

THE PECULARITIES OF THE EXTRACURRICULAR ACTIVITIES OF PRIMARY NATURAL SCIENCE EDUCATION

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Dear Readers!

The extracurricular activities of natural science education (EANSE) is one of the most significant fields of natural science education. The field hides inside numerous opportunities of choice. Whatever advanced natural science education is – it omits the functions and do not provide the opportunities that could be offered by the EANSE. Teaching is not and cannot be limited only by classes at any stage of the educational system. Pupils gain new experience in the extracurricular activities that is very important to broadening of creativity and other properties relevant to modern life. The usage of the latest information technologies, communication and cooperation, group work, the change of ideas and a critical approach towards social reality are the greatest abilities of human being in a new century. School has to devote an exceptional attitude towards its development. Hence, the system of extracurricular activities should exhaustively be used as this is a place where schoolchildren can acquire knowledge and experience that cannot be obtained at school, i.e. different methods can be applied and the attitude that they are the users of nature as well as responsible for its evolution and protection can be fostered. It should be remembered that an affective value-based aspect is very important to the correlation with nature. It includes a need to feel concern about the environment, to communicate with nature and to feel being an integral part of it (Makarskaitė, 1995).

At the juncture of the 20th–21st centuries industrial society changed human approaches towards nature. Nature has lost its sacramentalism and magical power. The rapid development of science and technology has settled down the ecology „crisis“. Plenty of negative phenomena in terms of nature have arisen due to unambiguous thinking and aloofness towards environment and nature. The Johannesburg declaration of 4 September 2002 describing balanced development called „From Our Origin to the Future“ emphasizes that the world environment is further devastated. Bio-diversity vanishes, fish resources run lower, more and more loam develops into the desert, fatal climate consequences become evident, natural disasters take place more frequently and lead to severe outcomes, developing countries emerge as more contravened, etc. To solve the problems, it is necessary to acknowledge nature, to treasure its resources as well as to train human being from the very childhood, to foster his/her positive interaction with nature and its phenomena. The earlier natural culture foundations are built, the better value-based relations between human being and nature are grasped.

A chosen type of extracurricular activities after school quasi extends and complements the class as knowledge is transformed into experience and indicates the possibilities of their practic appliance. Ac-

According to Prof. Šapokienė, the activity helps to better understand the laws of nature in a real correlation with reality, develops understanding about the wholeness of the native land, encourages the research, observation and environment control, etc. (Šapokienė, 1995). Exceptional attention should be kept to the EANSE research in primary school as this age range is very beneficial to fostering interaction with nature, respect for life and to cherishing other relevant personal properties. However, little research has been conducted in the discussed field. The situation differs in the foreign literature of educology as findings here are the field of interest (Wellington, 1996). A direct link between children's interests and the effectiveness of the teacher's work including teaching topics of nature in primary school is the object of research (Sullivan, 1979; Dawson, 2000). Designed extracurricular activities of primary natural science education (Osler, 1994), a concept of balanced development in primary school (Summers, 2000; Kruger, 2000 etc.) and other pedagogic phenomena of the EANSE are assessed.

Extracurricular activities are defined rather differently. Despite the diversity of opinions, all authors agree that the extracurricular activities of natural science education are a very important component of the whole educational system. Three ways of extracurricular activities are distinguished in Lithuania:

- formal (centres, sections of the young naturalists, etc.);
- informal (coteries, organizations and clubs of naturalists, etc.);
- non-formal (the media, etc.).

Lithuanian extracurricular activities of natural science education are mainly informal and very rarely – non-formal. The concept of Lithuanian education (1992) states that „a pupil or student can additionally develop his/her abilities, advance cognitive interests and the need of self-expression in the institutions of the coherent educational system“. However, the extracurricular activities of natural science education need certain conditions to be established. The assessment of the extracurricular activities of the foreign institutions (Zaleskienė, 1993) reveals two main tendencies of pupils' activities:

- cognitive-technical;
- ecologic-exploratory.

The majority of the foreign countries have an explicated network of the institutions engaged in learners' extracurricular activities. There are a number of different clubs, organizations, societies that offer different curricula of natural sciences. Lithuanian extracurricular activities of natural science education have deep-rooted traditions. Lithuanian school ran various coteries, cells, etc. in 1918–1940. The extracurricular activities of natural science education of the Soviet period did not gain wider dimensions. Moreover, closer attention was devoted to teaching individual subjects at school. Lithuanian extracurricular activities of natural science education of the year 1990–2010 were developed pretty rapidly. In general, extracurricular activities are a wonderful means of meaningful occupation of children. For example, more than 100 thousand Lithuanian pupils participated in different programmes, sections, contests and other events of the national extracurricular activities institutions in 1995 (Makarskaitė, 1998). The present national centre of the young naturalists and 8 naturalists' sections count more than 3 thousand pupils.

We suppose that the main reasons encouraging to turn more careful attention to extracurricular activities of natural science education are as follows:

- the primary school curriculum is wide and includes different fields of science;
- according to teaching curriculum, natural science education is directly dedicated two classes per week while the native language has 7–8, mathematics – 4–5 hours;
- extracurricular activities compensate some drawbacks of the training process as well as supplement it directly: impart information, generate interests within the process of practical activities, broaden experience, improve knowledge;
- in a way the pupil is free from the teacher and obligatory learning.

Schoolchildren can immediately join the actions of nature protection, are attached to conditions to better acknowledge, enjoy and protect nature, they can apply the undertakings of the great respect for life in the process of the extracurricular activities of natural science education. Everything mentioned is the basis to foster moral values such as responsibility, sincerity, respect for environment and human being. The extracurricular activities of natural science education seem to be the medium for the child where s/he feels to be safe, protects others, transfers his / her abilities and attention to an environment that is the place to live and to act.

„Club activities are just as an important structure that stays in the background of the changes of paradigms as well as a precondition to train individual value-based maturity. It is significant to the process of strengthening the interaction with nature and life as knowledge without this relation fades out or is rejected. However, the overloaded school curricula are still preventing from the interaction establishment. Moreover, crimes, narcotic addiction, alcoholism and other anti-social habits proliferate among the young people. Fight with the mentioned mischief most frequently is the battle with outcomes not with reasons. Try to involve pupils into the heightened activity and we will avoid numerous adversities“ (Šapokienė, 2001, p.12).

Some educators assert that the extracurricular activities of natural science education should combine broadening of knowledge and experience that cannot be obtained at school. In other words, the extracurricular activities of natural science education are treated bearing in mind the exact meaning of the word – “to plug” the gaps of formal natural science education.

Ability to feel inward relations with nature is extremely important to the pupils of primary school (this age range is auspicious to foster affective value-based relations with nature)

This is the basis of successful mastering natural science knowledge. It encourages to take interest in the environment as well as to communicate with nature and to perceive himself/herself as an inseparable part of it.

In our opinion, the extracurricular activities of natural science education should be directed towards:

- training positive personal qualities (individual training using extracurricular activities of natural science education) (for example, independence, responsibility, kindness, etc.).
- the development of the correlation between human being and nature (for example, a non-consumable humanistic approach towards nature, the sensation of the unity between nature and human being, respect for nature, etc.).

However, not the whole arranged pupils' extracurricular activities of natural science education are effective and produce desirable results. Hence, it is important to find out the structure and dynamics of pupils' activities in nature and to continually advance the EANSE patterns of organization.

The following effective the EANSE patterns could be distinguished.

- the coteries of natural science education (*ecology* / for example, “Lovers of Nature”, “Ecology and Creativity”, etc. /based on single subjects / “The Young Zoologists”, “The Young Entomologists”, etc./ and others);
- complex excursions of natural science character;
- children's creativity (affective children's experience in nature is expressed by the creative activities such as poems, essays, drama, games, art, etc.);
- learners' participation in projects (for example, projects on ecology – environment protection);
- actions (for example, “Planting a Tree”, “Nesting Boxes – Birds' Home”, “Birds and Animals' Protection”, “Economy of Water and Electricity”, “Making My School Green”, “Planting Oaks”, “Speak to Grass”, etc. /responsibility is fostered, want is understood/);
- quizzes and get-together events (for example, “We and Nature”, “Blooming in Autumn”, “I Know Them”; etc.).
- contests (for example, painting, writing, contests of different character and at different level).
- clubs and camps (for example, “Little School of Nature”).

The implementation of the extracurricular activities of natural science education finds important the following points:

- the process of the extracurricular activities of natural science education has to involve the most important participants: pupils, teachers, parents;
- the extracurricular activities of natural science education are based on the common objectives of natural science education;

- the extracurricular activities of natural science education help to effectively integrate all knowledge of the subjects that pupils are taught at school;
- the extracurricular activities of natural science education are in opposition to the theoretic and classroom-based nature study.

The extracurricular activities of natural science education can be defined as a part of permanent education that should guarantee the complete development of pupils' physical, psychical and emotional power. It is an excellent opportunity for pupils to improve their natural science education with a help of different coteries, arranged camps, actions, projects, etc.

Thus, obviously, the extracurricular activities of natural science education in primary school are an influential field of pupils' training that is extremely useful to fostering affective value-based relations with nature, to cherishing love for nature and respect for life. In general, the majority of children of this age realize the importance and significance of activities related to nature and this is the main point of the extracurricular activities of natural science education training. Also, there are a variety of ways to create *extracurricular activities* in science education area at a primary school. In every moment *teachers should be ready* to implement extracurricular activities in real school life.

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