

CHILDREN'S UNIVERSITY ACTIVITIES AS IMPLEMENTATION OF THE THIRD MISSION OF HIGHER EDUCATION INSTITUTION

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Abstract. Dynamic changes in all spheres of the modern world are the cause of many challenges in the educational process. Higher education carries out the third mission through extensive cooperation with the surrounding socio-economic environment. Many educational initiatives relate to support for various social and age groups. Support for children's education is the implementation of the university's social responsibility. This activity is of great value in the sphere of promotion for universities. The idea of children's universities is implemented in many countries and will develop in the coming years.

The exchange of ideas and good practices presented in the article between the universities of Bulgaria and Poland cooperating under the Erasmus + project, helped to develop the idea of a children's university. Based on the experience of two universities, the implementation of the third mission of the university in the field of activities supporting children's education was shown.

Keywords: third mission of higher education institution; children's university; social responsibility of the university

Introduction

The contemporary higher education institution, apart from the didactic and research functions, called the first and second missions, has an important task - building and developing relationships with the environment. It is known as the third mission. It can be described as social responsibility of higher education institution and is identified with all the activities affecting building relations with social environment (Clark, 1983). Its scope includes not only shaping economic relations with the economic environment, but also involvement of higher education institution in cultural, ethical and civilization activities (Pinheiro et al, 2015).

Thus, community engagement in higher education allowed to create many valuable initiatives, which were not addressed to the academic community. Children's Universities proved to be a great success, and the first one was established in 2002 in Tübingen, Germany.

The aims of the article is:

- to present the activities of the Children's University as a modern opening to wider groups of those concerned, to social capital.
- applying the successfully realized idea of Children's University in the Bulgarian educational environment.

The third mission of higher education institution

The third mission of higher education institution refers to the additional function of the above institution in the context of a knowledge-based society. The institution of higher education is not only responsible for human capital (education – first mission) and for generating new knowledge (research – second mission). Universities must be engaged in social activity and the market by combining the university's activities with its own socio-economic activity. Contemporary higher education institutions are developing their strategies regarding three missions (Bonaccorsi & Daraio, 2007). Scientists are debating the successful integration of the above missions into a coherent institutional framework. Governments develop third mission practices by allocating funds for it. Policy makers and experts are implementing specific conceptual indicators. Despite different economic systems, different levels of development and different roles in national innovation systems, the role of higher education is a key issue in all EU countries. Among the recognized scientific and pedagogical community of Bulgaria and the Republic of Poland, conceptual trends in higher education have become the subject of numerous scientific and pedagogical studies (Petrova et al, 2018; Nenkov et al, 2017A; Zagorodnya et al, 2020; Nenkov et al, 2017B; Jarmusevica et al, 2019; Badjanova et al, 2018; Linde&Petrova, 2018; Uteubayev et al, 2018).

The universities of the 21st century conduct previously unknown activities, mainly:

- Popular science digital publications, websites and radio programs for recipients from outside the academic community.
- Dissemination of science through open lectures, debates and science festivals
- Initiatives for health protection and prevention, as well as the ones dealing with the university of the third age.
- Activities involving school life and various interactions relating to it, including organization of children's universities, whose participants are schoolchildren and pre-school children.

There are various reasons for such pro-social activities of universities. Most often they relate to improvement the position of the university on the education

market, brand building, striving to improve relations with local environment, marketing activities (Zomer & Benneworth, 2011).

Social responsibility of higher education institution in the context of Children's University

Social responsibility of higher education institution is an important offer for a wide social forum. It serves to identify opportunities and chances, support dialogue and engage broad groups of persons concerned by increasing the efficiency and effectiveness of science activities due to university's third mission implementation. Social science responsibility programs should be aimed not only at popularizing and disseminating science and research, but also at awakening cognitive curiosity and integrating the community with the academic center. They are to equalize educational opportunities and reach the regions of the country where academic and scientific activity has not existed so far. Hence, the great popularity belongs to the universities of the third century, who deal with seniors as well as to children's universities.

The idea of setting up Children's University arose in 2002 (4 June) in Tübingen, where prof. Gregor Merker conducted a lecture for 400 children entitled "Why do volcanoes breathe fire?" Due to the university authorities support, the first "Kinder – Uni" was established. The above valuable initiative has been adopted all over the world. The mission of children's universities is to develop creative and intellectual potential of children so that, using their talents, knowledge and possibilities, they would understand the world around them and be able to act in it. The organizers achieve the following goals: children's motivation and help in their own interests development; engagement of children in experiential learning; lifelong learning abilities and critical thinking skills development, awakening skills for learning. Organizers of children's universities must answer the questions: "What should young students be prepared for? What competences should they be taught? What should parents pay attention to? How to change our higher education institutions?"

Answering the above questions, one should take into account the studies according to which knowledge theoretical foundations become older more slowly than the applied knowledge and practical skills, while soft skills allow to understand the modern world better. Most of the professions which today's participants of children's universities will choose when they are adults, do not exist. Therefore, attention should be paid to the ability regarding adaptation to changes, lifelong learning, development of criticism and self-criticism, problems solution in an innovative way.

Although children's universities have appeared recently, their success is incredible. Within a dozen of years, most European countries can be proud of children's universities activities. It turns out that there is no one model of children's universities. The organizers included not only universities but also government

agencies, associations, foundations, scientific and cultural institutions. The activities include workshops, presentations, lectures, laboratory classes, sports, artistic and cultural activities. The universities participating in the above projects emphasize the following benefits: image improvement, science popularization and acquisition of new students. It is important for children and teachers to study without stress, generate enthusiasm for learning, contact with scientific authorities.

In Poland, the first children's universities were established in 2007 in Cracow, Warsaw, Poznań and Łódź. The Children's University project received the Descartes Prize for Science Communication from the European Commission for outstanding services in popularizing knowledge. European Children's University Network (EUCU.NET) has also been created. EUCU.NET's intention is to support existing interactions between partners from different countries, as well as to provide help in looking for partners. Joint Internet platform and partner meetings funded by the EU Seventh Framework Program will be helpful in the above activities. Most universities operating all over the world organize their projects generally as out-of-school activities. The Children's University operates as a science camp, there are 2-3 lectures a week for children aged 6 – 13. Most children's universities in Poland are organized during the school year in the afternoons or on Saturdays. They have the character of regular meetings with children who are eager to study at the above children's university.

The examples of Children's University activities

The Bronisław Markiewicz State Higher School of Technology and Economics in Jarosław (PWSTE) has supported the idea of Children's University. The inauguration of the first semester took place on March 9, 2013. The main goal of the initiative of the PWSTE Children's University in Jarosław was to provide help for development of creative and intellectual potential of children aged 10 – 13 by stimulating cognitive activity and transferring knowledge and skills in various fields of science. The lectures and workshops at the university are conducted for curious children, seeking answers to questions which bother them. The above initiative is a part of the Higher School mission and helps to equalize educational opportunities for children. The organizers have scheduled four meetings per semester – two hours for each meeting (the second Saturday of the month). The first part of the classes is in the form of a lecture and cannot exceed 30 minutes, then young students carry out laboratory classes. A limit of 50 participants has been set for each semester. It was taken into account filling in the electronic form and the order of applications. Participation in the above classes is free of charge. In addition, the organizers decided to conduct open lecture each month relating to pedagogy and education. The curriculum for children included the disciplines which were studied at Higher School, as the classes were organized by the academic teachers working in different institutes. In the first semester of Children's University, the following issues were considered:

- Engineering map – preparation of a map and its applications,
- Small entrepreneur or nuts and bolts of company running,
- 110 years ago the plane flew into the sky...,
- Adult cardiopulmonary resuscitation and emergency management.

The Higher School authorities have opened laboratories for young students. Children had the opportunity to work with maps and Geographic Information Systems, work in physical and medical laboratories. The lecture for parents concerned working with a mathematically gifted child. It is worth emphasizing that the above classes are always designed by professors. They lasted for six years. It should be mentioned that the following issues were very popular:

- Electricity from wind and flowing water
- Is it still chemistry or magic
- How do the vehicles move?
- Can we see heat?
- Glass is the most ecological packaging material all over the world.
- Why does the plane fly?
- From plant to medicine.

In 2019, the Polish Ministry of Science and Higher Education organized a competition for implementation of the third mission of higher education institution in the form of children's universities. The Bronisław Markiewicz State Higher School of Technology and Economics in Jarosław (PWSTE) took part in the competition and was among the winners. Co-financing of the ministry for Children's University activities for three years amounts to approx. 125 thousand EUR. Within the project "Through the thorns to the stars", the PWSTE Children's University in Jarosław has increased its activity. The project is directed to primary school students from Jarosław at the age of 7 – 15 years as well as to their counsellors. Participation in Children's University is free of charge. A separate recruitment is carried out for each age group. The curriculum and workshops relating to a certain field of study are adapted to the age, cognitive abilities and interests of children. Classes are held on Saturdays in the lecture halls of Higher School and other places, they correspond to university idea applying many fields of science.

The curriculum is divided into three fields adapted to the age of children:

- TASK 1 Discovering and inspiring (age group from 7 to 8 years): 30 participants x 3 groups
- TASK 2 Science to square (age group from 9 to 11 years): 30 participants x 3 groups
- TASK 3 Master – student (age group from 12 to 15 years): 30 participants x 3 groups
- TASK 4 An intergenerational platform with integration activities: 30 participants (10 participants from each age group) x 3 groups and 30 parents (10 from each age group) x 3 groups.

– Integration classes: science picnic 90 students x 3 groups, 3-day trip to Warsaw: 90 students x 3 groups

The aim of the project is to improve the cognitive skills and abilities of Children's University participants in the field of cognitive curiosity, intellectual and social development, effective learning, creative thinking and mutual cooperation. The achievement of this goal is to develop and introduce an innovative tool, unconventional modules, activities workshops involving the methods of creativity development, creative and critical thinking, problems solution and innovative actions, communication, self-development and self-creation, as well as effective learning and teamwork. The project provides for the implementation of specific objectives, which include:

- stimulation of intellectual, axiological and social development of young generation;
- inspiration of creative thinking, interests and passions development;
- promotion of innovation;
- acquaintance with academic staff and Higher School as a place of scientific view of reality;
- integration of the local community around academic centers.

The individual competences planned for specific purposes will be achieved through the implementation of classes in mathematics and natural science, information technology; through understanding skills, creativity, innovation, entrepreneurship, critical thinking, problems solution, learning skills, teamwork skills.

Achievement of general objectives and specific objectives will contribute to the implementation of POWER objectives, including in particular, the specific objective of increase in creativity competence of persons dealing with higher education, meeting the needs of the economy, labor market and society. The inauguration of “new” Children’s University took place in April 2019.

The classes for the youngest children were conducted under the title: “Economics has big eyes”. For children aged 9 – 12 years: “From plant to medicine”, “Mechanics in everyday life”.

For children aged 13 – 15 years: “Physics in sport”, “Following the footprints of originator”.

The project will be implemented by the end of 2021.

Applying the successfully realized idea of Children’s University in the Bulgarian educational environment

Dynamic changes in all spheres of the modern world are the reason for a number of challenges to the educational process. This necessitates a redefinition of both the learning process and the teaching process, and the role of students and teachers. It is increasingly necessary to focus on the individual trajectory of learning, introduce

new educational standards and change the forms and organization of the processes of obtaining and assessing knowledge (Vitanova, 2019). The main focus in the preparation of the young generation is the formation of skills for adapting and developing in a constantly changing society.

The role of higher education is „to improve the acquired knowledge, skills and relations in terms of: professional and personal competencies of the student and future teachers of civic education and the subjects of the historical and philosophical cycle in the system of school education (Koleva, 2019).

In the context of these challenges, the “Erasmus +” program provides opportunities for the exchange of ideas and good practices between educational institutions from different countries. The partnership with PWSTE in Jaroslaw, Poland started with a teaching mobility under the European program and developed into an exchange of scientific ideas and joint research. The shared experience of the “Through hardships to the stars” project is in the basis of the idea developed by the authors for its implementation in Bulgaria. The successfully implemented activities encourage our team to promote this innovative educational initiative and create a children`s university in a variant adapted to the Bulgarian educational system.

In support of the activities related to the establishment of a Children`s University in Bulgaria, the following important arguments can be pointed out:

- The Children`s University will carry out interinstitutional interaction and cooperation between educational institutions from different educational stages and grades, will help to increase students` cognitive and social competences;

- Through the Children`s University there will be implemented interinstitutional interaction and cooperation with representatives of municipalities, state institutions, community centers, cultural institutions, the Regional department of education, parental community, non-governmental sector, etc.;

- The participation in the Children`s University will positively contribute to the development of students` learning motivation by stimulating their cognitive interests. The expression of a cognitive interest gives rise to positive intellectual feelings related to patience, curiosity, and to the discovery of something new (Popova, 2012: 80 – 85).

- The Children`s University will enrich the educational practice through innovative and interactive methods, forms and teaching aids which are adequate to the contemporary challenges.

In Bulgaria, the idea of Children`s University has been realized at the New Bulgarian University, but with an emphasis on arts. In September 2012, the program of the New Bulgarian University`s Children`s University started as a “Summer art school” which gradually established itself as a permanent initiative, together with an art gallery. Every Saturday there is organized the so called New Children`s University for children aged 5 – 14 years. The children are introduced to the gallery collection of paintings and sculptures; they learn about basic genres, styles and

techniques in art; make drawings, collages, plastic art, etc. Classes are held among the gallery's collections including works of old masters and contemporary artists. "University students at very young age" listen to tales of art history, learn to look at paintings, learn drawing techniques, and learn to think creatively. They have the opportunity to feel the academic atmosphere and from an early age to meet visiting lecturers – university professors and people of art. Interactive methods are used, children are active participants in the process, they ask questions, draw, play and learn through experience. Classes are carried out in two groups: for children up to 5 years old, in the presence of a parent; for children over the age of five who want to be more deeply engaged in drawing.

Based on the good European practices (PWSTE Children's University – Jaroslaw, Poland) and the Bulgarian experience (NBU Children's University) we accept the idea of establishing a Children's University at the Veliko Tarnovo University as up-to-date and innovative. The focus of its classes can be designed in the field of activities of the existing faculties. Through innovative and interactive methods of teaching in a university environment, the Children's University will form a wide range of knowledge, skills and competences while helping for identifying and developing children's and students' talents.



Photo 1. Classes in Copernicus Science Centre in Warsaw



Photo 2. Outdoor classes under the title: “Usage of map in education”

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