Nature and freedom in education - Findings from a qualitative study on school leisure time in natural settings

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Abstract

Nowadays, more and more educational methods are being used to raise students' environmental awareness. At the same time, however, young people have fewer opportunities to spend leisure time in nature (in other words, to do free exploration in nature), the importance of which has been confirmed by numerous studies. This paper presents the results of a qualitative research that investigated the effects, implementation aspects and integration potential of free exploration in nature in the Hungarian school system. A total of 15 interviews were conducted in five schools. Data processing based on Grounded Theory was used to isolate the relevant aspects of the issue. The most important categories include positive aspects (e.g. pedagogical, psychological, social and physical benefits), negative aspects (e.g. accident factors; students put themselves, others and the environment at risk; negative feelings of students, parents and teachers), implementation aspects (e.g. degree of teacher control and education; preparation; link to school operations; role of age), barriers (e.g. weather; school environment; attitudes of students, teachers and parents; specific features of the education system; lack of time; risk of accidents; financial constraints) and facilitating dissemination (e.g. changing the education system; changing the mindset of teachers and policy makers; patronage; exchange of experience). These results can promote the conscious and appropriate use of free exploration in nature in education systems.

Keywords: environmental education, free exploration in nature, qualitative pedagogical research, Grounded Theory

1. Introduction

The pedagogical innovations of recent decades have multiplied the number of available outdoor environmental education (EE) methods, which are increasingly being used to develop environmental awareness. At the same time, however, a number of studies have highlighted the environmental pedagogical importance of leisure time spent in nature (e.g. Martin et al., 2020; Richardson et al., 2018; Wells and Lekies, 2006; Bixler et al., 2002; Tarrant and Green, 1999; Kals et al., 1999; Palmer, 1993) and the declining trend in this type of activity (e.g. Luís et al., 2020; Louv, 2008). In this study, the concept of free exploration in nature has been used to describe these experiences. In school context, it means that teachers have a passive role, they only supervise students' free activities in green areas (e.g., climbing, playing, exploring)

therefore students spend their time freely and do not participate in special tasks or organized programmes.

This paper presents the results of a qualitative research project, which investigated the effects, implementation aspects and integration possibilities of free exploration in nature in the Hungarian school system. However, before presenting the research, it is important to clarify the previous research findings in this field.

Csonka (2023) pointed out that nearly 90% of school leaders (N=35), science and PE teachers (N=76), class teachers (N=29) and school programme organisers (N=25) believe that free exploration in nature can have a significant positive impact on students or is an indispensable pedagogical element. Another important finding is that 80% of school leaders (N=35) believe that there is a need to increase the proportion of this programme element in their institution (Csonka, 2023). The importance of research on free exploration in nature is also underlined by the fact that 55% of students (N=423) associated the dominant nature related school experience they recalled with too many compulsory programmes, too much discipline and/or lack of free time (Csonka, 2023). These findings all warranted this qualitative research which is presented below.

2. Focus of the qualitative research

As mentioned in the previous chapter, the focus of the qualitative research was on the effects, implementation aspects and integration potential of free exploration in nature. This meant examining the following questions:

- How do students respond to free exploration in nature?
- How free exploration in nature can be integrated into school work?
- What positive impact can free exploration in nature have?
- What are the negatives, dangers and obstacles to the use of free exploration in nature?

3. Research sample and methodology

The qualitative research involved five educational institutions, each of which conducted semi-structured interviews with one or two head teachers and 2-3 other teachers. In the latter case, teachers were selected who were involved in some way in the implementation of outdoor programmes (e.g. programme organisers or teachers of environmental subjects). A total of 15 interviews were conducted, in the form of individual and pair interviews. 17 people participated

in the research due to the paired interviews (there were schools where two leaders or three teachers participated). The schools were selected on the basis of previous questionnaire surveys. Among the questionnaire result, strength of the students' nature connectedness, attitudes of the teachers (including school directors) and the frequencies of implementation of free exploration in nature was taken into account. The sample was selected from schools where some of the values of the questionnaire were close to the extreme ranges. Both ends of the ranges were considered in order to obtain a heterogeneous sample. The diversity of the sample is also reflected in the size and location of the schools, as well as the mixed primary/secondary school and eco-school/not eco-school status.

In the case of eco-school/not eco-school status, it is important to know that *an eco-school differs from an ordinary school in that it applies the principles of environmental education and sustainability pedagogy not only in teaching, but in all aspects of school life, from running the school to providing meals for children and organising camps (*Source: Hungarian Institute for Educational Research and Development, web: https://ofi.oh.gov.hu/mi-az-az-okoiskola). In addition, the local environment and its problems are always part of the pedagogical work in eco-schools (also based on the previous source).

The characteristics of each school are summarised in Table 1 below:

Table 1. Characteristics of the schools participating in the research

Institution	Type	Status	Settlement
1.	primary school	eco-school	village
2.	primary and secondary school	eco-school	big rural city
3.	6 grade secondary school	not eco-school	capital (Budapest)
4.	primary and secondary school	not eco-school	big rural city
5.	primary school	eco-school	village

The heads of the institutions interviewed in each school were teachers of biology, geography, history, English, art and digital culture. The other interviewees were day-care teachers and teachers of environmental studies, biology, mathematics, history, ethics, Hungarian language and literature, English and physical education.

4. Processing the data

Grounded Theory methodology (Glaser and Strauss, 1967) was followed in the data processing. In Grounded Theory based data processing, the empirical data is broken down into different codes during the coding process and then used to create abstract categories for conceptual analysis (Charmaz, 2006; Glaser, 1978, 1998; quotes: Charmaz, 2011). This is done in a three-step process involving open, axial and selective coding. In open coding, appropriate concepts are assigned to text segments and then used to create categories, in axial coding, subcategories are created within each main category, and in selective coding, relevant categories are compared according to the theoretical background of the research (Gelencsér, 2003; Sántha, 2009; quotes: Sántha, 2012). Thus, it can be seen that in the application of Grounded Theory, the categories of analysis are formed and compared during the process of coding. For the purposes of this analysis, content categories have been distinguished. Data were analysed using the MAXQDA software package. The reliability of the results was increased by intracoding. This means that the text corpus is encoded twice or more by the same person (in this case the author) at different times. To check the reliability of the intracoding, the cohen kappa was calculated, which quantifies the extent to which the encodings differ from each other (Sántha, 2012). According to Greve and Ventura (1997), coding above a kappa value of 0.6 is acceptable (quotes: Sántha, 2012), which was taken as a guideline in the present research. As Sántha (2012) points out, in the case of Grounded Theory based data processing, only open coding can be reliably applied to intracoding. Keeping this in mind, the data processing included intracoding of the main categories (open coding), which was performed within a few days after the first coding. The kappa value for the interviews was 0.64, so the data could be reliably processed based on the intracoding codes.

5. Results and discussions

5.1. Description of the main categories

In the case of the interviews, five main categories were most relevant to the focus of the research, and these are presented below. The main categories and their definitions are summarised in Table 2 below:

Table 2. Interpretation of the main categories

Main category	Interpretation
Positives	The positive effects of free exploration in nature.
Negatives	The negatives associated with free exploration in nature.
Implementation aspects	What should you look out for when implementing free exploration in nature? How to organise this programme well? How can it be integrated into the school curriculum and organisational structure?
Barrier factors	The obstacles that prevent free exploration in nature.
Facilitating dissemination	How can the spread of these programmes be helped?

5.2. Code matrix for the main categories

5.2.1. The results of the code matrix

The results were also interpreted using a code matrix, which shows the number of codes (number of mentions) belonging to each category. Using the code matrix generated by MAXQDA, it was also possible to examine the code numbers for each category broken down by school. The code matrix below (Table 3) shows the number of codes per school for each main category:

Table 3. Code matrix for the main categories

Main categories	Not eco-school in Budapest	Not eco-school in big rural city	Eco-school in big rural city	Eco-school in village	Eco-school in village	SUM
Positives	66	65	69	48	55	303
Negatives	22	16	8	8	10	64
Implementation aspects	40	64	47	39	29	219
Barrier factors	80	64	61	54	46	305
Facilitating dissemination	40	26	21	16	10	113
SUM	248	235	206	165	150	1004

From the code matrix it can be seen that a total of 1004 codes were assigned to the different main categories, as each text fragment that carried information related to a main category was

counted as a separate code. Some information could therefore appear in several codes. Based on the results, eco-schools provided less information on the topic than not eco-schools. In addition, it can be said that the village schools provided the least information, followed by the two schools of big rural cities and the one in the capital. The not eco school in Budapest provided the most information, while one of the village eco schools provided the least. Of the main categories listed, teachers most often talked about the positives and the barrier factors. The least frequently reported topic was the negative impact of the programme. It can be seen that in the case of the school in Budapest, the barrier factors, the negatives and the ways of dissemination are more pronounced. These three categories are less prominent in rural schools, especially in schools in villages. The number of positive aspects mentioned showed less variation between schools and was a popular topic in all institutions. In the eco-school/not eco-school context, no marked differences in the pattern are apparent, apart from the number of mentions of negatives, which was higher for not eco-schools.

An interesting result is that the low mention of negatives and the high mention of positives were accompanied by a high mention of barrier factors. The reason for this is that the category of negatives refers specifically to information related to the negative impacts of the implementation of the programme. These were relatively less mentioned by respondents, with positive impacts being more typically mentioned. In contrast, the category of barrier factors included information relating to obstacles to the implementation of the programme. These partly included negative impacts during the programme (negative category), but in many cases other impacts were also mentioned (e.g. organisational or financial issues, see Chapter 5.3.4.). Overall, therefore, respondents mentioned positive impacts of the programme more than negative impacts, but a lot of information has also been coded into the barrier factors of implementation.

5.2.2 Discussing the results of the code matrix

The results suggest that attitudes towards the topic differ more in the rural/urban context than in the eco-school/not eco-school context. The responses collected in the school of the capital reflect more negative attitudes in terms of barriers, but in addition to the negative aspects of the issue, there is also a strong emphasis on facilitating dissemination, linked to changes in teacher attitudes and the education system. In contrast, a less critical attitude emerges from the rural eco-school interviews. It is important to note, however, that all five schools provided a lot of information on the positive effects of these programmes which outnumbered the negative

aspects for all institutions. This confirms the results of the questionnaire survey (see: Csonka, 2023), which showed that teachers' attitudes towards these programmes are basically positive.

5.3. Detailed description of each main category and subcategory

5.3.1. Positives

The subcategories within the positives, with their corresponding mention numbers and key information, are summarised in Table 4 below:

Table 4. Subcategories of the positive main category and their characteristics

Subcategories of the positive main category	Number of mentions	Important information
Learning	**61**	acquiring practical knowledge of the environment; deeper and more complex learning through observation of nature; more differentiated and monitorable development, including skills and competences; preparing for later independent learning processes; promoting voluntary involvement in different themes and projects; motivating students to do their homework, since in many cases the day care centre allows students to go out after writing their homework; changes in student attitudes also affect parents
Feelings, experiences	**54**	sense of wonder, freedom, happiness; children get excited and enthusiastic during the game, and at the end they get tired, which makes them more manageable; parents and teachers may also have good feelings about the program (e.g. parents are happy that their child is benefiting from it)
Psychological	**39**	students are better able to pay attention to themselves; developing other competencies than in traditional education; development of decision-making, discovery and emphatic skills; development of openness; recognition of own limits; getting to know the issues of responsibility, care, respect, separation, farewel; strengthening of creativity, sense of beauty, respect for nature and sensitivity to nature; students recognize the calming effect of the program; development of creativity (students give meaning to natural objects during the programme); the programme can be an antidote to digital addiction (e.g, the popularity of the program among students increased after the restrictions during the Covid period)
Environmental protection	**38**	the programme teaches environmental awareness, as students have to respect certain rules in order to protect the environment; students' knowledge about nature increases; students develop a sensitivity to a clean environment and may become interested in certain natural creatures; exposure to environmental pollution during the program can inspire environmentally conscious behavior later on (teacher's help is also important for this); as a result of the program, students can also get involved in

Social	27	environmental protection topics; environmental protection activities can also be carried out during the program, which can strengthen students' environmental attitudes getting to know each other; building friendships; experiencing communitiy; building community; informal conversations (even with teachers); psychological support among students; teachers get to know students better and can provide psychological support; students' behaviour can be better observed during the programme; social skills development such as cooperation, listening to each other, asserting one's own will, ability to play with children of different ages
Health and physical	19	fitness, coordination, fine motor, sense of touch development; helps to develop a healthy lifestyle later on
Others	65	puts less burden on teachers and can be implemented with less financial expenditure; solves the monotony of structured programs; helps students to better assess the possibilities and dangers of their living environment; the risk of human-to-human infections can be reduced because it takes place outdoors

The Table 4 shows that teachers most often highlighted positive aspects of learning and positive feelings/experiences within this main category.

5.3.2. Negatives

The subcategories within the negatives, with their corresponding mention numbers and key information, are summarised in Table 5 below

Table 5. Subcategories of the negative main category and their characteristics

Subcategories of the negative main category	Number of mentions	Important information
Feelings of students	16	feeling of boredom; feelings of discomfort, fear (students are becoming more fearful of nature), stress, anxiety, phobia and trauma about nature; experience of failure, because students need different competences than in the classroom; discomfort in the community; negative feelings that the environment used is not natural enough
Risks of accidents	15	endangering each other and themselves (e.g. falls, jostling, climbing on dangerous places); asthma symptoms, rotten trees, splinters, stinging plants, ticks, insect stings (e.g. wasp, bee)
Students' behiviour	8	not listening; using mobile phones; fooling around; behaving wildly; lack of interest; lack of self-control; destruction of objects; isolation from nature; many students are not aware of the positive effects of the programme; endangering peers; direct and indirect confrontations between students; disturbing strange people in the area; self-harming behaviour; environmentally harmful behaviour
Conflicts between children	5	see previous point

None or few negatives	5	the programme has no negatives or far fewer than positives
Feelings of pedagogists	4	tiring, stressful and time-consuming to teach in this way; fear of accidents (and parental reactions to them) and that students are not mastering the material what is needed for further studies; feeling of discomfort that the location is not natural enough
Parental attitudes	4	fear of accidents; bad feelings about soiling and worn clothes
Its usefulness is questionable	3	it is questionable whether the program is useful from a pedagogical point of view
Environmental degradation	2	students can damage the environment
Others	2	it does not help further education; special attention must be paid to traffic and students' disruptive behaviour towards strangers

Table 5 shows that the most frequently mentioned negative aspects of the programme were related to the feelings of students and risk of accidents.

5.3.3. Implementation aspects

The subcategories within the implementation aspects, with their corresponding mention numbers and key information, are summarised in Table 6 below:

Table 6. Subcategories of the implementation aspects main category and their characteristics

Subcategories of the negative main category	Number of mentions	Important information
Organisation (management and control issues within the programme)	96	a certain degree of teacher control is important to protect against accidents (e.g. student doing dangerous activities, going too far) and to protect children who are afraid; the age of the students is important when determining the level of control; swimming, rowing, winter sports require increased control to protect against accidents; weather conditions must be monitored; care must be taken that students do not disturb strangers and that they are careful not only with nature but also the tools they use; educators need to find the right balance between structured and unstructured programmes; it is important for teachers to avoid unnecessary control; teachers must be careful to exercise little control over the development of social relationships; it is important to clarify with students what they need to be aware of before starting the programme; teacher control can also play a role in encouraging students to participate in the programme; optional organized programs can be added to free exploration in nature as well as semi-organized programs such as talking in nature, grilling or finding natural places on your own and spending time there; with regard to day care and breaks, it is basically worth focusing on free pastime (unless the children require control or are bored); it can be an alternative version of the program if the students vote on what and how they want to do; it is important for teachers to take parents' requests into account when organizing the programs;

		the control applied during the program can also serve an educational purpose: it is possible to direct students' attention to certain things; smaller tasks can be given to the students (e.g. in relation to nature education, PE education, sensory education, fear reducing) or smaller knowledge can be transferred; in forest schools, the program can be organized in such a way that it complements what is learned at school; it is important for teachers to reflect on students' comments during the programme; with the help of the control, it is also possible to get time for everyone during the games; educational activities can be carried out not only during the program, but also before and after
Preparation	31	it is important to prepare for the programmes in advance: students should be given instructions before the programme (e.g. expected standards of behavior, risk factors, prohibited activities with an explanation of the reason for the prohibition, description of the location of the program); gradual practical preparations and exams could be necessary (e.g. for rowing, swimming, cycling, winter sports); students need to acquire orientation skills and learn how to ask for help; students need to get to know the natural places in the living environment; preparing parents for risk factors (e.g. accidents, danger of ticks, colds); it is important for teachers to assess students' needs before the programme; teachers should walk and check the routes before the tour and they must ensure the possibilities of reversal; adequate food, drink and tools should be provided for students; students should turn off their mobile phones before the program, although the use of some apps can have an educational effect; preservation and creation of green areas suitable for the program; teachers need to learn to trust children
Link to institutional operations	16	schools should have an environmental education plan that focuses on experiential learning; providing educational elements in the curriculum of schools (and teachers) that enable the program (e.g. forest schools, active tourism programs, class trips, excursions); the programme can be integrated into comprehensive school education models (e.g tourism model with different programmes); there are more opportunities for the programme during free time but it can also be done during lessons (rather in lower secondary school), day centres and breaks; these programmes should be addressed by teachers' working groups with dedicated teachers; specific meetings can be organised on the subject; it is important to have a large and committed team of science teachers in schools who can also deal with these programmes; the organisational culture of schools should be supportive of the programme
Age	10	the age of the students is important when organising these programmes; it is worth starting the programme for children at an early age; students in grades 1-4 need more guidance; it is important that the characteristics of the programmes (e.g. duration, distance from the site) vary gradually with age; students

		are able to decide what to do by about 3-4th grade, and their interest in the programme tends to wane after 8th grade
Others	**66**	teachers should consciously organise time outdoors as often and as varied as possible; students need to go more often, but for shorter periods to natural places outside school; in the case of the forest school 5-day implementation is appropriate; lessons on the environment should include taking children outside the four walls; there should be a lesson in the woods every week where possible; on weekdays, Fridays may be more suitable for these activities; muddy weather is not necessarily an obstacle to the organisation of the programme; the more natural the implementation site, the better; even if the schoolyard has good facilities, it is still worth taking walks outside the school; nature-based programmes are also important for children in rural areas; the curriculum for the programme should incorporate local specificities and take into account the eco-school label and other environmental programmes where relevant; preference should be given to closer locations; students should have the opportunity to talk to the teacher during the programme, who should be interested in the students; children should be reminded to check themselves after programmes to reduce the risk of ticks; if students become overheated or wet, they should be moved to a safe place; students should be encouraged to be aware of strange people and traffic; programmes should be organised in accordance with the legal requirement of 1 teacher for every 10 children in outside schools

The most frequently raised implementation aspect was the level of organisation of the programme. A large number of responses were received on how and for what purpose these informal programmes could be made more controlled and managed.

5.3.4. Barrier factors

The subcategories within the barrier factors, with their corresponding mention numbers and key information, are summarised in Table 7 below:

Table 7. Subcategories of the barrier factors main category and their characteristics

Subcategories of the barrier factors main category	Number of mentions	Important information
Environment, weather	**54**	lack or elimination of green areas; extreme weather conditions (with flu epidemic is particularly problematic)
Students	**51**	students' negative behaviours and feelings (see negatives/students' behaviour); age-related factors (see implementation aspects/age); in addition: students' possible physical abilities and personalities; students can bring the dirt inside the school after the programme

Curriculum, education system	34	traditional education system can be a barrier to the implementation, from which it is difficult to exit; the programme is not included in the National Core Curriculum (NCC); the NCC contains unnecessary teaching materials (which takes time away from the programme) and does not focus on learning about the local environment; the NCC changes rapidly; the opinion of educators takes a back seat when the NCC is created; too much emphasis on digital education; the school leaving certificate system does not support the organisation of such programmes; large amounts of homework; 45-minute lessons are too short; too few double lessons; there is rarely suitable lessons for the programme at the beginning or end of the day (which could help to increase the duration); project days and lessons are not harmonised; outdoor programmes are organised too infrequently but are often too long
Teachers, heads of institutions	34	see: negatives/feelings of pedagogists In addition: adherence to traditional pedagogical methods (e.g. strong emphasis on information transfer); questioning the usefulness of the programme; shying away from new methods; the need to comply with curricula; lessons may be cancelled because of the programme, which could lead to conflict between teachers; both the presence of an accompanying teacher and independent team leadership can cause problems; most teachers need a little managerial pressure to organise such programmes, but many are not motivated to do so; the programme often requires licences and administrative procedures; implementation of the programme requires cooperation between teachers, which can be a source of conflict (e.g. clashes with lessons and programmes; joint organisation); teachers must prepare for the programmes and assess students' needs; not all teachers are able to sufficiently suppress their own will during the programme; the frequency of the programmes is also determined by the attitude of the heads of the institutions; some teachers may be distracted by the responsibilities of the programme or may not be able to manage or find it difficult to manage children
Lack of time	32	both students and teachers have little time for the programme; reasons: too many lessons; compulsory programmes for students in the afternoon (e.g. trainings, extra lessons), more opportunities at day care, but not all students participate; other day care tasks (e.g. homework writing); as activities outside the schools require one teacher for every ten pupils, the time of the accompanying teacher must be freed up
Money	17	many teachers do not take on the extra work involved in the programme because they believe their salaries are too low and their overtime is not paid; schools' autonomy to fund these programmes is limited; there is no public funding for these programmes and related trainings, physical environment transformations; the lack of public funding also affects forest schools, which find it difficult to promote themselves
Risks of accidents	16	see negatives/risk of accidents

Parents	**14**	some parents are not supportive of these programmes, e.g. they think it takes time away from writing homework, dangerous to to their child, their child gets dirty, their child's clothes get ruined; some parents prioritise the use of digital tools or doing other types of programmes; parents can instil fears in children about nature or fail to resolve past bad experiences; some parents cannot afford the programme or do not want to pay for it; parents often have to arrange transport down to the programme site which may cause difficulties; families are hiking less than in the past
Others	**53**	some programmes require a more organised form (e.g. swimming, rowing, skiing); high performance expectations for students (loss of free time); children are released from lessons at different times; children start and leave day care at different times; few people teaching teachers new pedagogical methods; possible epidemiological regulations may also complicate implementation, as additional safety aspects need to be taken into account

Table 7 shows that the most frequently cited barriers were related to school environment, weather and student behaviour.

5.3.5. Facilitating dissemination

The subcategories within the facilitating dissemination, with their corresponding mention numbers and key information, are summarised in Table 8 below:

Table 8. Subcategories of the facilitating dissemination main category and their characteristics

Subcategories of the facilitating dissemination main category	Number of mentions	Important information
Education structure, professional content, decision-makers	**27**	reducing NCC constraints and removing unnecessary learning materials; increased communication between decision-makers and teachers; change of mindset of decision-makers (recognition of the importance of the programme); elimination of time pressure; reducing the burden on students; more age-appropriate education; move towards project-based and experiental education; better harmonisation of curriculum and project days; a baccalaureate system that supports experiential learning; greater consultation of teachers when the NCC is drawn up; inclusion of the method in the NCC (if the majority of teachers agree); slowing down the pace of change in the curriculum; effective blocking of lessons; more frequent but shorter outdoor programmes; compulsory forrest schools
Teachers' change of mindset	**13**	trainings and discourses can help teachers to change their attitudes towards free exploration in nature; fostering the development of supportive teacher communities

Exchange of experiences	**12**	publishing and online sharing these programmes; sharing teacher portfolios; creating online platforms and databases to share experiences and make recommendations; field leaders should be involved in the training and further training of teachers
Mecenature	**9**	removing financial obstacles (see barrier factors/money)
Others	**52**	educating students about the learning impact of the programme; preparing students for nature and its dangers; familiarising students with suitable sites for the programme; focus on semi-organised activities (e.g. talks in nature, bonfire lighting); assessing and making better use of the environment around schools; creation and reclamation of green areas; installation of outdoor toys; providing schools with their own natural area for education; implementing schoolyard animal husbandry with student involvement; fostering a supportive parental environment; putting mild pressure on teachers to implement these programmes; sharing and routinising the paperwork involved in the programmes; establishing links with external actors involved in the organisation of such programmes (e.g. friends, volunteers, organisations); strengthening the links between schools and local authorities; better use of forest schools, possibly propagating them; better teacher communities at institutional level; presence of enthusiastic teachers in school communities who are involved in organising the programme; implementation of the programme as a leisure activity; research and surveys on the subject

It can be said that a wide range of ways of facilitating dissemination were mentioned by the interviewees, a significant number of which were so diverse that they were not listed as a separate subcategory (they were listed in the subcategory 'other', which had the highest number of mentions).

6. Conclusions

The qualitative study helped to isolate important aspects of free exploration in nature in school context. The programme have several positive impacts, which relate to educational and, as part of this, EE effects (e.g. experiential knowledge, learning about the local environment, development of competences, strengthening of environmental attitudes, development of environmentally conscious behaviour). In addition, the information mentioned within this main category was linked to the positive feelings (e.g. happiness, freedom, wonder), psychological effects (e.g. development of openness, decision-making, creativity; recognition of own limits), social effects (e.g. community building, development of social skills such as cooperation) and the development of physical health (e.g. fitness, coordination, fine motor skills). There are also negative aspects of the programme, such as negative feelings of students (e.g. boredom, fear),

students' behaviour (e.g. endangering others, themselves and the environment), conflicts between students, risk of accidents, negative feelings of teachers and parents (e.g. students not learning the material; fear of accidents). One of the most important categories was the implementation aspects, within which the teacher control (e.g. in order to avoid accidents, control bored children, offer activity options, use semi-structured activities, draw children's attention to certain phenomena, provide small tasks during, before or after the programme) was a key issue. Within the category of implementation aspects other topics were also raised such as the preparation for the programme (e.g. pre-education of students, pre-touring of hiking routes, provision of food and drink for students), the integration of the programme into school life (e.g. integrating implementation support elements in the schools' curricula; involving school working groups in the work of the programme) and age related topics (e.g. organising age-appropriate programmes, starting the programme at an early age). A large number of teachers also mentioned obstacles to the implementation of the programme, such as environmental and weather conditions (e.g. lack of green areas near schools; extreme weather conditions), student-related factors (e.g. negative feelings and behaviours, age, physical abilities, personalities), factors related to the educational system (the programme is not included in the NCC; redundant curricula; inadequate graduation system; 45-minute lessons), factors related to teachers and directors (e.g. adherence to traditional teaching models; fears among teachers, conflicts between teachers, administrative and preparation difficulties, attitudes of the directors), time constraints (both for teachers and students, e.g. afternoon programmes; too many lessons), financial factors (e.g. lack of autonomy of schools; lack of subsidies; combination of low salaries and lack of overtime payments), risk of accidents, parental attitudes (e.g. fear of accidents; preference for other activities; transfer of fears to children; negative attitudes towards costs). Respondents also talked about how these programmes could be disseminated. This can be achieved by changing the approach of the education system and policy makers (e.g. reducing NCC constraints such as removing unnecessary curricular units, enhancing experiential and project learning; eliminating time pressure and overload; better communication between policy makers and teachers), changing teachers' attitudes (e.g. organising trainings, discussions; strengthening teacher communities), sharing experiences (e.g. sharing programmes and teacher portfolios; creating online platforms and databases) and removing financial barriers.

This research has also opened the door to future representative sample studies, which can be extended to a more comprehensive analysis of the information contained in each subcategory.

A quantitative study of the topic could involve not only teachers and heads of institutions, but also students and parents. It would also be important to raise awareness in the community of educators that free exploration in nature can be seen as a pedagogical tool with a specific place and role in education. Finally, it would be important to inform teachers about the positive and negative aspects of the programme, its implementation aspects and possibilities, and ways of promoting its dissemination.

Acknowledgement

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