

**Lena Sigurnjak, BSc**

University of Applied Sciences of Slavonski Brod  
Dr. Mile Budaka 1, 35 000 Slavonski Brod, Croatia  
Phone: 035-492-805 Fax: 035-492-804  
E-mail address: lena.sigurnjak@vusb.hr

**Sanja Knežević, BSc**

University of Applied Sciences of Slavonski Brod  
Dr. Mile Budaka 1, 35 000 Slavonski Brod, Croatia  
Phone: 035-492-805 Fax: 035-492-804  
E-mail address: sanja.knezevic@vusb.hr

**Anita Kulaš, BSc**

University of Applied Sciences of Slavonski Brod  
Dr. Mile Budaka 1, 35 000 Slavonski Brod, Croatia  
Phone: 035-492-805 Fax: 035-492-804  
E-mail address: anita.kulas@vusb.hr

## **IMPLEMENTATION OF SUSTAINABLE DEVELOPMENT FOR EDUCATION IN BRODSKO POSAVSKA COUNTY**

### **PRIMJENA ODRŽIVOG RAZVOJA U OBRAZOVANJU U BRODSKO POSAVSKOJ ŽUPANIJI**

#### ***ABSTRACT***

*Changes in awareness, educational values and social responsibility in educational institutions have an increasing influence on sustainable development. Learning about sustainable development for young people is an essential tool for achieving sustainability. Schools should be models of sustainable living and learning. Raising awareness of certain values and education for sustainable development should start as early as possible, in primary school or in kindergarten. Education for sustainable development is transferred to lifelong learning and includes professional teachers' training. There are many ways in which educational institutions take the responsibility for leading community towards a sustainable future and can be involved in sustainable development. Major fields of sustainable development in educational system can be developing public understanding, public awareness, restructuring of education programs, providing training and most important is access to quality basic education for everybody.*

*The purpose of this paper is to investigate four target groups: pre-school, basic, upper secondary teachers and higher education professors and their awareness, knowledge and understanding about sustainable development in Brodsko Posavska County. The research has been carried out in the beginning of 2012. Analysis of implementation of sustainable development in educational system of Brodsko Posavska County is based on survey conducted on four education institutions: 10 pre-schools, 20 basic schools, 8 upper secondary schools and 2 higher education institutions. Altogether 40 institutions and 62 teachers/professors did respond. Research shows current understanding of the sustainable development in educational institutions in Brodsko Posavska County. It has own limitations which should be*

*taken into consideration in further implementation of activities in education to achieve sustainable development. The main question of this paper refers that teaching stuff should be vital parts of society, have more awareness of transferring their knowledge about sustainable development. They should be centers of knowledge and promoters of sustainable development not only for people in their schools, but also for local community.*

**Key words:** *Implementation, Sustainable development, Education, Teacher performance, Educational Institutions, Knowledge*

## **SAŽETAK**

*Promjene u svijesti, obrazovne vrijednosti i društvena odgovornost u obrazovnim ustanovama imaju sve veći utjecaj na održivi razvoj. Učenje o održivom razvoju za mlade je osnovni alat za postizanje održivosti. Škole bi trebale biti modeli održivog življenja i učenja. Podizanje svijesti o određenim vrijednostima i obrazovanje za održivi razvoj treba početi što je prije moguće, u osnovnoj školi ili u vrtiću. Obrazovanje za održivi razvoj se prenosi na cjeloživotno učenje i uključuje profesionalnu obuku učitelja. Postoji mnogo načina na koje obrazovne institucije mogu preuzeti odgovornost za vođenje zajednice prema održivom budućnosti i mogu biti uključene u održivom razvoju. Glavna područja održivog razvoja u obrazovnom sustavu mogu razvijati javno razumijevanje, svijest javnosti, restrukturiranje obrazovnih programa, pružanje obuke, te najvažniji je pristup na kvalitetnom osnovnom obrazovanju za sve.*

*Svrha ovog rada je istražiti četiri ciljne skupine: predškolski odgoj, osnovnoškolske učitelje, srednjoškolske i visokoškolske profesore i njihovu svijest, znanje i razumijevanje o održivom razvoju u Brodsko posavskoj županiji. Istraživanje je provedeno početkom 2012. Analiza provedbe održivog razvoja u obrazovnom sustavu u Brodsko posavskoj županiji temelji se na anketi provedenoj u četiri vrste obrazovnih ustanova: 10 predškolskih ustanova, 20 osnovnih škola, 8 srednjih škola i 2 visokoobrazovne ustanove. Ukupno 40 institucija i 62 nastavnika / profesora je pristupilo anketi. Istraživanja pokazuju trenutno razumijevanje održivog razvoja u odgojno-obrazovnim ustanovama u Brodsko posavskoj županiji. Postoje ograničenja koje treba uzeti u obzir za daljnju provedbu aktivnosti u obrazovanju za postizanje održivog razvoja. Glavno područje istraživanja ovog rada odnosi se na nastavno osoblje koje bi trebao biti vitalni dio društva, te imati više svijesti o prenošenju znanja o održivom razvoju. Oni bi trebali biti centri znanja i promotori održivog razvoja ne samo za polaznike u svojim školama, već i za lokalnu zajednicu.*

**Ključne riječi:** *provedba, održivi razvoj, obrazovanje, učinkovitost profesora, obrazovne ustanove, znanje*

## **1. Introduction**

Education has always been considered as one of the most important components of human development and traditionally held the most respectable position in our society. In a world characterized by dynamic and complex changes there is an increasingly growing concern in the last two decades about lack of care for the environment. In light of this aspect, the need for a sustainable development in education has become acutely urgent. Knowledge today represents a base for the quality of human life, so education for sustainable development should be an integral part of every educational system in a society. Education for sustainable development will give to pupils and students the opportunity to assume obligations for creating sustainable future and possessing it. The main aim of this paper is to emphasize the meaning of education for sustainable development and point to the possibilities for the

implementation of sustainable development into educational institutions in Brodsko Posavska County (BPC).

## **2. Sustainable development**

Sustainable development refers to “development that meets the need of the present without compromising the ability of future generations to meet their own needs” (Patzelt, H., Shepherd, D.A, 2011, p. 631). It defined sustainable development as a complex and interdisciplinary area. Term sustainability is used as substitute to words such as systematic, durable or long-term. The understanding of sustainable development is not easy because of different sustainable dimensions: economic, environmental, and social which are interrelated and complementary. One of the first steps in the process of implementation sustainable development is education. Education is “the act or process of imparting or acquiring general knowledge, developing the powers of reasoning and judgment, and generally of preparing oneself or others intellectually for mature life“ or we can define as „the act or process of imparting or acquiring particular knowledge or skills, as for a profession“(<http://dictionary.reference.com/>). For the improvement and progress of society in Brodsko Posavska County generally education is very important and necessary.

### **2.1. Education for sustainable development**

Education is prerequisite to sustainable development and one of priority aims of society. „Education for sustainable development is an umbrella for many forms of education that already exist, and new ones that remain to be created. Today’s education is crucial to the ability of present and future leaders and citizens to create solutions and find new paths to a better future” (<http://www.unesco.org/>). Education for sustainable development is a dynamic concept. It comprising all aspects of education, society’s awareness and training in order to provide or expand understanding for sustainable development. This paper research formal learning for sustainable development.

### **2.2. Education for sustainable development in the world**

First discuss about education for sustainable development was held in Rio de Janeiro in 1992 at UN Conference on Environment and Development (the Earth Summit). The result of conference was Agenda 21, program focused on acting locally, regionally, nationally and globally in purpose to achieve sustainable development in the 21st century. The Declaration of the Earth Summit in Rio de Janeiro was adopted in at the World Summit on Sustainable Development in Johannesburg in 2002. Decade of Education for Sustainable Development 2005 – 2015 is a UN initiative that education is fundamental for creating a more quality and stable society and implement the ideas of sustainable development into all levels of educational system. „The overall goal of the UN Decade is to integrate the principles, values and practices of sustainable development into all aspects of education and learning. This educational effort will encourage changes in behavior that will create a more sustainable future in terms of environmental integrity, economic viability and a just society for present and future generations” (<http://www.unesco.org/>).

### **2.3. Education for sustainable development in Republic of Croatia**

The improvement in the quality of the environment and improvement in the quality of the education as well as quality in research and development activities is emphasized in Croatian

Strategy for Sustainable Development (2009). One of eight key challenges of Strategy that needs to be fulfilled is to raise the educational stage of all people in Republic of Croatia and build a society based on knowledge. „Education for sustainable development in Republic of Croatia should be implemented on three levels: through formal learning in educational institutions; outside regular educational institutions, for instance, through activities of non-governmental organizations (informal learning); through media (newspapers, television, radio) in order to make education for sustainable development a part of everyday life“(<http://www.mzpu.hr/>). In this paper education for sustainable development will be implemented through formal learning in educational institutions. Formal learning is organized as acquisition of professional knowledge, skills and competencies.

### 3. Research

Education system of all countries is one of the main elements of the development and competitiveness of its human resources. Formal education system of the Republic of Croatia includes pre-school, basic, upper secondary and higher education. The share of public expenditure on education is about 4% of GDP and it is under the European average.

Table 1. Number of institutions and teaching staff (BPC and Croatia)

Educational institutions	Number of institutions in BP County	Number of institution Croatia	Number of teaching staff BP County	Number of teaching staff Croatia
Pre-school education	28	1495	132	10046
Basic education	115	2130	1230	32213
Upper secondary education	15	711	625	24223
Higher education	3	166	92	16319

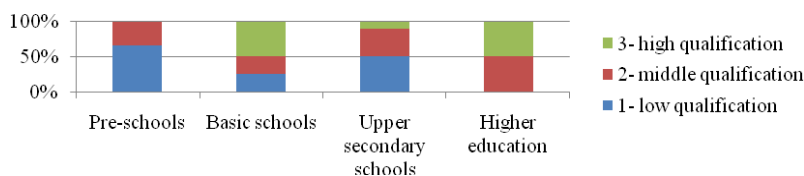
Source: Made by authors according to [www.dzs.hr](http://www.dzs.hr)

Pre-school education includes nurseries, kindergartens and a form of preparation for elementary school. It is education for children from 1 year old and lasts until child is 6 or 7 years old. In Brodsko Posavska County (BPC) there are 28 pre-school institutions (1,87% of a total number in Croatia) and 132 teaching staff (1,31% of a total number in Croatia). Basic education is obligatory education lasting 8 years for all children between the age of 6 and 15. Basic education is carried out in schools and gives basic general education according to the established educational plan. In BPC there are 115 basic schools (5,40% of a total number in Croatia) and 1230 teaching staff (3,81% of a total number in Croatia). Upper secondary education is divided into: 3-year vocational schools which prepare young people for vocation, 4-year technical and other vocational schools, art school and 4-year general education – gymnasias. They all prepare young people for professional and higher education. In BPC there are 15 secondary schools (2,10% of a total number in Croatia) and 625 teaching staff (2,58% of a total number in Croatia). Higher education institutions include university, faculty, art academy as a component part, polytechnic and college. The mission of the University is to prepare the students for the labor market, personal development and growth and for active participation in the society. In BPC there are 3 higher institutions: Faculty of Mechanical Engineering Slavonski Brod, Faculty of Teacher Education-dislocated study in Slavonski Brod and University of Applied Sciences of Slavonski Brod. That is 1,80% of a total number in Croatia and teaching staff 0,56% of a total number in Croatia.

### 3.1. Research methods

The research methods in this paper consist of survey developed by the authors in respect of the awareness and knowledge of sustainable development and environmental education among teachers and professors in BPC. Analysis of implementation of sustainable development in educational system of BPC is based on survey conducted on four education institutions: 10 pre-schools, 20 basic schools, 8 upper secondary schools and 2 higher education institutions. A total number of teaching staff did respond on survey: 6 in pre-schools, 16 in basic schools, 30 in secondary schools and 10 in higher educations. Altogether 40 institutions and 62 teachers/professors in BPC did respond.

Chart 1. Teachers/professors qualification about sustainable development



Source: Made by authors

Education of teachers and professors about sustainable development represent not only obligation, but also their responsibility. Chart 1. shows teachers and professors qualification about sustainable development. In the past, pre-schools in our country did not follow the trends of the development of education for sustainable development, but today the process of that kind didn't change. In pre-schools almost 67% of teaching staff has a low qualification about sustainable development and not familiar with the term, only 33% have some knowledge. The target group of teachers in basic schools responded that about 50% have a high, 25% middle and 25% low qualification about sustainable development. Only 10% of professors in upper secondary schools have high qualification about sustainable development, 40% middle and even 50% of them are low skilled. In higher institutions an equal number of respondents 50% of them have high and middle qualification. It can be concluded that highest qualification of teaching staff about sustainable development is in basic schools and higher education. Their activities about sustainable development are shown in text below.

### 3.2. Ways of implementation of sustainable development

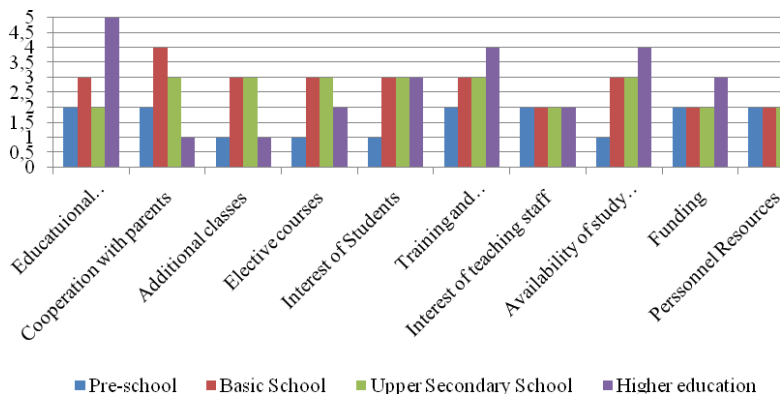
Aiming to find direct answers about ways of implementation of sustainable development respondents had to write activities in their institutions. In pre-schools it is necessary to consider how to bring education for sustainable development closer to a child. The basic school teachers listed activities like discussions with pupils (about environment, pollution, recycling, global warming and so on), walks or outdoors activities (like gardening, decorating of composting bin, riding a bike), marks the anniversary of Earth Day, world Water Day and Electricity Day. Teachers take pupils to excursions and sports days. Teachers also motivate pupils about not throwing garbage in nature, separation of waste, preserving the environment and all ideas about how to contribute to sustainable development. In Upper secondary schools and higher education pupils and students learn about sustainable development through lectures of formal system of education. Higher education takes the responsibility for leading society towards a sustainable future. In both surveyed institutions there are obligatory courses

about sustainability (Agro ecology, Agricultural botanic, Social Ecology and Renewable Energy Sources).

### 3.3. Measure of implementation pre each item

According to the survey respondents had the opportunity to express the level of implementation of each item by scores of 1 to 5. Level values are: 1 - Never; 2 - Rarely; 3 - Sometimes extent; 4 - Implement, 5 - Conducted in a fully satisfactory way. Results of research are presented in chart 2.

Chart 2. Implementation of sustainable development in teaching process



Source: Made by authors

The overall evaluation of the results shows that higher education in BPC has a strong tendency to develop and implement education for sustainable development through the environmental science. It indicates the students' desire to study sustainable development, academic staff members are interested in teaching sustainable development and gives a high score for the knowledge and skills of their academicians. The lowest rated categories are cooperation with parents and additional classes. Approximately the same percent of statements in Chart 2. in basic and upper secondary schools have the equal attitudes and considerations about sustainable development. Such a result is largely due to the situation that the educational programs are almost identical. The presentation of research findings points out that the understanding of sustainable development in pre-schools is still too narrow. Pre-schools have the lowest rated categories and don't implement opportunities to incorporate elements of sustainable development in their curricula.

## 4. Conclusion

One of the key actors that should raise the awareness of sustainable development in BPC is certainly educational institutions. They educate pupils and students about awareness of environment and also of their responsibility for the future. Nowadays, sustainable development is the greatest challenge that humankind is faced with. When educational institutions in their work commit themselves to implement principles of sustainable development it will progressively be transferred to all sectors of society. After the survey analysis of implementation of sustainable development into educational institutions the research result is that higher education institutions of BPC have the key role in generating

new knowledge and practices. It is most important for education institutions to identify the importance of education for sustainable development. They have to take over the sustainability role in society, develop strategies for its implementation in order to promote better quality of the world around us.

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