

## ENVIRONMENTAL AWARENESS AMONG THE CHILDREN IN NOVI SAD CITY

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### **Abstract**

Education on environmental protection must be realized throughout the entire education period, from pre-school age, in order to create a model of responsible behavior towards the environment. In order to assess the environmental awareness among children, a survey was conducted among children aged 6 to 12, who attend preschool and elementary schools at the territory of Novi Sad. The purpose of the work is to show wheather the children are aware of the problems of environmental and nature disorders and pollution, with which they most often associate the term "environment".

### **Introduction**

Schools are a significant factor in developing awareness and behavior of children. It is important that from the beginning of children's education, to introduce to children and get them familiar with basic knowledge and concepts of environmental protection. Pre-school children are considered to accepted and adopting knowledge and behaviors of adult at the most, ie parents and teachers [1]. Particularly important issue in knowledge transfer is the teacher's commitment to children, from pre-school age. People involved in children's education, pre-school teachers, school teachers and trainers of children are responsible for shaping the children's attitudes, values and skills needed to develop environmental care [2]. The results of a survey conducted among teachers in the South-Backa District show that only 35% of teachers in preschool institutions have strong interest in implementing environmental activities, and as much as 54% think they are not sufficiently trained to carry out educational work in this field [ 3].

Environmental education has recently become a part of teaching system in Serbia. It is teach, depending on the age, as a separate course or educational content within the activities of pre-school institutions, or as part of courses like nature and/or society, or biology, chemistry, geography and physics, or vocational subjects in secondary schools [4]. Legal obligation for preschools is a program of rest and recreation, climate recovery and teaching in nature, in order to form positive attitudes towards nature and its protection [5]. In the curricula of elementary schools in the Republic of Serbia, from the first to the fourth grade, ecological and environmental contents are mostly represented in the subjects "The world around us" and "Nature and society". In the first and second grade, the share of "The World around Us" makes up about 10% of the total number of hours of regular education [6]. Knowledge of environmental protection is important in order to develop the correct ecological behavior and to undertake correct actions in order to protect the nature and environment. Promotion of ecological education is necessary as it seen as a key component in environmental education and a prerequisite for ecological behavior [7]. The aim of this paper is to examine the child's perception of environmental protection, as well as their behavior, which contribute to a minor disruption of the environment.

## **Experimental**

Using random sample method, a questionnaire was conducted among children from 6 to 12 years. The research involved 25 respondents, and the research was conducted at the Festival of Science and Education in Novi Sad as a part of workshop organized at the Festival. Research was conducted using questionnaire in print form and in direct contact with respondents. The children responded to questions independently but in some situations when respondents was from pre-school, they need a help to read and understand certain questions. Questionnaire was used as tool to obtain the necessary data for research. Questionnaire had two parts, first one in which the respondents answer the standard questions on gender and age, and second part was questionnaire questions (Q):

- Q1: Do you turn off the tap while you brush your teeth?
- Q2: Do we need to re-use the used things?
- Q3: Do you turn off the light when you are not in the room?
- Q4: Do you play in the park and spend the time in nature?
- Q5: Do you use both sides of the paper when writing / drawing?
- Q6: Do we need to use pesticides (chemicals) in our gardens?
- Q7: Do you throw waste into the garbage bin?
- Q8: Do you study in school about how to protect the environment?
- Q9: Have you made objects/figures from recycled materials with a teacher/educator?
- Q10: Do you think we need do the most to protect the nature and environment?
- Q11: How do you protect the environment?
- Q12: When you think of environmental protection, what comes to your mind first?

Available answers to questionnaires from Q1 to Q7 were as follows: a) always, b) sometimes and c) never. Answers to Q8 and Q9 were: a) Yes, b) I do not know, and c) No, while for Q10, Q11 and Q12, respondents was free to write the answer.

## **Results and discussion**

Structure of respondents based on age and gender is given in Figure 1 and Figure 2, respectively.

A total of 25 respondents took part in the survey, of which 14 boys and 11 girls. According to age, the structure of the respondents is as follows:

- children aged 6 and 7 years - 7 respondents,
- children aged 8 and 9 years - 10 examinees and
- children aged 10.11 and 12 years - 8 subjects.

The analysis was conducted by a random sample method and one can notice almost equal distribution of respondents both by sex and age.

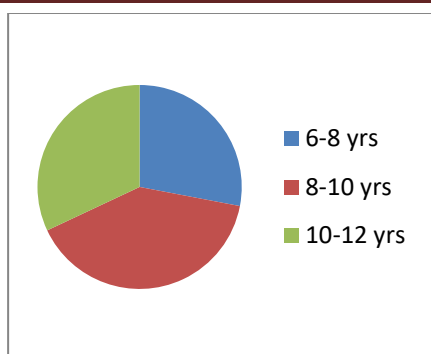


Figure 2. Respondents age

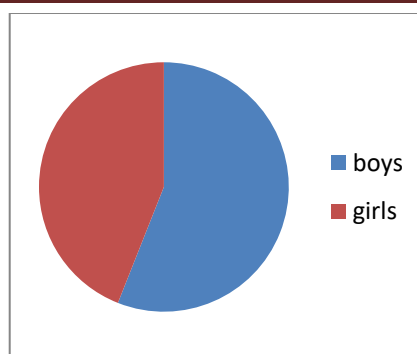


Figure 1. Respondents gender

In following tables, responses to questions were analyzed and presented as a percentage of total answers for each question (%).

Table 1. Distribution of answers from Q1 to Q7 (%)

Questionnaire question	Always	Rare	Never
Q1	16	28	56
Q2	36	52	12
Q3	92	8	0
Q4	52	44	4
Q5	40	40	20
Q6	4	36	60
Q7	92	4	4

Table 2. Distribution of answers for Q8 and Q9 (%)

Questionnaire question	Yes	I do not know	No
Q8	96	0	4
Q9	44	4	52

Questions related to environmental protection, Q1, whether you turn off the tap while you brush your teeth, 56% of the respondents gave a positive response. Majority of respondents (96%) turn-off the light when they do not stay in the room, and 60% think that we should never use chemicals in the gardens. Almost all surveyed children (96%) gave a positive answer to the question of whether they learned about how to protect the environment. At the same time, Q8 is an indicator how much attention do the children pay to this topic and their interest about environmental protection. However, more than half of respondents (52%) answered that they did not have recycling workshops in kindergarten / school, which implies the need for different trainings for teachers in the field of environmental protection and necessity to design workshops adapted to children of different ages. Q10 refers to increasing environmental care and 24 children responded that we should take more care of the environment. Reasons are mainly associated with waste pollution and excessive nature pollution. Children believe that taking care of the environment also concerns the health of people, and in the answers we can found that the children are familiar with the term “principle of environmental sustainability”, in the sense that nature should be preserved for future generations. Children’s contribution environmental protection is in most of the responses is related to the waste separation (68%). Also, they perceive water saving as an contribution to environmental protection as well as recycling, and planting. The first

association to environmental protection is nature and preservation of nature from pollution, as well as recycling and waste disposal.

### **Conclusion**

The aim of this work was to obtain the data and information about the children's awareness regarding environmental protection. In order to do it, questionnaire with 10 questions was prepared to conduct the analysis and obtain the relevant data. A survey was conducted among pre-school children and younger primary school children which shows that the children are aware about the problem of environmental protection, namely aware of waste dumping and waste pollution. Their behavior is reflected in waste separation in designated places. There is also awareness of the need for saving water and electricity. Certain answers nevertheless indicate insufficient activity in kindergartens and schools, in terms of maintenance of recycling and other ecological workshops. This analysis showed that there is a need for additional plans and programs in our country in order to promote the environmental protection rise the awareness about the problem related to environmental pollution, from preschools to universities.

It can be noticed that there were no responses in children's free responses regarding the wastewater and water pollution, air pollution due to traffic and industry. This indicates the necessity of expanding theoretical and practical activities that would expand the awareness of children in that segment. Education on the environmental protection should take place throughout the life and should be implemented from the beginning of education, from preschool to higher levels of education including after college education. This could be done through the promotions of activities in environmental protection which need to be carried out continuously.

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