objectivated social worlds.

However, I think in the present study it was useful to understand the idea of the experiential learning model, so that one can better understand, evaluate or test out, and make use of the main components.

3.2. *Qualitative research design*

According to Denzin and Lincoln (2005), qualitative research—generally—is a situated activity that locates the observer in the world. It consists of a set of interpretive, material practices that make the world visible. They turn the world into a series of representations, including field notes, interviews, conversations, photographs,

recordings and memos to the self. As a qualitative researcher, I am primarily concerned with the outdoor adventure learning *process*, rather than its outcomes or products. I am interested in *meaning*, for example, how the participants in the focus group make sense of their lives, experiences, and the structures of their world. The qualitative researcher is the *primary instrument* for data collection and analysis. The data are mediated through this human instrument, rather than through inventories, questionnaires, or machines. Finally, according to Denzin and Lincoln (2005), qualitative research involves *field work*. I, as a researcher, physically go into the classroom, to meet the pupils or the school institution to observe their behaviour or record their voices in their natural setting. Qualitative research is *descriptive* in the sense that the researcher is interested in the process, meaning, and understanding gained through texts, words or pictures. The process of qualitative research is *inductive* in the sense that the researcher builds abstractions, concepts, hypotheses, and theories from details (Denzin & Lincoln, 2005; Guba & Lincoln, 2005b, pp. 191–215; Lincoln & Denzin, 2005). In the next section I take a look at the action research cycles.

3.3. *Participatory action research*

According to Carr and Kemmis (1986) action research is simply a form of a self-reflective enquiry undertaken by participants in social situations in order to improve the rationality and justice of their own practices, their understanding of these practices, and the situations in which the practices are carried out (pp. 162–165). Participatory action research can be defined as ‘*collective*, self-reflective enquiry undertaken by participants in social situations in order to improve the rationality and justice of their own social ... practices’ (Kemmis & McTaggart, 2005, pp. 567–605). What we can see here is an approach to research that is oriented to problem solving in social and organizational settings, and that has a form that parallels with Dewey’s conception of learning from experience (Dewey, 1937/1951). At the simplest level, action research involves a spiral or cycle of 1a. Planning; 2a. Action; 3a. Observation/Monitoring; and 4a. Reflection—1b. New planning; 2b. New action, etc. (Kolb, 1984, pp. 26–38, inspired by the work of Kurt Lewin, 1946). In the following there are simple examples of the four Lewinian cycles/phases in action (Karppinen, 2005, pp. 99, 103–104).

3.3.1. *The first cycle (Action research & Experiential education/Adventure outdoor education)*. 1a. *Planning* (Week 33): August 15th, 1998 I started to plan the research project, I joined the university work group and presented the ideas to the tutor-professor. 2a. *Action*: The next day at school: I assessed and evaluated the pupils and their abilities to do outdoor activities, I introduced my ideas of getting outdoors in the afternoon, together we planned small activities (to be done) outside the school, went walking as a group in a park near the school, returned back to the classroom after a 1 hour walk. 3a. *Observation* & 4a. *Reflection*: In the classroom we briefly discussed: (1). What was done/Who did well? What animals/birds/plants did we see?

Who acted wrong? (2). So what? If we listen to the teacher, we can do more exciting things in the park . . . (3). Now what? The next time, let's go out and follow our rules . . . During the week I made participant-observations, notes and memos in real situations as one of the group, I created short stories for later use of the days of this week, reading books (Karppinen, 2005, p. 103).

3.3.2. *The second cycle (Action research & experiential education/Adventure outdoor education)*. 1b. *New planning* (Week 34): During the research process, I've noticed that all representations of the action research process on paper are too simplistic. It was clear to me that in reality school life is too complex and things rarely go as planned. Indeed, although action research may start with a carefully planned action, the nature of the process makes the outcomes uncertain. The enquiry can deviate from its original path as these aspects are explored. A flexible and diplomatic attitude towards focused pupils and their actions is important. This week I started with new planning: what kind of adventure activities would be suitable for 10- to 12-year-old boys who have a certain type of behavioural difficulty, like poor concentration or ADHD? What are their special needs or self-concepts; how long could these activities last; how is it possible to integrate experiential education into the curriculum, etc. 2b. *New action*: This week we decided to take a rope with us. We walked to the park and tied the rope between two trees, there was running water under the rope. We climbed on the rope back and forth, many times . . . 3b. *Observation &* 4b. *Reflection*: We returned back to school to make a short reflection: (1). What did I/we do in the park? Who did fine? (2). If you do not hold on to the rope, you can get wet, right? So how must you do it? (3). The next time we will do it with the eyes blindfolded; how does it feel to be blind? How can you manage without seeing? How important are the eyes to us? Feeling good, having all the senses work, right? During the week I made participant-observations, notes and memos in real situations as one of the group, I created short stories for later use of the days of this week, reading research books (Karppinen, 2005, p. 104).

3.3.3. *The third cycle . . . (continuing for 40 weeks altogether)*. According to Stringer (1999) the action research process works simply through three basic phases: *Look*—building a picture and gathering information. When evaluating we define and describe the problem to be investigated and the context in which it is set. We also describe what all the participants (educators, group members, managers, etc.) have been doing. *Think*—interpreting and explaining. When evaluating we analyse and interpret the situation. We reflect on what the participants have been doing. We look at the areas of success and any deficiencies, issues or problems. *Act*—resolving issues and problems. In evaluation we judge the worth, effectiveness, appropriateness, and outcomes of those activities. We act to formulate solutions to any problems (Stringer, 1999, pp. 18, 43–44, 160):

I wrote down all the memos and notes in the field diary during the day. Especially the issues that were linked to adventure activities' (Field book, p. 93).

There were so many things and actions in the school days which interrupted the spiral cycle planning for adventure action . . . I agree with Kemmis and Taggart (2005) as they point out that in reality, the process did not go as easily as the spiral of self-contained cycles of action research planning, acting and observing, and reflecting would suggest. The stages overlap, and initial plans quickly become obsolete in the light of learning from experience (Field book, p. 88; Karppinen, 2005, p. 99).

In the present study the values of action research and participatory observation are, first, that it was possible to carry out the evaluation, reflection, self evaluation and, second, that it could also provide the evidence to justify rapid changes in the present actions. It was easy to improve the outdoor activities or change irrelevant practices.

3.4. Participatory observation

Participatory observation is a field strategy which simultaneously combines document analysis, interviewing respondents and informants, direct participation and observation, and introspection. In this study the observation is easy to link to everyday school life as I have a good relationship with the students, having taught them in the same school for many years. Here are examples of the memos which I made of weeks 36, 41, 2, 6, 8, 16 and 17 during the research project:

(Week 36: August–September). Trekking & walking in small islands & rope climbing: ‘We tied a rope on the trees next to the stream/brook and climbed across the flowing canal. The rope was attached at the height of 1 metre, so the task of crossing demanded concentration. The water flowing underneath gave the situation a feel of reality and danger’ (Field book, p. 108).

(Week 41: October). Reflection in class: On Monday we reflected on the field trip of the previous week. We tried to learn the place names, the route we took, the features of the terrain, the incidents and events, and our behaviour in nature, which we once more evaluated together (Field book, p. 112).

(Week 2: January). Winter walking in very cold weather. As it is very cold, we do not talk much but we try to get to the destination quickly. Our cheeks and fingers are freezing (Field book, p. 117).

(Week 6: February). Two fathers joined us on the adventure excursion. In the wintry terrain we had a great opportunity to trek in the snow drifts, do tobogganing/sliding downhill, make a fire and sit by it and get warm, barbecue sausages and ski in really spring like sunshine. The pupils see that the teacher and the fathers are ‘in the same boat’ (Field book, p. 123).

(Week 8: March). Walking in the snow & observations of the snow: We took samples of the snow, ice and slush, which we put to melt in containers in the classroom. The next day we measured the liquid content and filtered the samples through coffee filter paper to find impurities. We had interesting results of the states of water, the density of substances, and environmental pollutants. This was real environmental education! (Field book, p. 120).

(Week 16: April). Bird expedition: We started to observe migratory birds, which are returning back to Finland from Africa. In the park we had binoculars with us, and we went close to the seashore.

(Week 17: May). Flora and fauna: It is May and soon the swallows will be flying in the sky. Yellow flowers are blossoming and the grass is getting thick and all nature turns green (Field book, p. 107).

These memos were compared together with the observation, reflective discussion and interviews.

The observation of adventure education activities and the focus group almost always took place outdoors, which caused problems in recording the phenomena and events. Preferably there should have been at least a recording device or another team observer. In practice it does not seem to be possible to write everything down at the very time things happen.

3.5. Interviewing, individual /group

Interviewing involves gathering data through direct verbal interaction between individuals. In the present project the individual interviews were conducted between myself and each student. As the focus group was under 10 persons, a group interview would be a more natural method to gather information, which is essentially a qualitative data-gathering technique that relies upon the systematic questioning of several individuals simultaneously in a formal or informal setting. In a group interview, the interviewer directs the enquiry and the interaction among respondents in a very structured fashion or in an unstructured manner, depending on the purpose of the interview (Fontana & Frey, 2005, pp. 651–652). In the present research I group-interviewed the pupils three times altogether: once at the beginning of the fall semester, once in the winter season, and the last time in the spring semester, just at the end of the school year. The interviews were recorded and transcribed, the data was then analysed by drawing out the general themes that emerged. Each interview took 15–30 minutes.

A few of my pupils were able to answer my questions briefly. Some were quiet and unable to say much, if anything. The linguistic skill of expressing oneself was rather terse and scanty when it comes to boy pupils. Therefore it was essential to try and activate them to speak about the events of the adventure, their feelings and behaviour, that is, to verbalize their thoughts. After about 15 minutes, concentration was difficult. The individual interviews took place in the school library, and the group interviews in the classroom during a lesson (Field book, p. 96).

Here is an example of a group reflection, which was recorded. The interview concerning outdoor adventure learning experiences was tape-recorded in the classroom during reflective discussion next day after a whole-day expedition to a forest (Group Interview 8):

- Teacher:** *'Let's think, all together, what good adventure learning includes'.*
- Jari: It is a long trip, a great moment and a long trip . . .
- Jarmo: Sausage! Yes! Outdoor picnic . . . excitement and risks . . . My stomach wants more food!
- Sauli: and expedition . . . weak/thin ice and coca-cola . . .
- Jari: Yes exactly/that's right, when we saw an otter in the bush.
- Jarmo: —no, no it was a lemming!
- Jari: OK. Yes, we saw a lemming . . . and he bit your toe . . . right?
- Sauli: Surprises and turn ups . . . they belong to adventure!
- Jari: And sudden risks . . . which turn up accidentally.
- Jari: Yeah! And not all the surprises are neat! They might be real nasty . . .
- Jarmo: It is great that there are sudden surprises
- Jari: What adventure is that out there in the forest, you'll meet difficulties, but you will get through them.
- Tommy: And it is great that you start laughing in the end . . . (Group Iv8).

The themes that emerged were compared to personal documentations made by participation observation and field documents. The themes of the interviews were: (a) experiences of learning, (b) one's own development, (c) one's own behaviour, and (d) behaviour in a group and skills of co-operation/co-operative skills. The informal interview took place during the lesson, and the session was recorded. During the interviews the pupils improved their skills of concentration and communication. The interview situation was a part of the cycle of the activity research, in which adventure activity was reflected upon. The analysis can be compared to the process of experiential learning (Fontana & Frey, 2005).

3.6. Analysing the data: analytic induction

The analysis of the research data consisted of the analysis of participating observation and inductive interviewing. The field notes gathered through participating observation and the analysis of interviewing the focus group pupils complied with the so-called classification of analytic induction (Erickson, 1986, pp. 148–149).

Analytic induction is a formal, non-quantitative method for building up causal explanations of phenomena from a close examination of cases. The method is a formal kind of negative case analysis. The technique can be described in a series of steps: (1) First define a phenomenon that requires explanation and propose an explanation. (2) Examine a case to see if the explanation fits. If it does, then examine another case. An explanation is accepted until a new case falsifies it. When a case is found that does not fit, then, under the rules of analytic induction, the alternatives are to change the explanation (so that you can include the new case) or redefine the phenomenon (so that you exclude the nuisance case). Ideally, the process continues until a universal explanation for all known cases of a phenomenon is attained. Explaining cases by declaring them all to be unique is a tempting but illegitimate option (Hammersley & Atkinson, 1990, p. 174).

4. Findings

In this section I will first take a look at the research process. After that, I will discuss education based on outdoor adventure as an alternative educational approach in the formal education curriculum. I will describe some of the focus group's educational and developmental experiences captured during the course of the study (40 weeks). These narrations and actual voices of the pupils were tape recorded after adventure activities in the classroom in 1998–1999. These outcomes are presented in this way to allow the reader to personally identify with the experiences and so relate them to their own situations (Priest, 1999b, p. 21).

4.1. Research process

As the focus group only consisted of 6 pupils and the duration of the study was 40 weeks, it was practical to use an application of the action research, and include several sources and elements of collecting data (Kemmis & McTaggart, 2005). Through triangulation it was possible to combine interviews and a weekly diary with observation and test, and fill in the accounts given in interviews, and vice versa (Denzin, 1978; Karppinen, 2005). The additional data was to be found in items such as unpublished school documents, written memos of meetings with parents, unusual behaviour, acting-outs or drawings. Using these data sources as a foundation, the ethnographer relies on a cultural frame of analysis. This could be achieved through participative observation, which simultaneously combined documentations, interviews of the informants, field notes of direct participation and observation, and introspection (Guba & Lincoln, 2005a, p. 105).

The first finding was the recognition of how important it is to provide evidence that experiential education and outdoor adventure education are more than just fun and games, and to understand the evolution of the concept of outdoor adventure education (Priest, 1999b, p. 16). In the present study the adventure activities were mostly low-risk adventures (Darst & Armstrong, 1991, pp. 3–4), which it was possible to include in the formal curriculum, such as physical education. The reflection of each adventure session was easy to include in the formal day schedule: for example, listening to others, communication and conversations on the experiences were part of language, history or science lessons. It was possible to offer participants a broad spectrum of psychological, physical and emotional outcomes that could not be achievable in traditional forms of education (Ewert & Garvey, 2007, p. 22). In the present study the outdoor adventure education concept was a broad combination of 'Adventure education' (Ewert & Garvey, 2007, pp. 21–22; Kraft & Sakofs, 1985; Priest, 1999a; Prouty, 2007, p. 4); and *Erlebnispädagogik* (Hahn, 1958; Heckmair & Michl, 2002, p. 90; Reiners, 1995, p. 15). In Finland we have our own rich adventure traditions based on the mythology of Finland's national epic Kalevala (1828/1922/2005), and in the nature-centric way of living in the wilderness called *erä*, which derives from the Nordic Stone Age, but which did not have the definition of 'Adventure education' until recent years (Telemaki & Bowles, 2001). All these concepts were integrated

intentionally with the general Finnish school education. In Finnish, adventure education is translated as (and called) *seikkailukasvatus*, and has become a useful and a practicable word, as *seikkailu* means adventure, and *kasvatus* means education in English (Karppinen, 2005, p. 24).

However, being culturally situated I found that there are some semantic details, confusing definitions, interpretations or misunderstandings concerning ‘experience’ and outdoor adventure education (Telemaki & Bowles, 2001). For example, to make an emotional experience conscious, I needed reflection that was based on language, and according to Berger and Luckmann (1995), social reality is constructed by language. The findings of the study would appear to show that the ‘Learning by doing and reflecting’ concept of Dewey is the most useful method to understand the process (Kolb, 1984, applying Lewin, 1946), which is based on the belief that learning is a result of direct experience, and includes the premise that persons learn best when they have multiple senses actively involved in learning (Kraft & Sakofs, 1985). As the focus group had behavioural problems and social-emotional difficulties, it was important to use multilevel and deep reflection in the ‘Learning by doing’ process (Gass, 1991). The reflection was a great way of learning to use language and verbal expressions, as well as listening to and concentrating on others.

4.2. Low risk outdoor adventure education and school curriculum—experiences and reflections of outdoor adventure learning and activities in formal school education

4.2.1. The focus group. The pupils were asked to reflect on their experiences concerning adventure-based activities outside the classroom and to consider whether they had in any way impacted upon their lives or motivation of developing themselves or going to school. A difficulty was that some of the boys were avoidant personalities and did not discuss fluently, or had a negative attitude: ‘some peers can’t concentrate outdoors . . . it is sad, because they destroy our happy walking . . .’ (Jari 98). ‘I didn’t really learn much (knowledge) (because of no books) . . . I didn’t actually learn anything (academic)!’ (Tommy 98). So I had to find ‘key informants’ to help their classmates to express feelings or emotions:

Only a couple of the pupils were linguistically fluent. They were the ‘key informants’, who gave me a lot of information about the meaning and, on the other hand, problems of adventure activities. I had intensive discussions with them, and together with the pupils we planned new adventures challenging enough to the neighbouring areas. Sometimes I asked the pupils’ fathers to join us on the excursions, and they revealed entirely new positive aspects both of adventure activities and their children (Field book, p. 89).

Teaching in adventure education differed from traditional subject and teacher oriented classroom teaching in the respect that, together with the teacher, the pupils had to participate in planning and realizing the process. During the adventure activity they gained experiences, which were discussed and reflected upon after the event. The themes and study sessions based on the discussions are the implements of reflective teaching and learning. The activity and act were given a verbal form. Some pupils found it difficult to give the experience in the form of a thought, idea, singular words

or meanings. Expressing one's own feelings was hard, and nobody was forced to speak about their experiences or secrets in the presence of others on such occasions.

4.3. Reflections of outdoor adventure experiences. In the present study outdoor adventure approach is, in school context, regarded as learning, training, education or even rehabilitation. As Gass (1993, p. 4) suggests, 'Experiential learning is predicated on the belief that change occurs when people are placed outside positions of comfort (homeostasis) . . . and into states of dissonance. In these states, participants are challenged by the adaptations necessary to reach equilibrium. Reaching these self-directed states necessitates . . . resultant growth and learning'. A pupil describes outdoor adventure education in the following words:

Adventure brings excitement to life . . . if you sit bored at the classroom desk and just wait and wait . . . the teacher is 'jabbering and babbling' and asking what two plus two is. But as you get outdoors and meet some risks . . . it is real life, it is more than life, it is an experience to know that life is not too simple a thing! (Sauli, Group Iv8).

To this young man the most meaningful experience from adventures is to learn to know himself and the realities of his life. Also for Hopkins and Putnam (1993, p. 81), the dissonance is the key, as high impact activities are consciously used to focus and broaden the gap between past and future experience. They add that most learning occurs by gaining a series of perceptions or insights. These are usually accommodated into learners' overall view of the world or frame of reference.

However, outdoor adventure activities have a holistic impact, and are made to increase multi-dimensional learning experiences and transfer into everyday life, as they should be carried out to contribute to personal growth like the concept of the self and self-esteem. As students pointed out:

It is great to get outdoors from the classroom, as there we learn all . . . all kinds of things . . . everything possible . . . I feel well and released, when I get outdoors . . . (Jarmo 98).

My concentration has become better . . . this [Outdoor Learning] makes my school days more interesting . . . I got interested in learning more (Tommy 98).

Ewert and Garvey (2007, p. 28) suggest that the process of experiencing and working with others in an adventure education setting helps participants to gain insight into why co-operation is necessary for group success. This is supported by a student's comment: 'I have learned to trust myself . . . It makes me understand my mates better . . . I can show I can help the others of my peers who were not real good friends to me . . .' (Jari 98). The students of the focus group got into a crisis, which could only be solved by decision. The action which follows the decision will show whether the decision will be approved of or failed. According to Becker (2008, p. 209) the adventure can be described as a chain of crises, caused by resistance and decisions. He suggests two points, (1) the 'vicarious interpretation', to avoid situations in which problems (for example, emotional disturbances) cannot be solved autonomously, and (2) the management of manifested crises as the key point, which make it necessary to professionalize outdoor work. By this he means outdoor pedagogical skills. One of the

most visible and advertised outcomes of adventure education programmes is personal growth, which has been characterized as changes in construct such as self-concept, self-esteem, confidence and personal motivation stated by Ewert and Garvey (2007, p. 29). They add that these outcomes have been measured with a variety of self-report instruments administered before, during, and after an adventure experience. In these comments the student has discovered a better feeling and new motivation: 'My head (mental feeling) has become happier and more joyful . . . After being outdoors I can do more work indoors (classroom)' (Sauli 98). There was conscious guidance towards emotional growth and social activity, as competition was not encouraged in the tasks. The pupils could make use of their own metacognition, i.e. their conscious ability to steer their own process of learning at their own level. With the help of participating observation the improvement of physical condition and skills plus steering the use of power into correct activity was clearly to be noticed: 'My feet power and hand power have got up/grown/increased . . .—appetite grows after the action lessons, then I eat a lot . . .' (Jarmo 98).

With this, one can learn self-confidence, concentration, self-control, and trust in others. The appreciation of the environment and nature became self-evident to everybody because all the pupils enjoyed being in nature and being free. After the adventure excursion the mind was calm and without stress (Karppinen, 2005).

Kraft and Sakofs (1985) outline several elements inherent to experiential education process (Kolb, 1984). (1) The learner is a participant rather than a spectator in learning. (2) The learning activities require personal motivation in the form of energy, involvement, and responsibility. (3) The learning activity is real and meaningful in terms of natural consequences for the learner. (4) Reflection is a critical element in the learning process. (5) Learning must have present as well as future relevance for the learner and the society in which he/she is a member. 'I feel I've developed myself, I don't know . . . in the beginning it didn't work . . . then I pulled myself together . . . I trusted myself and pushed on . . . many times I went thru . . . I felt released' (Tommy 98). According to the findings in adventure one learns to try and make an effort, and managing the hardships demands physical strength. The calming and empowering feeling is that of succeeding, surviving. In adventure you will see nature, animals in their own habitat. Nature and the environment are regarded as important. Adventure does not have to be anything grand, and it can take place in other surroundings than nature, but usually adventure is associated with happening in nature, not in a constructed environment (Karppinen, 2005).

As Boud, Cohen, and Walker (2000, pp. 8–17) point out, the process of experiential teaching is a complex process and learning from experience includes multilevel personal and social learning concepts. Dewey's (1937/1951) learning by doing-process is also a complex and a holistic teaching approach and task in schooling, as the outcomes in the reflection are more unpredictable compared to traditional teaching. In the school it is difficult to distinguish and categorize adventure education in exact programmes, such as recreation, developmental, educational or therapeutic goals, as this pupil tells: 'I learn many things, I cannot specify ... It gives good action in life—it doesn't make any sense to sit indoors and listen to the teacher' (Jari 98).

Priest (1999a) asserts that one adventure programme can deliver all four types of programming: recreation, education, development and psychotherapy. The key element in making school ‘adventurous’ is the teacher, who, in the field of adventure education, is commonly referred to by titles such as leader, facilitator or instructor (Karppinen, 2005). After an activity this student has noticed the risk-elements of a rope-climbing: ‘I don’t know . . . I try not to be careless anymore . . . otherwise I’ll get wet . . .’ (Jari 98). Ewert and Garvey (2007, p. 31) maintain that the ability of adventure educators to design activities that improve group performance is remarkable, as a trained educator can help the group metaphorically become more successful when returning back to everyday life. As a teacher-researcher, I planned—often together with my students—activities with uncertain outcome, sudden resistance, unforeseeable conditions, risk, inescapable consequences, energetic action and willing participation. After activities the reflective discussions were made to contribute to developmental and learning transfer into real life.

The findings suggest that formal school is not the right place to practice high-risk adventures, which induce situations too risky for the pupils. However, according to Becker (2008, p. 207) every decrease of the adventurous situation reduces its strangeness, its uncertainty and its resistance. At the same time it will lose its educational power. On this I agree. To avoid this problem I started the process logically from simple and easy activities toward sophisticated and more ‘challenging’ situations and experiences (Csikszentmihalyi, 2005, pp. 74–75). The adventure activities were authentic, creative and sensitive, even therapeutic, not ‘standardized’ programmes. Outdoor adventure activity-sessions were carried out 1–3 times weekly in the afternoons after the lunch break. Each outdoor learning session (including outdoor activity + reflections afterwards) took 2–3 hours per day including subjects such as sports, arts, science, languages, mathematics or history. In the process-based teaching and learning I used ‘metaphoric transfer and the mountains speak for themselves-approaches’ (Priest, 1999a, pp. 237–239). In climbing, abseiling and canoeing there was a professional adventure education team partner or youth worker helping me. All the activities took place in nearby localities and neighbourhoods around the city of Oulu in Northern Finland.

4.4. *Low-risk activities throughout the year*

Trekking in a nearby park, outdoor rope climbing, orienteering in a forest, outdoor swimming, kayak paddling, first snow activities, expedition to a forest, outdoor open fire & picnic lunch, visiting a greenhouse, wall-climbing, visit to a church, projects at a museum, projects at a library, walking in a forest, winter walking on natural ice on the sea, cross-country skiing, skating outdoors, ice fishing, sliding downhill/tobogganing, short expeditions in nature, bicycle tour, bird-watching, flora and fauna expedition (Field book, p. 105).

Hopkins and Putnam (1993, p. 94) suggest that these steps are important to remember when designing adventure activities or programmes: (1) Assess the needs

of the client, (2) Define activity objectives, (3) Develop the activity, (4) Run the activity, (5) Review the activity with participants, and (6) Continue to monitor the implementation of the activity. The learning environments were outside the classroom, in nature (field, marsh/bog, meadow, park, banks of a creek, river, seashore, place to make an open fire, path, rock/cliff, wilderness, snowy forest, ice on the sea). Sometimes the learning environment was a local museum, greenhouse or library. The natural environments were found in the close neighbourhood, and neither time nor money needed to be spent on travelling and getting to places. In different learning environments the pupils were to deal with challenging tasks and problems, in their own way and by using their own power of deduction (Karppinen, 2005; Field book, p. 106).

5. Conclusions

5.1. Reflective, constructivist pedagogy and experiential learning

In the reflection of outdoor adventure education the participants create their understandings by constructing and reconstructing knowledge out of their experiences. Constructivism is associated with active learning, such as learning from experience or learning by doing (Dewey, 1937/1951). According to Resnick (1989) the general sense of constructivism is that it is a theory of learning or meaning making, that individuals create their own understandings on the basis of an interaction between what they already know and believe and ideas and knowledge with which they come into contact. Learning is a four-phase/stage process that entails planning, realizing, reflecting, giving a meaning, new planning, new realizing and so on to the next phases or stages as Kolb (1984) suggests (Section 3.3). With the help of discussing interaction and verbalizing, new experiences gain meaning that build into learning experiences in the mind of the participant. By reflecting the activity and acts together with the teacher or the group it is possible to build new awareness of the self, the social group and the surrounding reality. Adventure education is an *experiential* practical teaching method in which adventure and adventure activity are used to give the individual experiences of being successful and managing things/surviving, from which growth and learning are guided in the direction hoped for (Boud, Cohen, & Walker, 2000, pp. 8–17; Kolb, 1984; Lewin, 1946).

5.2. Reformistic and progressive education

Adventure education is linked with the progressive and reform pedagogical tradition, the purpose of which is to act as an alternative to the prevailing learning trends, such as the classroom, subject-oriented or teacher-centred teaching methods (Section 3.1). In Finland, as in Europe and America, adventure education is a modern concept of education with various meanings (Dewey, 1937/1951; Prouty, 2007, pp. 6–10; Scheibe, 1999).

5.3. Holistic, inclusive and non-formal learning

In the teaching-learning interaction, it is possible to combine subjects such as social learning, sports, science, mathematics, languages and history (Section 3.4). A holistic way of learning tries to encompass and integrate separate academic subjects, multiple knowledge and the consciousness of meaning and experience rather than defining human possibilities narrowly. The findings appear to indicate that a combination of formal and non-formal activities will have valuable implications for further school culture, research, and for the improvement of policy and practice towards learning and education. With the help of reflective discussion it is possible to verbalize feelings that have to do with surprising non-formal situations (Section 3.5). It is difficult to include dimensions of emotional life in traditional formal education. Balancing in dealing with personal experiences, demands from even an experienced teacher all of courage, discretion and wisdom at the same time (Csikszentmihalyi, 2005, p. 82; Karppinen, 2005; Priest, 1999a, pp. 237–239).

5.4. Empowerment and ecological awareness

The setting of the learning event is, instead of a classroom, nature or the nearby environment. Nature offers freedom, silence, calming down and space. Interaction takes place between the environment, the teacher and the participant, when it is possible to transfer learning, directly or symbolically, into everyday life. It is possible to include activities of adventure into academic teaching, which children, especially boys, will find interesting (Section 4; Karppinen, 2005, 2010, p. 129).

5.5. Meaning and basics for using outdoor adventure learning at school

Outdoor adventure education and learning is an alternative method in formal education. It is flexible, experiential-based, non-formal and supportive. It is a constructive ‘expedition’ into oneself and into the social environment and reality. It is a rehabilitative and a ‘holistic’ method to transfer knowledge, personal development and social growth directly in the everyday life and connect them with formal learning by constructivistic and reflective learning theory. Developing personal and social skills are written down in the formal education curriculum, but there are no methods mentioned as to how to increase transfer of those skills; now, here is one! It is a sustainable method to help pupils to use their five senses bodily to get into contact with nature, environment and social reality (Karppinen, 1998, 2005, 2008, 2010).

6. Limitations and critical reflection on the findings

It was possible to produce data with the help of various material, theories, sources, situations and methods, despite the fact that there was only one teacher-researcher. Using only one researcher can be regarded as a weakness in the objectivity of the research arrangement and as a subjectivity undermining reliability. On the other

hand, the teacher-researcher acting as the classroom teacher knows the culture, backgrounds, problems and strengths of the focus group. Triangulation entails, in addition to literature dealing with adventure education, participating observation, interviews and holistic insight into/empathy with the personal situation of the pupil. The weakness was to record and document the huge amount of data immediately during the events. It was not possible. A lot of useful material was lost in the flood of information. A solution was to examine the daily and weekly events retrospectively. A small-size dictation device, in which authentic recordings and observations could have been saved, would certainly have been of great help.

In qualitative research, transferability, dependability and confirmability can be regarded as central definers essential to reliability (Lincoln & Guba, 1985, pp. 294–316).

Transferability has to do with the possibility of applying the findings in another context, e.g. in this study, to another group of pupils of a similar kind. One way to certify the transformability is the so called rich or dense description (Lincoln & Guba, 1985, pp. 294–316). Owing to the duration of the study (40 weeks) it was not meaningful to use the dense description throughout the research process but to concentrate on the observations and themes that emerged in the material in the descriptions. The research dealt with a small focus group, so it was absolutely necessary to follow the ethical principles from the beginning of the study to its very end. All those involved in the research had been asked for the appropriate permissions, the names of those participating, and the place names had been changed for code names for security reasons. The focus group was a margin group, to which it might not be possible to find a peer group. Neither can the external circumstances of time, place, or objects be made exactly the same in another study, so that the research observations cannot be compared with those obtained from others directly. Dependability has to do with carrying out the research in such a way that the reliability and credibility are as good as possible, and that the conclusions the researcher reconstructs from the realities of those observed correspond with the original constructions (expressly the constructions from reality, and not realities themselves). Dependability can be increased by staying in the study target long enough, by observing carefully, by making reflective notes, or by using triangulation (Lincoln & Guba, 1985, pp. 294–316). In this research, dependability refers to, for example, the fact that as the teacher-researcher I personally took part in the field work and made authentic observations of the situations realized during the school year.

The third criterion of reliability mentioned by Lincoln and Guba (1985, pp. 294–318) has to do with the *confirmability* of the research situation, and the same factors that I discussed in the study of correspondence can be considered as linked with criteria that have to do with confirmability. Using an outsider researcher during the practical process would have probably increased the confirmability, because as a teacher-researcher I was aware of being socially and emotionally too close to the object. The help, advice and roles of the instructor-professors of my research were essential. Without the discussions and considerations with colleagues and

tutors many of the practical constructions and phenomena would have remained unreconstructed and unchanged into scientific language.

As a result it has motivated me, as a practitioner, to develop and create new approaches of experiencing outdoor adventure learning methods. In the future it would be interesting to research two or three public school cultures after interventions of outdoor adventure learning settings. One important issue would be to start an international research project including environmental goals of formal school with outdoor adventure activities. Personally I would be interested in creating connections between the interventions of outdoors adventure learning and therapeutic approaches, which are, according to Greenway (2008, pp. 348–349), more and more actual in modern society today.

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Author biography

Seppo J. A. Karppinen, EdD, MA, serves as chair for the research branch of the Finnish Adventure Education network. He is a teacher-researcher and lecturer having over 30 years of experience teaching outdoor adventure-based education as a supportive pedagogical method at primary and secondary levels of public and special education. He has educated a wide range of audiences at universities and upper levels of education in Finland. Karppinen's specialty is in understanding how children and adolescents learn to construct knowledge and social-emotional development through experiential and reflective teaching. He has published articles in a variety of journals and books related to experiential and outdoor adventure education in Finland. He is devoted to making people enthusiastic about rehabilitative ideas and practices of Erä life, the original Finnish outdoor adventure life.

References

- Becker, P. (2008). The curiosity of Ulysses and its consequences—In search of an educational myth of the adventure. In P. Becker & J. Schirp (Eds.), *Other ways of learning. The European Institute for Outdoor Adventure Education and Experiential Learning, 1996–2006* (pp. 199–210). Marburg: Bsj Marburg.
- Becker, P., & Schirp, J. (Eds.) (2008). *Other ways of learning. The European Institute for Outdoor Adventure Education and Experiential Learning, 1996–2006*. Marburg: Bsj Marburg.
- Berger, P. L., & Luckmann, T. (1995). *Todellisuuden sosiaalinen rakentuminen. The social construction of reality: A treatise in the sociology of knowledge*. Helsinki: Gaudeamus.
- Boud, D., Cohen, R., & Walker, D. (2000). *Using experience for learning* (pp. 1–17). Buckingham: SRHE and Open University Press.
- Carr, W., & Kemmis, S. (1986). *Becoming critical. Education, knowledge and action research*. London: Falmer Press.

- Csikszentmihalyi, M. (2005). *Flow. Elämän virta. Tutkimuksia onnesta, siitä kun kaikki sujuu* [Flow. Stream of life. Study about happiness and wellbeing]. Rasalas Kustannus: Tallinna Raamatuutrükikoda.
- Darst, P. W., & Armstrong, G. P. (1991). *Outdoor adventure activities for school and recreation programs*. Prospect Heights, IL: Waveland Press.
- Denzin, N. K. (1978). *The research act: A theoretical introduction to sociological methods*. New York: McGraw-Hill.
- Denzin, N. K., & Lincoln, Y. S. (Eds.) (2005). *The Sage handbook of qualitative research* (3rd ed.). Thousand Oaks, CA: Sage.
- Dewey, J. (1937/1951). *Experience and education*. New York: Macmillan.
- Erickson, F. (1986). Qualitative methods in research of teaching. In M. C. Wittrock (Ed.), *Handbook of research of teaching* (3rd ed., pp. 148–149). New York: A Project of the American Educational Research Association.
- Ewert, A., & Garvey, D. (2007). Philosophy and theory of adventure education. In R. G. Prouty, J. Panicucci, & R. Collinson (Eds.), *Adventure education: Theory and applications/Project adventure* (pp. 19–32). Champaign, IL: Verso Press.
- Fontana, A., & Frey, J. H. (2005). The interview: From structured questions to negotiated text. In N. K. Denzin & Y. S. Lincoln (Eds.), *The Sage handbook of qualitative research* (3rd ed., pp. 645–674). Thousand Oaks, CA: Sage.
- Gass, M. A. (1991). Enhancing metaphor development in adventure therapy programs. *Journal of Experiential Education*, 14(2), 6–13.
- Gass, M. A. (1993). *Adventure therapy: Therapeutic applications of adventure programming*. Dubuque, IA: Kendall/Hunt Publishing/Association of Experiential Education.
- Greenway, R. (2008). A view into future: The value of other ways of learning and development. In P. Becker & J. Schirp (Eds.), *Other ways of learning* (pp. 347–372). Marburg: bsj Marburg.
- Guba, E. G., & Lincoln, Y. S. (2005a). Competing paradigms in qualitative research. In N. K. Denzin & Y. S. Lincoln (eds.), *The Sage handbook of qualitative research* (3rd ed., pp. 105–117). Thousand Oaks, CA: Sage.
- Guba, E. G., & Lincoln, Y. S. (2005b). Paradigmatic controversies, contradictions, and emerging influences. In N. K. Denzin & Y. S. Lincoln (Eds.), *The Sage handbook of qualitative research* (3rd ed., pp. 191–215). Thousand Oaks, CA: Sage.
- Hahn, K. (1958). *Erziehung zur Verantwortung. Aus den deutschen Landerziehungsheimen* [Education to responsibility. About German country boarding-schools]. Stuttgart: Ernst Klett Verlag.
- Hammersley, M., & Atkinson, P. (1990). *Ethnography. Principles in practice*. New York: Routledge.
- Heckmair, B., & Michl, W. (2002). *Erleben und Lernen. Einstieg in die Erlebnispädagogik, 4* [Experiencing and learning. Introduction to experience-pedagogy 4], erweiterte und überarbeitete Auflage. Neuwied; Krefeld: Luchterhand.
- Hopkins, D., & Putnam, R. (1993). *Personal growth through adventure*. London: David Fulton.
- Kalevala. (1828/1922/2005). Collected by Elias Lönnrot. Translated into English, 1868. Helsinki: Suomalaisen Kirjallisuuden Seura. <http://www.sacred-texts.com/neu/kveng/>
- Karppinen, S. J. A. (1998). *Experiential approach in Special Education*. Licentiate report. Faculty of Education, University of Oulu, Finland. Elämyspedagoginen näkemys erityisopetuksessa. Lisensiaatintutkimus. Oulun yliopisto. Kasvatustieteiden tiedekunta.
- Karppinen, S. J. A. (2005). *An adventurous year in a challenging class* (Unpublished doctoral dissertation). Faculty of Education, University of Oulu, Finland. Acta Universitatis Ouluensis. E 77/2005. Retrieved from <http://herkules.oulu.fi/isbn9514277554/>
- Karppinen, S. J. A. (2008). From experience to learning. In S. J. A. Karppinen & T. Latomaa (Eds.), *Seikkailun elämyksiä 1. Seikkailukasvatuksen teoriaa ja sovelluksia* [Experiences by adventuring. Part 1. Adventure education theory and applications] (pp. 75–97). Rovaniemi: Lapin yliopistokustannus.

- Karppinen, S. J. A. (2010). From experience to learning. In S. J. A. Karppinen & T. Latomaa (Eds.), *Seikkailun elämyksiä 2. Seikkailukasvatuksen teoriaa ja sovelluksia* [Experiences by adventuring. Part 2. Adventure education theory and applications] (pp. 118–135). Rovaniemi: Lapin yliopistokustannus.
- Kemmis, S., & McTaggart, R. (2005). Participatory action research. In N. K. Denzin & Y. S. Lincoln (Eds.), *The Sage handbook of qualitative research* (3rd ed., pp. 567–605). Thousand Oaks, CA: Sage.
- Kolb, D. A. (1984). *Experiential learning*. Englewood Cliffs, NJ: Prentice-Hall.
- Kraft, R., & Sakofs, M. (1985). *The theory of experiential education*. Boulder, CO: Association of Experiential Education.
- Lewin, K. (1946). Action research and minority problems. *Journal of Social Issues*, 2(4), 34–46.
- Lincoln, Y. S., & Denzin, N. K. (2005). Epilogue: The eighth and ninth moments—qualitative research in/and the fractured future. In N. K. Denzin & Y. S. Lincoln (Eds.), *The Sage handbook of qualitative research* (3rd ed., pp. 1115–1126). Thousand Oaks, CA: Sage.
- Lincoln, Y. S., & Guba, E. G. (1985). *Naturalistic inquiry*. Beverly Hills, CA: Sage.
- MacLean, M. S., & Mohr, M. M. (1999). *Teacher-researchers at work*. Berkeley, CA: National Writing Project.
- McKenzie, M. (2000). How are adventure education program outcomes achieved? A review of the literature. *Australian Journal of Outdoor Education*, 5(1), 19–28.
- Miles, J. C., & Priest, S. (Eds.). (1999). *Adventure programming*. State College, PA: Venture Publishing.
- Oelkers, J. (1996). *Reformpädagogik. Eine kritische Dogmengeschichte* [Reform pedagogy. A critical overview of reformistic education]. Weinheim: Juventa.
- Priest, S. (1999a). Outdoor leadership competencies. In J. C. Miles & S. Priest (Eds.), *Adventure programming* (pp. 237–239). State College, PA: Venture Publishing.
- Priest, S. (1999b). Research in outdoor adventure. In F. H. Paffrath, A. Salzmann, & M. Scholz (Eds.), *Wissenschaftliche Forschung in der Erlebnispädagogik* [Academic research in experience-pedagogy/Experiential education] (pp. 13–24). Augsburg: ZIEL GmbH.
- Programme for International Student Assessment (PISA). 2010. OECD. Julkaisusarja: Opetus- ja kulttuuriministeriön julkaisuja, 2010: 21. Helsinki. <http://nces.ed.gov/surveys/pisa/>
- Prouty, D. (2007). Introduction to adventure education. In R. G. Prouty, J. Panicucci, & R. Collinson (Eds.), *Adventure education: Theory and applications/Project adventure* (pp. 3–17). Champaign, IL: Verso Press.
- Reiners, A. (1995). *Erlebnis und Pädagogik: Praktische Erlebnispädagogik; Ziele, Didaktik, Methodik, Wirkungen* [Experience and education: Practical experiential education; goals; didactics; methods; effects]. 1. Aufl. Fachhochsch.-Schr. Munich: Sandmann.
- Resnick, L. B. (1989). Introduction. In L. B. Resnick (Ed.), *Knowing, learning and instruction. Essays in honor of Robert Glaser* (pp. 1–24). Hillsdale, NJ: Erlbaum.
- Scheibe, W. (1999). *Die reformpädagogische Bewegung 1900–1932* [The educational reform movement 1900–1932]. Hemsbach: Druckhaus Beltz.
- Statistics Finland's Education Statistics. (2009). *Tilastokeskus* [Statistics]. Helsinki: Yliopistopaino. http://www.tilastokeskus.fi/til/erop/index_en.html
- Stringer, E. (1999). *Action research* (2nd ed.). London: Sage.
- Telemäki, M., & Bowles, S. (2001). *Theory and practice of outdoor adventure education, Part 1* [Seikkailukasvatuksen teoria ja käytäntö. Osa 1]. Oulun yliopiston Kajaanin opettajankoulutuslaitoksen julkaisuja. Sarja B. 15/2001. Oulu: University of Oulu.