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**PRIMARY GRADES TEACHERS’ PERCEPTIONS OF LEARNING  
ACTIVITIES IN NATURE**

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***Abstract***

Knowing the environment is very important for primary grades pupils so that they understand the world they are living in, to be able to valorise it appropriately and to be able to adapt as well as possible. In this paper, we analyse primary grades teachers’ opinions from the urban area of Romania (Mureş County) related to the activities with their pupils, taking place in nature. In order to know their opinions, we administered a questionnaire with questions about the objectives and the typology of activities, organisation frequency, number of participating pupils, the places where those activities took place and their benefits. A significant number of teachers organised 2-4 activities in nature, with pupils from their own classes, during the 2016-2017 school year, especially during outdoor type activities, hiking, and trips. Their favourite places for these activities were the city parks and to a lesser extent the woods and meadows. The most important aims of the activities in nature were learning by experimenting, identifying certain environmental components, and their features, and pupils’ relaxation through movement and games. We proposed identifying the difficulties that teachers have to face when organising those activities and investigating also rural area teachers’ opinions about these activities and finding out solutions.

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**Keywords:** Mathematics and Environmental Exploration, urban area, hiking, trip, investigation, observation.



## 1. Introduction

Knowing the environment is very important for primary grades pupils so that they understand the world they are living in, to be able to valorise it appropriately and to be able to adapt as well as possible (Dulamă & Ilovan, 2015, 2017). Good knowledge about the environment supposes that the respective person has a structured knowledge system about it, about its components and the relationships among them, about its functionality (Dulamă, 2010).

In the *School Curriculum for the Discipline Mathematics and Environmental Exploration. The Preparatory, the 1<sup>st</sup> and the 2<sup>nd</sup> Grades* (M.E.N., 2013) and in many didactics papers, they recommend developing activities in nature so that pupils form their competences characteristic of Environmental Exploration and of Nature Sciences (Dulamă & Magdaş, 2014). The primary grades teachers are aware of the importance of activities in nature for their pupils to achieve knowledge in the fields of Mathematics and Geography, and to form certain abilities (Magdaş, Buzilă, Dulamă, Ilovan, & Buzilă, 2017; Magdaş, Dulamă, Ilovan, & Crişan, 2017b).

The studies and papers in the Didactics of Geography recommend organising these activities in the settlement of residency so that to enable pupils' in-depth understanding of this and the valorisation of this learning context. The natural heritage of the periurban areas represent, at the same time, an optimum space for study (Ilovan, 2007). The teachers in Romania organise activities in nature in the proximity of streams, in the wooded area (Dulamă, Ilovan, Magdaş, & Răcăşan, 2016; Dulamă, Ilovan, & Magdaş, 2017), and in national parks (Havadi-Nagy & Ilovan, 2013; Ilovan & Dulamă, 2006). The teachers in Romania consider that the activities organized in nature/in the natural environment, are valuable in environmental education and in education for sustainable development in our country (Ilovan et al., 2018). To increase the efficiency of the learning activities, the scientific literature recommends that teachers offer feedforward and feedback to their pupils (Dulamă & Ilovan, 2016).

## 2. Problem Statement

At present, in Romania, one may notice that teachers organise many visits, hiking activities, and trips, at different moments during the school year (at the end of the week or during the week called "School in another way"), and during school holidays. During many of these extracurricular activities, the focus is on visiting human made objectives and landscapes and, to a lesser extent, on the natural objectives and landscapes. Through the direct observation of the activities organised by teachers, from the discussions we had with them and with their pupils, during the above-mentioned activities, we noticed the trend to organise activities in nature, but without naming the aims or objectives that the pupils should achieve under their teachers' supervision. According to our previous observations, we deduce that the activities in nature, organised in the Romanian education system, are not valorised in an optimal manner for educational purposes. This was the reason why we wanted to know teachers' opinions about these issues.

## 3. Research Questions

In this research, we look for answers to several questions: What is the frequency of teachers' organising activities in nature? What are the size and features of pupils groups that take part at activities

in nature? What are the organisation forms and typology of the learning activities in nature? Which are the places where learning activities in nature took place? Which is the contents of these activities? Which are the objectives and benefits of these learning activities organised in nature for pupils?

#### **4. Purpose of the Study**

The purpose of this research is to know the primary grades teachers' opinions about organising, in formal contexts, the learning activities in nature, with their pupils, and to find out their perceptions about the aims and benefits of these activities on children's development and personality. The obtained results may be used with the aim to propose measures for increasing the role and efficiency of these activities during the primary grades.

#### **5. Research Methods**

##### **5.1. Procedure**

To achieve the research aim and answer the research questions, we collected the data using the questionnaire survey realised in *Google Drive*, with *Google Forms* application. The period for collecting the data was May 2017. The questionnaire had 10 items. Out of these, seven were dual choice, four were multiple choice, two required choosing answers on a 5 point Likert scale where 0 signifies "to a small degree" and 4 "to a high degree". Two items required an open answer. We processed statistically the obtained data, in Excel.

##### **5.2. Participants**

20 primary grades teachers filled in the questionnaire on a voluntary basis. Out of these respondents, 35% have over 20 years of experience in the education system, 25% have an experience between 11 and 20 years, 20% have didactic experience between 5 and 10 years, and 20% have less than 5 years. All respondents were women. Most of the respondent teachers currently work at the 1<sup>st</sup> grade and the smallest number at the 3<sup>rd</sup> grade (10%). At the preparatory and the 2<sup>nd</sup> grades currently work 20% of the teachers, for each, and for the 4<sup>th</sup> grade currently work 25% of the surveyed teachers. One teacher works in the simultaneous classes system. The small number of participants does not allow for results generalisation, but offer an image that corresponds to the researchers' perceptions of organising learning activities in nature, perceptions that have been formed through observation during a long period.

##### **5.3. Research material**

It was represented by the teachers' answers, of those who filled in the questionnaire on the activities that took place in nature during the 2016-2017 school year.

#### **6. Findings**

After administering the questionnaire to the primary grades teachers and processing their answers, we reached several to several results related to the activities organised in nature. Related to the *frequency of organising activities in nature*, all primary grades teachers that filled in our questionnaire had organised activities in nature, with their own class, during the 2016-2017 school year (Table 1). 25% of

the teachers organised such an activity, 20% organised two activities, 30% organised three activities, 20% four such activities, and one teacher more than four activities in nature.

Related to the *features of the pupils groups* that participated to the learning activities in nature, organised by these teachers in the 2016-2017 school year, 95% of the respondents argue that these groups were made of pupils from the same class. Even though 30% of the teachers organised activities in nature with pupils from several classes in the same grade, 70% of the respondents said that they participated at such activities organised by diverse teachers. Although 15% of the teachers organised activities with pupils from several classes in different grades, 30% of them argue that they got involved into activities at which pupils from other classes participated. We noticed the teachers' propensity to organise activities in nature with their own class probably because such activities were easier to organise and control. Similarly, we noticed the teachers' stronger involvement in activities organised by other teachers.

Taking into account the fact that most of the primary grades teachers organised learning activities in nature, with pupils from their own classes, the size of most of the groups was between 16 and 30 pupils (40%) (Table 1). 30% of the teachers participated to learning activities in nature with quite numerous groups, between 31 and 60 pupils, probably from two classes. Very few respondents (3%) participated at activities in nature with very numerous groups of pupils (between 60 and 100), as maybe those were organised at the level of their school.

**Table 01.** Size of the pupils groups participating at activities in nature

Size of the pupils groups participating at activities in nature	Respondents (%)
Including less than 15 pupils	15
16-30 pupils	40
31-60 pupils	30
60-100 pupils	15
Including more than 100 pupils	-

*The types of activities in nature* that the primary grades teachers preferred to organise during the 2016-2017 school year were the following: walks (65%), trips (55%), hiking (40%), and thematic visits (40%). They realised such activities in diverse places in nature: city parks (80% of the respondents), deciduous forests (35%), meadows (35%), and nearby streams (35%) (Table 2). The places in nature where they organised the smallest number of activities are the groves (15%) and the coniferous woods (15%), maybe because nearby the settlements where the respective schools were, there were no such environments. The big percentage of activities taking place in the city parks has the explanation in the fact that 75% of the respondents work in the urban area.

According to these teachers' opinions, the most important aims of activities in nature were: relaxing pupils through movement ( $m = 3.45$ ) and games ( $m = 3.35$ ), recognising plants and animals ( $m = 3.40$ ) and identifying certain environmental components and their features ( $m = 3.35$ ) (Table 2). Other important objectives were the following: comparing certain environmental components and their features, strengthening pupils' bodies, and measuring things. The least important ones were considered digging in the earth and climbing trees.

**Table 02.** Importance of the objectives for learning activities in nature

Objectives for learning activities	Weighted mean value
Relaxing pupils through movement	3.45
Recognising plants and animals	3.40
Relaxing pupils through games	3.35
Identifying certain environmental components and their features	3.35
Analysing certain environmental components and their features	3.20
Comparing certain environmental components and their features	3.15
Planting plants	3.15
Strengthening pupils' bodies	3.05
Collecting materials from nature	3.05
Measuring things from nature	3.00
Perceiving certain features of the environmental components	2.95
Estimating the size of things from nature	2.90
Digging in the earth	1.75
Climbing trees	1.40
Other objectives	2.70

We asked teachers to assign scores from 0 to 4, depending on the frequency of organising certain learning activities in nature, during the 2016-2017 school year (0 = not at all; 1 = rarely; 2 = average frequency; 3 = frequently; 4 = very often). According to Table 3, one can notice that the mentioned organised learning activities had an average frequency (below  $m = 3.10$ ). With the highest frequency were organised the activities for comparing the sizes of things ( $m = 3.10$ ), for identifying/analysing colours ( $m = 2.95$ ), smells ( $m = 2.85$ ), planting plants ( $m = 2.75$ ). The lowest frequency was for climbing trees, digging the earth, and identifying/analysing the shades of things.

**Table 03.** Frequency of organising certain learning activities in nature

Learning activities	Weighted mean value
Comparing the sizes of things	3.10
Perceiving/identifying/analysing colours	2.95
Perceiving/identifying/analysing smells	2.85
Planting plants	2.75
Perceiving/identifying/analysing sounds (noise)	2.70
Perceiving/identifying/analysing tastes of fruit /vegetables	2.70
Perceiving/identifying/analysing forms	2.65
Perceiving/identifying/analysing sizes	2.65
Comparing the colours of things	2.60
Recognising plants and animals	2.60
Comparing the forms of things	2.55
Comparing the shadows of things	2.50
Comparing sounds	2.45
Comparing the taste of fruit /vegetables	2.40
Perceiving/identifying/analysing the skyline	2.20
Perceiving/identifying/analysing the texture of some surfaces	2.20
Collecting objects from nature	2.15
Estimating the dimensions of some elements from nature	2.10
Perceiving/identifying/analysing the movement of animals	2.05
Comparing the aspect of the skyline	2.05
Measuring the sizes of elements from nature	2.05
Comparing the texture of surfaces	1.95
Comparing the movement of animals	1.95
Perceiving/identifying/analysing the shadows of things	1.65
Digging in the earths	1.50
Climbing trees	1.05
Other types of activities	2.05

With the aim to identify the characteristic features of the contents specific to learning activities in nature, we asked teachers to name the disciplines within which they had realised those activities. During these activities organised in nature, they focused on contents specific to several disciplines. 65% of the respondents organised frequently learning activities in nature for *Mathematics and Environmental Exploration*. Other disciplines that the respondents enumerated as the ones where they had organised such activities in nature were: *Sciences of Nature, Visual Arts and Practical Abilities, Music and Movement, Physical Education and Sport, and Geography*.

**Table 04.** Disciplines whose contents were the focus of the learning activities in nature

Discipline	Respondents (%)
Mathematics and Environmental Exploration	65
Sciences of Nature (3 <sup>rd</sup> and 4 <sup>th</sup> grade)	50
Geography	45
Music and Movement (the preparatory, 1 <sup>st</sup> and 2 <sup>nd</sup> grades)	35
Games and Movement (the 3 <sup>rd</sup> and 4 <sup>th</sup> grades)	35
Physical Education and Sport	25
Visual Arts and Practical Abilities	25

To identify the benefits for pupils of the learning activities organised in nature, we asked teachers a question with an open-ended answer: “How do you appreciate pupils’ involvement in these activities?” 40% of the surveyed primary grades teachers argued that these learning activities organised in nature allowed pupils to get actively involved and stimulated their curiosity (40%), these activities produced satisfaction (30%), they offered the optimum context for games and relaxation in the open air (15%), and they offered the opportunity of contact and of direct observation upon the natural environment (15%) (Table 04).

## 7. Conclusion

At the end of this research related to organising activities in nature by the primary grades teachers, we reached several conclusions. Almost two thirds of the teachers said they organised 2-4 activities in nature during the 2016-2017 school year and that indicated teachers’ interest in and care for such activities. Almost all of them organised activities with the pupils from their own classes. The preferred and most of the organised activities were the walks and the trips. The preferred places to develop these activities with pupils were the city parks, due to their proximity, and to a lesser extent the forests and meadows, these being usually at a longer distance from the urban centres where the respondents lived. The most important aims of the activities in nature were relaxing the pupils through movement and games, as well as identifying certain environmental components and their features. Most of the activities in nature focused on contents from the discipline Mathematics and Environmental Exploration. These results mainly showed urban primary grades teachers’ perceptions and behaviours related to the organisation and benefits of activities in nature for pupils. Therefore, we think it is important to further investigate the difficulties that primary grades teachers in the rural area cope with and their opinions on organising learning activities in nature

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