



LET'S GO OUT! A GROUP-BASED INTERVENTION IN OUTDOOR ADVENTURE EDUCATION AS A SPECIAL EDUCATIONAL SUPPORT

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Abstract:

This article deals with the group-based behavioral, cognitive, and skill-training intervention program *Maltti* as a special educational support action applied with outdoor adventure education at the primary school level. The need to apply the group-based intervention arose from the special education teachers' (N=2) desire to reinforce and expand their pedagogical methods in order to improve the students' development in special education. The special education teachers had a group of pupils with special educational needs, aged from 10 to 11 (5th graders in Finland). These pupils faced challenges in social and emotional development, for example, in the areas of psychological regulation, self-regulation, and emotional regulation. This article is a case study which presents how outdoor adventure education can be implemented in special education. It also describes how special education teachers experienced the group-based intervention intersecting with outdoor adventure education. The research findings indicate that together, the intervention and the outdoor adventure education encouraged pupils' emotional and social development, well-being, relaxation, a sense of belonging, successful experiences, positive group experiences, and strengthened executive functions. The findings promote the use of outdoor adventure education methods in the group-based intervention *Maltti* with children with special needs.

Keywords: teachers as reflective practitioners, intervention study, attention and executive functions, special education, outdoor adventure education

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1. Introduction

In this article, the focus is on applying the *Maltti* group-based intervention in outdoor adventure education (OAE) settings with special education teachers and their students with special educational needs (SEN). The *Maltti* intervention program (*Maltti* means 'patience' in Finnish; Paananen et al., 2011) is a theory-driven and group-based intervention method for elementary school pupils with attention and executive function problems (see also Paananen, 2019). *Maltti* was chosen as the intervention solution in this study because of its suitability for the age group of the participating children and because of its positive results regarding symptoms of attention and executive function deficits that are common in today's classrooms.

The *Maltti* program is a comprehensive behavioral, cognitive, and skill-training approach that aims to improve pupils' on-task behavior. It can be implemented in an elementary school context within the common procedures of pedagogical support systems. The *Maltti* program consists of 20 rehabilitative group sessions with detailed instructions. The tasks and exercises particularly aim to train students in the skills needed for academic on-task situations, such as attention control, action selection and inhibition, planning, and the use of strategies. The intervention program is always carried out by two adults (Paananen et al., 2011). According to a previous study about *Maltti* concerning self-efficacy and learning disability interventions, significant intervention effects were found in the behavioral manifestations of attentional and executive skills in the classroom setting among children who had moderate symptoms in the pre-intervention assessment. Positive effects of the intervention were also observed in arithmetic and reading skills (Paananen et al., 2018).

This article is based on the idea of implementing the *Maltti* program in an out-of-school setting. Applying OAE widens the learning arena and develops the implementation of the program's methods in diverse learning settings, taking into account multiple learners and their needs. The literature indicates that OAE has positive implications for maintaining students' motivation and well-being (Karppinen, 2012; Marttila, 2016). Prior research has shown a correlation between OAE and increased self-efficacy, self-confidence, self-regulation, problem-solving skills, and other social group-related outcomes (Jones & Hinton, 2007; Sibthorp, 2003; Sibthorp et al., 2011).

This study investigated how OAE methods can be adapted and applied to special education practices in mainstream education. There were two important motivations for this research which emerged from the practical situation. First, the special education teachers who participated in this study experienced that the pedagogical practices in their work with pupils with SEN were insufficient. The second need was to strengthen pupils' on-task behavior and support them in compensating for the skills that were affected by attention and executive function problems. Moreover, there was a need to reinforce pedagogical support for the students with SEN, because they often experience a *negative response circle* during the school day due to their socially challenging behavior (Honkasilta, 2015). Hence, the need for this study emerged bottom-up from special

education teachers who sought to support their students more in everyday school life. The questions explored in the study are the following:

- 1) How can OAE be implemented in special education?
- 2) How do teachers experience OAE practices in special education?

2. Core Features of Student Support Systems in Finland

Educational policy and ideology in Finland are based on the idea of inclusion, ensuring 'one school for all.' Because of this goal, the role of special education in Finland has changed significantly over the last few decades (Lakkala, 2008; Lakkala et al., 2017; Takala & Sume, 2017). Today, special education teachers mostly work in mainstream settings with students in need of frequent or more intensive support (Sundqvist, 2012). In Finland, in 2019, approximately 20% of primary school pupils received intensified (11.6%) or special support (8.5%) (Statistics Finland, 2020a). Concerning the students with SEN, only 6.9% of them studied in separate special schools. Other students with SEN received their education in mainstream settings, studying full-time in special groups in mainstream schools (26.9%) or part-time in special education groups and part-time in general education groups (66.2%) (Statistics Finland, 2020b). SEN is a legal term to define the needs of children who have difficulties or disabilities which make learning more challenging for them than for other children their age, and require special education provisions to be made for them.

The keywords in the Finnish Basic Education Act (628/1998) are educational equality, individuality, lifelong learning, and cooperation, which are also emphasized in the national core curriculum for basic education (Opetushallitus, 2016). In Finland, inclusion is the official educational policy. The Finnish comprehensive education, called basic education, is based on the principle of neighborhood schools. This means that basic education is mainly organized in mainstream schools which are regular, local schools offering basic education according to the national core curriculum for all the neighborhood children (Opetushallitus, 2016). To achieve this, a three-tiered support system has been developed with general, intensified, and special support (Opetushallitus, 2016). With the help of the support system, teachers and other professionals are expected to work collaboratively and develop flexible and supportive learning environments in mainstream settings (Thuneberg et al., 2014).

General support is directed to all students. The common forms of support are differentiated instruction, remedial teaching, and learning guidance. For example, teachers differentiate their teaching in class, and students may receive some remedial teaching and individualized tasks in one or more school subjects. Some of the support may take place in mainstream classes and some in flexible, small groups, often called a part-time special education groups. If general support activities are not enough, intensified support may be implemented. Together with the student and his/her parents, a multi-professional team conducts pedagogical assessments and applies a plan for intensified support. On this tier, an individual learning plan is obligatory. It can include

pedagogical instruction, part-time special education, and assistive devices or services. The only difference between this tier and the general support is that the support on this tier is more comprehensive and long-lasting. If the intensified support is insufficient, special support can be provided. This requires an extensive multi-professional assessment, an official administrative decision on the need for support, and an individual education plan. Only on this tier can the whole syllabus of various school subjects be individualized (Opetushallitus, 2016).

In Finnish basic education, students are also supported by a student welfare support system. The latest Pupil and Student Welfare Act (1287/2013) accentuates preventive and communal student welfare. In Finland, the concept of student welfare is connected to the promotion of physical, mental, and social well-being and the prevention of perceived threats to well-being. Student welfare can be seen as every student's right, and its task is to prevent exclusion (Koskela et al., 2013). It emphasizes early support, for example, group-based rehabilitation in regular schools, carried out in collaboration with school social workers and teachers. However, according to the Finnish Education Evaluation Centre (Summanen et al., 2018), the focus is still mainly on corrective individual student welfare actions.

The criteria for inclusive education are diverse. Critical elements are active, meaningful participation in everyday functions of the classroom, as well as a sense of belonging for all the students in the institution (Frostad & Pijl, 2007; Qvortrup & Qvortrup, 2018). According to previous studies, the success of inclusive education is underpinned by teachers' positive values and attitudes towards diverse learners (e.g., Braunsteiner & Mariano-Lapidus, 2017). It is essential that teachers respect all their students irrespective of their abilities and see them as transformative individuals who are able to learn and develop (Florian & Spratt, 2013). One of the core elements of implementing inclusive education is a collaboration (Lakkala et al., 2021). Teachers and other professionals need to be able to reflect on their students' needs as a group and as individuals, and construct learning environments that enhance their learning and togetherness (Kelly & Zhang, 2016; Tjernberg & Mattson, 2014).

The Finnish Core Curriculum for Basic Education (2016) requires transformative pedagogical practices at schools and highlights student well-being, learning in out-of-school settings, and students taking an active role in learning. The objective is to create a performance culture that provides learning, growth, participation, well-being, and a sustainable way of life (Niemi et al., 2016). Moreover, learning and the learning environment are understood holistically, and they are intertwined in the new curriculum. The learning process should begin with the students' own thinking and questioning, and then proceed according to the inquiry learning method, in which students manage their own learning and explore real, authentic problems (see Hakkarainen et al., 1999). Traditionally, classroom interactions were often teacher-centered and textbook-centered (see Rajala, 2016). However, according to the new pedagogical approach in Finland, learning should be student-centered, phenomenon-based, and occurring in out-of-school settings to some extent.

3. Outdoor Adventure Education Intersecting with Special Education

In this article, we present how outdoor adventure can promote the well-being of students with SEN. The goal of the development project presented in this article was to incorporate out-of-school education in special education, thus creating a comprehensive form of education, with the objective of enhancing the general well-being of children and adolescents, including their academic, physical, emotional, social, and psychological well-being (see Harun & Salamuddin, 2014).

OAE has a rather broad definition in which the concepts of outdoor education, outdoor studies, and outdoor learning often overlap or are interconnected, so the conceptual diversity in the field is evident (Sarivaara & Uusiautti, 2018). Outdoor education is understood as education in, about, and for the outdoors (Maher, 2017). The general concept of the outdoors is essentially associated with open-air environments. OAE is conducted using the methods of adventure education, with the emphasis often on the comprehensiveness of the adventurous outdoor situation. OAE is also characterized as a long-term educational process in which it is essential to learn in a group through interactivity and shared experiences (Karppinen & Latomaa, 2015, p. 300; Louhela, 2010, p. 154.) Further, according to Sibthorp (2003), the secret of the adventure is the 'hook,' which engages students' interest and motivates them to participate in the practices. He concludes that the combination of interest and motivation, together with the necessary interpersonal social interactions, makes OAE a crucible for the development of social interaction and emotional skills (Sibthorp, 2003).

Previous studies show that OAE provides a fruitful context for pedagogical practices in special education. Karppinen (2005) studied OAE through active research with students aged 13 to 15 years who were attending a hospital school. The study shows that the pedagogical practices in OAE should be supportive and holistic in order to maintain students' motivation and well-being. According to that study, especially for students with special needs, the practices can be implemented as a rehabilitative method. Marttila (2016) studied OAE through active research with students with special needs and found that OAE supports communality, peer relationships, enhanced school enjoyment, reduced absences, and physical activity. In addition, the study shows that the method supports the learning process. Further, Zachor et al.'s (2017) recent study explored the effectiveness of an OAE program in children with autism spectrum disorders. The study shows that an OAE program promotes significant improvement in social communication, according to the social cognition, social motivation, and autistic mannerism subdomains of the Social Responsiveness Scale.

4. Methodology

The need for this project arose from the grassroots level, with the idea that teachers are reflective practitioners (see Karppinen et al., 2020; Larrivee, 2008). The special education teachers who participated in this research felt that their existing educational practices

were insufficient in developing pupils' self-regulation. The teachers wanted to develop more student-centered teaching methods, and try new and innovative teaching methods in special education teaching. They wanted to develop systems to be more student-oriented in their methodology (see Lakkala et al., 2020). For example, the learning environment for students who require special and enhanced support was inadequate; the students who needed group-based rehabilitation during their school day were spending their days in various kinds of groups with different levels of adult guidance, which did not meet their needs. Notably, the new version of the student welfare law revised the curriculum and was put into effect in the autumn of 2013. These changes have contributed to the need to develop and renew special education approaches, which focus on community learning as well as individual learning.

The main focus in this study was to develop a pedagogical model which combines the field of special education with outdoor education. The data were gathered from special education teachers (N=2) who participated in the project. A group of pupils (N=6) aged 10–11 years old participated in this project, both boys (N=4) and girls (N=2) who needed support for their social and collaborative skills. Therefore, a group-based rehabilitation was planned for them. Students who took part in the rehabilitation sessions had difficulties with their social and emotional development, such as psychological regulation and self-regulation. The research was conducted in a comprehensive school located in an urban environment in a city in Northern Finland. There are green park areas, a river, and forest areas geographically close to the school. Thus, the OAE activities were easy to conduct in the school's nearby, local surroundings.

As stated above, the motivation for this study stems from the special education teachers themselves, who were inspired to transform and improve their pedagogical practices. The teachers had the novel idea of incorporating OAE in their work with their students. In 2019, they contacted an associate professor in teacher education working in the field of OAE in order to co-create a development project and to become educated in OAE practices. As a result of the contact made with the associate professor, the plan for conducting the process started to take shape. There was a need to establish a multi-professional development group to advise and train special education teachers in the field of OAE; to support and mentor the teachers during the process; and conduct the research process during the project. The members of the multi-professional development group (N=11) had expertise in different pedagogical areas. In addition, the group included three students who were conducting their bachelor theses. The project's aim was to investigate how OAE could be implemented in special education, and how special education teachers experience using OAE in special education. It was decided that the special education teachers would act as reflective practitioners (see Korthagen, 2017) in the study. Therefore, they would produce information on the possibilities of OAE in special education. During the development process, the multi-professional development group would act as mentors supporting the special education teachers in planning and carrying out the rehabilitative intervention with their students. The research strategy was related to and had some features of collaborative action research, whose ontological

starting point is people's socially constructed knowledge (Brydon-Miller et al., 2003). However, the research process did not have several development cycles as in action research; the pilot process was more of a reflective intervention (Mertler, 2014).

The research was conducted using a case study as the qualitative research methodology. A case study aims to gain an understanding of the phenomenon studied (Yin, 2018). Thus, the aim here was not to generalize, but rather to develop a more specific understanding of the issues. The main concern was to explore the benefits of OAE for children with mild emotional and social problems. Further, the study intended to investigate how special education teachers perceive and experience OAE practices in special education. The research interest was focused on six different areas taking into account the children's benefits from OAE practices. However, in this article, the primary data are the information gathered from the special education teachers' (N=2) group interview and notes, while the meeting notes from the developing group's conversations are also utilized. The interview material was recorded (length 1h/15min), transcribed (using Times New Roman size 12 and 1.15 line spacing, for a total of seven pages), and analyzed thematically. The multi-professional group in which special education teachers were included met a total of 10 times during the academic year 2016–2017. The meetings were not recorded, but the minutes of every meeting was written (using Times New Roman size 12 and 1.15 line spacing, for a total of 15 pages).

When conducting research that deals with children, the research methodology and the ethics of the methodology are highly important: Our primary obligation is always to the people we study, not to our project or to a larger discipline. The lives and stories that we hear and study are shared with us with the understanding that we protect those who have shared them (Denzin, 1989, p. 83). Therefore, the ethical standards involved in the entire research process are the core issue since the research concerns children (e.g. Linkola, 2014; Määttä & Uusiautti, 2014). Anonymity is an essential part of the research process. In this study, complete anonymity was ensured for the students and the research school. The research group obtained permission from the parents of the students and from the school. The parents were thoroughly informed about the research processes in which their children would be involved. The researchers were committed to the highest ethical research standards, and this study completely adhered to those standards, according to the Finnish National Board on Research Integrity (2019).

5. Results

5.1 The Implementation of Outdoor Adventure Education in Special Education

The aim of this study was to apply the group-based intervention *Maltti* as a special educational support in OAE. The applied intervention was created by the special education teachers in collaboration with the multi-professional development group. The intervention was carried out over 12 weeks, divided into three parts or sections with different pedagogical themes and aims. An integral part of the model development was determining the students' role in the project. The special education teachers decided that

it was essential for the pupils to be engaged in planning the project activities and determining their own objectives for each project section.

5.1.1 The Group-based Intervention Model

The special education teachers together with a multi-professional development group planned the content and activities of the sections, with the idea that the activities would become more challenging during the process. In other words, the process started with trust-building activities and progressed to developing negotiation and self-regulation skills in actual problem-solving situations at the end of the process. The intervention activities consisted of three periods, with each period having its own theme and pedagogical goals (see Table 1). The group (students and special education teachers) met twice a week, and the practices were mainly conducted outdoors.

The main objective of the first period was “I understand what is right and wrong, and, if necessary, I will change my performance.” This focused on strengthening the pupils’ self-efficacy and building trust among the group members (i.e., the pupils). The activities mainly occurred in the local environment of the school. The OAE activities were snow labyrinth practices, walking on a rope, walking with a rope, and a snowshoe trip in the local forest area.

The objective for the second period was “I am able to take into account others’ feelings. I pay attention to how I interact with others.” The students’ own goal for this period was connected to strengthening their interaction skills. One of the teachers summed up the objective as follows:

“Well, the aim was to put into the center how to take account of others and how to speak to each other. Children felt that this meant how to talk to others kindly.” (Teacher 2)

The objective focused on pupils' ability to take other people into account, and through that develop social skills. The second period consisted of activities such as winter sliding and an ice fishing trip on a local river.

The third period focused on self-stability and proficiency, with the objective “I figure out solutions to problems or challenges.” The goal was explained by a teacher as follows:

“It means the feeling that I can do something, and I can go further with things—like, you know, in the world of school, there is a lot of this kind of thing that I do not want to do and I cannot do, and I leave it.” (Teacher 1)

The students were given the opportunity to add their own goals to this section. In practice, this was planned so that the teachers could give students options as to what they wanted to choose. The OAE activities in this period included walking through geometrical forms while blindfolded, treasure hunting, diverse collective puzzle tasks,

and geocaching. The OAE activities and the periods of the activities are summarized in Table 1.

Table 1: The OAE activities in the applied group-based intervention model

Duration	Main pedagogical objectives	Outdoor adventure activities
Weeks 1–4	First period: “I understand what is right and wrong, and, if necessary, I will change my performance”	- Snow labyrinth practices - Walking on a rope - Walking with a rope - Snowshoe trip in the local forest area
Weeks 5–8	Second period: “I am able to take into account others’ feelings. I pay attention to how I interact with others”	- Ice fishing trip on a local river - Winter sliding
Weeks 9–12	Third period: “I figure out solutions to problems or challenges”	- Manipulating geometrical forms while blindfolded - Treasure hunting - Diverse collective puzzle tasks - Geocaching

After each outdoor adventure activity, the teachers encouraged the students to reflect on their experiences, including what the students found difficult and what they felt was fun. Students’ self-reflection on experiences is considered a significant and essential part of the OAE learning process (see Brown, 2009; Priest & Gass, 1997). The goal of the reflection was to help the students better understand and express the feelings they had during the learning activities.

During the OAE activities, the teachers motivated the students using a reward system, where pearls were given as rewards. Each pearl was given a monetary value, and students were allowed to decide how and when they spent the money. Students received a pearl when they did well during the outdoor adventure activities. Beforehand, a list of rules was established for the trips, and these rules were written on a blackboard. Adherence to the rules merited rewards. This motivation system targeted the objective of building the children’s self-regulation skills.

5.1.2 The Multi-professional Development Group Supporting the Professional Development of the Teachers

As mentioned earlier, while the outdoor adventure activities of the applied group-based intervention were being conducted, the multi-professional development group regularly mentored the special education teachers. The pedagogical mentoring aimed to strengthen the teachers’ knowledge of using OAE in their special education teaching, and support the teachers in the context of new pedagogical activities. According to Hudson (2013), mentoring strategies associated with planning for teaching can include co-planning, verbally reflecting on planning with the mentee, and showing examples of the mentor teacher’s planning (e.g., teacher’s plans or school, district, or state plans). Mentoring is often haphazard; consequently, mentors need a pedagogical knowledge framework and a repertoire of pedagogical knowledge strategies to guide pre-service teachers’

development (Hudson, 2013). When the teachers were asked how they were structuring their practices, they mentioned the very important role played by the mentors, especially regarding the pedagogical materials which were collectively created:

"We were able to follow the mentor's guidance concretely with those practices, and then he held a short theory session along with his other colleague, so we really got very practical guidance." (Teacher 1)

The special education teachers did not have any knowledge of OAE before the intervention started. Therefore, there was a need to assemble a group of professionals from different fields, such as OAE professionals and other pedagogical professionals. The aim of the multi-professional development group was to support the professional development of the teachers and particularly to strengthen the teachers' knowledge and skills in the field of OAE. There was a short training period for the teachers on how to implement OAE in practice. This is how one of the teachers described the OAE training:

"In January, there was an instructional session where the mentors came to the village. They [OAE professionals] checked the school yard and showed us what we could do there and how we could start to work, and they [OAE professionals] gave us practical examples of how to work." (Teacher 1)

The need for in-service education for the teachers cannot be underestimated. It is essential to enhance work performance and increase the motivation of teachers working in the field (Osamwonyi, 2016). When discussing the OAE training period, one teacher noted that:

"We have never ever done this [OAE] before. In fact, our theory background is still narrow. We got a definite model from there [OAE professionals], and when the first period finished, we had telephone meetings. After that, we got more mentoring and more new practices for next time." (Teacher 1)

In the beginning, the teachers felt that their theoretical background and skills were underdeveloped, so they were very satisfied with the support they received. Practicing teachers are key to the transformation of schools, and, in order for teachers to lead the reform efforts, they need to be offered expanded and enriched professional development experiences (Dilworth & Imig, 1995). The teachers were grateful for all the support they received from the multi-professional development group, which helped the teachers concentrate on their work and enabled them to succeed in their work:

"I am grateful for how the university supported us so well; they organized the meetings about mentoring for us. This network has surely made our workload smaller. This kind of support and research responsibility was essential." (Teacher 1)

Therefore, the regular mentoring and OAE training period for the teachers were highly relevant and necessary.

5.2 Teachers' Experiences of Using Outdoor Adventure Education Practices in Special Education

The second objective of this study was to discover how the special education teachers experienced using OAE in teaching.

5.2.1 The Students' Reflection Skills and Motivation

The core pedagogical approach in OAE is to focus on students' reflection and strengthen it. The role of reflection in OAE comes from the theoretical framework of Kolb (1984), where he describes the significance of reflection in experiential learning. According to Kolb, experience alone is insufficient in the learning process. The aim is to integrate the new experience with past experiences through the process of reflection. Such reflection turns experiences into experiential learning (Kolb, 1984). This means that reflection is part of each OAE activity conducted with students. Often, the reflection occurs immediately after the OAE activities. The teacher has a major role in guiding the discussion and setting the reflective questions for the students. During the early phases of the intervention, the teachers realized and understood how difficult it was for the students to reflect on their experiences:

"In the beginning, it was surprisingly challenging and difficult for the children to say more than just 'I do not like it' or 'it was OK.' The goal, though, was to increase the ability to name the different feelings." (Teacher 2)

The teacher above described the students' low level of reflection skills at the beginning of the intervention. Initially, the students answered the teachers' reflective questions with one-word answers. However, during the 12-week intervention, the students' reflection skills improved. The teacher outlined the impact of the reflective practices within the OAE activities as follows:

"This kind of work increases social skills, team atmosphere, self-knowledge, and definitely the ability to identify feelings." (Teacher 2)

The students' motivation to participate in the intervention was low in the beginning; they showed resistance in the early phases. The students were not used to performing school activities in outdoor settings; they were accustomed to in-school learning. The OAE activities were also new to the students, which decreased their motivation to participate at first. However, the students gradually became familiar with the OAE practices and began to develop the motivation to participate in the activities. For example, the students showed their motivation by asking questions during the reflection process:

"It's best when the learning comes from the students' own motivation, from their questions." (Teacher 2)

The teachers felt that the intervention had a particularly good effect on some of the students who had challenges with participation and motivation in relation to school work. Teacher 1 described a male student who did not usually participate actively in school work and activities as his motivation to perform well at school was rather low. After taking part in the OAE intervention, his attitude and role started to change from passive to active:

"[We were] seeing him becoming happy and being together with the other students, and seeing sort of an openness in him. Before, he did not get involved, but now we realized that he definitely felt positive emotions from this [OAE]." (Teacher 1)

Crucially, according to the teachers, the motivation to participate in the intervention increased during the process. The teachers described the students' positive emotions, increased motivation, and experiences of succeeding in their performance in the intervention. Teacher 2 explained the joy of seeing a positive attitude during the students' performance in the intervention:

"The good humor in a student's face when she does the task." (Teacher 2)

In addition, Teacher 1 stressed how beneficial it is for students to succeed in achieving a goal. Student success is a source of joy and becomes a collective joy in the group, motivating the student to go further with the practices. The students are inspired to continue OAE practices.

"The student gets the work done and succeeds. This kind of joy leads to the motivation to work, and when we are leaving, the student asks when we are going to do it again." (Teacher 1)

According to the teachers, the feedback from the students was mainly positive and encouraging. They stated that the student feedback was one of the best parts of the intervention. The teachers also described the value of the students being exposed to new ways of thinking and doing things. The students were able to widen their perspectives and perform in a different way in certain situations.

5.2.2. Students' Self-labeling Phenomenon as a Side effect

The participating teachers perceived the students as having the tendency to label themselves or identify themselves or others as belonging to a specific group. The knowledge base regarding the use of instructional grouping in the classroom includes findings from research on effective schools, effective teaching, student academic

achievement, student perceptions of self and others, student motivation, student attitudes towards school, and student friendships and interactions in the classroom and school. A dominant theme in the research findings is that some types of instructional grouping contribute to more positive academic and affective outcomes for students. Other groups, particularly stable, long-term groups based on student ability, have a negative effect on students (Ward, 1987).

The teachers perceived grouping, which means the social formation of a group, as very important due to the function of the group and the goal of creating a cooperative spirit in the group:

"I can realize how important grouping is—students are functioning together with the other students, and they are talking to each other freely." (Teacher 2)

However, at the beginning of the project, the teachers experienced a challenging reaction when they found that the students started to call themselves the "Attention Deficit Hyperactivity Disorder (ADHD) group":

"Some of the students started to name us an ADHD group, like we are, like, some insane group." (Teacher 2)

The teacher further explained this by supplying an example of the students labeling their group through their own initiative:

"We were about to travel by taxi, and the students started to talk to the taxi driver, saying that we are this kind of ADHD group...I realized that the situation was embarrassing." (Teacher 1)

The teachers felt that the situation was very difficult and complex when the students labeled themselves negatively to the unknown taxi driver in a way that excluded them from the norm. For the students, it was a kind of joke and a way of making fun of themselves. However, this can be seen as a negative phenomenon because of the homogeneously formed group; students who had similar challenges with emotions and social skills formed this particular group. If the group had been formed in a heterogeneous way by mixing students with different abilities, the risk of self-labeling would have been lower. According to the literature on labeling, self-labeling can also be seen as a self-fulfilling prophecy (see Haralambos, 1986). Moreover, labeling can be seen as disrespectful towards the students and generally undignified.

The teachers understood that the students needed to discuss their similarities and differences. The teachers talked about this with the students and made a covenant that no labeling would be allowed to happen within the group:

"We agreed that no labeling is allowed in this group. We talked about this and we agreed that we are not an ADHD group or anything like that." (Teacher 1)

As a result, this problem did not reappear after the discussion with the students. A teacher alluded to this when discussing the fulfillment of the first goal of the intervention:

"Making a group and then trusting each other; these things have grown during the process, definitely. We also do not hear anymore that we are a stupid group. We are talking to each other and we are interested in others. When other pupils are doing something, we support them, support the goal which they have set, and we take others into account." (Teacher 1)

Overall, the teachers felt that grouping occurred successfully, which is a precondition for a working method to be successful (Paananen, 2019). The self-labeling phenomenon may occur in situations where students with SEN are gathered together as a separate group. Students easily evaluate their situation as being different from the norm and start seeing themselves as different. This may lead to students labeling themselves negatively because they belong to the SEN group.

5.2.3 Pre-work and Circumstances in Outdoor Active Education

The teachers mentioned that planning and preparing the OAE practices were quite demanding and time-consuming during the process, since the field of OAE was new to the teachers and they had to do a lot of pre-work before the teaching sessions. However, they felt that it provided professional progression for them. They also felt that teachers need to be committed to OAE in order to be able to work with such a method:

"I think there is behind this some kind of commitment—that you go to prepare the ropes and this kind of preparation work is needed beforehand." (Teacher 2)

The teacher experienced that using OAE in teaching demands certain preparation and pre-work before the actual activity session with the students. For example, she explained that when doing OAE activities with rope, the teacher has to go and prepare the learning space beforehand. In comparison, if the teachers conduct textbook-centered teaching indoors, it can be assumed that less planning and preparation are needed for the lesson, whereas OAE requires more effort and preparation outdoors by the teachers.

In addition, when conducting OAE in teaching, the teachers needed to cope with feeling insecure, as the OAE tasks, practices, and pedagogy were new to them. They needed to learn to use a self-evaluative didactic model (Mödrischer et al., 2013). As one teacher stated,

“This is kind of new for me—you have to practice all the time and you feel insecure. But then, you realize from your work that next time you will have to give better guidance.”
(Teacher 2)

The teachers pointed out that teachers working in the field of OAE need to feel psychologically secure with themselves, their boundaries, and their capacity to work in challenging circumstances. This means that teachers should have a strong sense of self-efficacy in their professionalism. Another teacher explained that a teacher must feel confident as a person.

“Moreover, the teachers experienced that the circumstances for OAE can be challenging: You need to like to be outside, and you need to be able to cope with cold and frost and rain.”
(Teacher 2)

This quote demonstrates the concrete context of OAE in practice. Since it occurs outdoors, the weather sets a certain framework for the activities. The activities in this intervention were conducted in Northern Finland during the winter. This means that the weather was usually very cold, with the temperature at around -15°C. The weather conditions varied from frozen to snowfall to snow storms. The teachers also faced challenges concerning students' ability to cope with the weather. The students were often not prepared to be outdoors for many hours in varying weather circumstances. They remarked that the students often felt cold and their shoes were unsuitable for the outdoors. However, the teachers noticed that as the process continued, there appeared to be greater support from home, so the students had extra clothes with them and something to eat when they arrived for the OAE activities.

5.2.3 Reflections on Outdoor Adventure Education in Teaching

We were interested in finding out how the teachers experienced OAE as a teaching method. When asked whether the project added to the teachers' workload or increased their stress, the teachers denied this. This seems to be related to teachers' competence, self-efficacy, knowledge, and skills as professional educators (Metsäpelto et al., 2020). It is an important notion, as according to Paananen (2019), the working method decreases the stress reactions of learners, while teachers gain beneficial working methods that create less stress for themselves (Onnismaa, 2010).

The teachers also reflected that co-teaching is a suitable way to conduct OAE in special education teaching.

“I do not feel this [OAE] as a heavy load. This is because we can do it with another teacher. You can jointly reflect beforehand and afterwards from both the child's perspective and the teacher's perspective. It is very rewarding to work, really rewarding. When I am doing this special teacher job and I feel lonely while working, it makes it less stressful when you can share your work.” (Teacher 1)

Teacher 1 described how she had experienced the project and how important the role of a cooperative colleague was as a co-teacher. She mentioned joint reflection, which means that the teachers reflected on teaching situations together both before and after the situations. The teachers experienced co-teaching as a rewarding method when conducting OAE. It gave the teachers an opportunity to reflect on experiences together with a peer teacher and also decreased stress. In addition, the teachers claimed that OAE did not pedagogically overload them. However, this is the opposite experience of what the teachers described above concerning the pre-work involved in organizing OAE learning in out-of-school settings.

The teachers also reflected on the current national curriculum (2014) and its renewed pedagogical framework due to special education teacher work. The revised curriculum opened up the learning environments and pedagogical practices in learning. One teacher pondered the preventative practices in special education to support students with SEN, perceiving the intervention as a preventative method:

“New dimensions are brought to our teachers’ work, and there is a kind of new curriculum perspective. You do not need to do it all in the classroom or in a therapy session...we can do this kind of functional group rehabilitation method in part of the school day. It is the best preventive work.” (Teacher 1)

Moreover, the teachers had the opportunity to get to know the students better. During the intervention, there appeared to be space for free and calm discussions with the students. This enabled the teachers to gain deeper insight into the students. As Teacher 2 stated:

“During the walking trips, you talk a lot there freely. It is not a busy time. You have time to listen and talk.” (Teacher 2)

The teachers felt that they were highly motivated and inspired to conduct OAE in the special education intervention. Teacher 2 argued that using OAE in special education teaching advanced her competence and skills as a teacher, and also motivated her in her pedagogical practices:

“This has been inspiring. I have a chance to get new knowledge for my own work. In fact, this is really so different from what I have done earlier, and when I start to see how this affects the children, I can also feel that this provides benefits.” (Teacher 2)

The teachers did not meet the students in their regular classes; they only met twice a week. The rest of the time, the students studied in their own classrooms with their own class teachers. Therefore, the special education teachers were not able to observe possible transfers of learning. They wondered whether OAE had had any transfer effect on the performance and behavior of the students in those classes. In other words, they were

interested in whether the OAE activities had positively affected students' other study time in other subjects in their own classrooms. Transfer of learning, particularly in the field of OAE, has been under examination (see Miller, 2001; Sibthorp et al., 2011). According to Perkins and Salomon (1992, p. 3), "*transfer of learning occurs when learning in one context or with one set of materials impacts on performance in another context or with other related materials.*" Thus, transfer of learning is one goal of OAE.

5.2.4 Connecting with and Enjoying Nature

The significance of being outdoors in nature seemed to be a valuable experience for the teachers and the students. The teachers stated that learning in an out-of-school setting connected the students to the environment and to nature. It gave the students an opportunity to experience their local environment, enjoy it, and respect nature:

"Students begin to respect their own environment and start to enjoy their own living environment." (Teacher 2)

In light of the fact that students in the group had challenges with social skills and also with ADHD, Teacher 2 stressed that being in nature and doing OAE practices helped the students relax and enjoy being there. According to her, being in nature balanced the students and decreased their restlessness:

"I myself also learned to observe the environment differently as these children did. There are few who do not like to be in the same place for long. I got a good feeling when I was watching them, how they wanted to catch fish and they were relaxed. Sometimes, these children lack the ability to relax and stay in one place." (Teacher 2)

In addition, the teachers described the advantages of the students conducting the OAE practices in groups, rather than individually. This supported the students' social skills and created a feeling of connectedness among students. The teachers felt that being outdoors was both mentally and physiologically supportive for the students:

"I can recommend this kind of group work and working together. The students were joyful afterwards and they were happy. They were also refreshed when outdoors and in nature. They were not familiar with that, and we know that the outdoors and nature are good for kids." (Teacher 1)

In conclusion, the teachers reflected that conducting the special education intervention in out-of-school settings outdoors benefited the students in several ways. They stressed that being in nature seemed to make the students happy and relaxed. Moreover, they observed that the students became more connected to nature and their local environment.

6. Discussion and Conclusion

This study was conducted in Northern Finland and aimed to apply the group-based intervention OAE as a special educational support. The objective here was to give a voice to the special education teachers who took the initiative to conduct this project. The project was led by a multi-professional development group which included several OAE experts. There was flexible, regular, and supportive interaction between the development group and the teachers.

According to the research findings that emerged, three recommendations for special education based on OAE methods are suggested here. First, when conducting OAE in special education, co-teaching was shown to be a valuable and fruitful working method. The teachers experienced co-teaching as a means of strengthening their pedagogical thinking and reflection. They felt that their work in OAE was less stressful and psychologically demanding due to the co-teaching method. Therefore, we suggest that OAE in special education would benefit from co-teaching as a pedagogical method. Second, we suggest that, when applying OAE to educational practices for the first time, the mentoring system appears to be supportive and crucial for teachers. In other words, systematic mentoring is essential for teachers new to OAE. The mentoring model improves, supports, and raises the pedagogical level of OAE practices. The teachers experienced mentoring as a significant factor in their professional growth in the field of OAE. Third, OAE in special education as a source of pedagogical practices appears to improve the teaching, the learning, and the social and emotional skills of students. According to the results, students with SEN would benefit from special education support intersecting with OAE.

We argue that special education, particularly for students who have challenges in social and emotional skills, would benefit from OAE practices. As in the case of this research, where the pupils of the intervention group were mostly boys, it appears that gender is a factor related to the need for special education. According to Finnish statistics, the number of boys receiving special education services is more than double the number of girls; around 40% of the students have a broad range of learning disabilities, and two-thirds of these students are boys (Statistics Finland, 2017). The research findings indicate that the intervention increased emotional and social development, well-being, relaxation, sense of belonging, successful experiences, positive group experiences, and students' executive functions. The findings support the use of OAE methods in the group-based intervention *Maltti* with children with special needs.

Conflict of Interest Statement

The authors declare no conflicts of interest.

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