Review article

SCHOOL AS A PREPARATION FOR LIFELONG LEARNING
AND SUSTAINABLE DEVELOPMENT

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Abstract. The paper analyses the relation of contemporary school with the concepts of lifelong learning and sustainable development. It also elaborates the fact that school itself undergoes numerous changes in order to adequately respond to the demands of modern society, some of which refer to developing tools that build students’ capacities for lifelong learning and education for sustainable development. The major changes are felt in the very base of its functioning, moving it from the traditional educational organization toward the learning organization, that adopts modern work models and bases process of learning on active involvement, knowledge transformation and partner relations between students and teachers. Such conceptual changes fully correspond to new educational needs of individuals longing to develop competences for lifelong learning. Consequently, the alignment of school changes with the necessity to prepare students for lifelong education and education for sustainable development makes the central idea of the text. Finally, changes in contemporary school, especially in the part of school learning, are found to support the development of the concept of lifelong learning and education for sustainable development.

Key words: school, education, lifelong learning, sustainable development

1. INTRODUCTION

Sustainable development as a concept was first introduced in the last decades of 20th century, by the United Nations General Assembly and, ever since, it has been developed together with the parallel concept of education for sustainable development that was supposed to support it (UN Decade of Education for Sustainable Development, 2005, p. 26). But, education for sustainable development is not the issue that only policymakers are interested in. It comes also into the highlight of educators’ interests during the process of overall changes of school, because education for sustainability is considered an integral part...
of every educated person in contemporary times, and because of its current and ever growing importance. Education and sustainability have many mutually shared values and support the same goals, and this fact is acknowledged by educators as well as by policymakers. For example in the UN document Decade of Education for Sustainable Development (later in this paper referred to as DESD) the basic vision of the world is the one in which “everyone has the opportunity to benefit from education and learn the values, behavior and lifestyles required for a sustainable future and for positive societal transformation” (2005, 6). It promotes values and behavioral outcomes, which mainly characterize learning in all circumstances. Among other shared values, we’ll name just a few: support for all of the human rights; viewing the learner as an individual, a family member, community member, and a global citizen; building knowledge, life skills, perspectives, attitudes and values; providing the tools to transform current societies to more sustainable societies; being informed by the past, relevant to the present, and preparing individuals for the future; being measurable (DESD, 2005, 27). Such view of these two phenomena opened the field of education for sustainable development and implementation of sustainable development in schools. The idea of making education for sustainable development an integral part of educational work in schools is strongly supported by the fact that school, especially elementary, is recognized as the place where the foundations for personal and social development are laid. The issue of implementing the content of education for sustainable development in schools is addressed in different countries in different ways, but it is mainly focused on key themes (climate change, disaster risk reduction, biodiversity, poverty reduction and sustainable consumption, etc.). Most often, education for sustainable development in schools is set up as an integrative, intercultural topic, which includes many individual issues that unite within the educational system.

2. THEORETIC ORIENTATION

2.1. School and education for sustainable development

As a basic educational institution, in addition to the non-formal education system, school is the main source for acquiring and developing knowledge for sustainable development. The first knowledge about life and the surrounding world is acquired in schools, and rightly the influence of these institutions in the life of each individual is considered to be irreplaceable. In schools, through the officially adopted plans and programs, in addition to the basic subjects of compulsory education (the basics of reading, writing and arithmetic), students should be offered a wide range of knowledge about the immediate living environment in which they are located. The school as an educational institution should answer the questions: How to successfully prepare students for complex relationships in society? How to train them for the complex roles that await them in the future? Considering this aspect, the responsibility of a modern school is great, because knowledge in the modern society is distinguished as basic capital. The contemporary school is expected to be flexible, open to change, adaptable to the new conditions of globalization, the information revolution, economic and social progress (Drucker, 1995; Hargreaves, 1994; Reich, 1992).

In this context, the last decades have brought significant changes at the level of the school itself that aim at offering education that will prepare students for their active involvement in the local community they live in. Following that orientation, school is
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opening up as an institution and, connects with other institutions, organizations and associations which find it desirable to involve students and emphasize the need for cooperation at different levels. Considering these changes, it is quite justified to talk about the new concept of school that understands school as a part of the student's broader environment and as an entity that is related, in many different ways, to the immediate environment in which students are located. Consequently, the main directions of school development aim towards building the school as an open institution that readily accepts changes from the environment and that, through its own actions, enables students to acquire knowledge that is in line with the needs of either a wider or narrower social environment. These processes move the process of learning in schools towards acquiring knowledge that will enable students to adequately navigate in everyday situations, in the specific conditions in which they live, unlike traditional schools that were mainly designed in such a way that separated school knowledge from real life and from practical educational needs of individuals.

Changes in modern schools are aligned with education for sustainable development, and the goals of education for sustainable development can be considered compatible with the goals of school education. The processes of changing schools, opening schools towards the environment, achieving a cooperative relationship with various actors from the local environment, introducing inclusive education, emphasizing the values of respecting others and accepting differences, developing critical thinking and, perhaps, primarily changing the way of learning and working methods, are the objectives of the school that are fully consistent with the goals of education for sustainable development. Namely, the objectives of education for sustainable development include respecting others, responsible local and global action, developing critical thinking, understanding the complexity of the problem, the ability to "imagine" the future, understanding interdisciplinary relationships, responsible behavior and, the ability to identify and clarify ecological issues and values (DESD, 2009).

In order to achieve the better coherence of mentioned goals, the links between education for sustainable development and the content of the official school curriculum are strengthened and developed in a different, more active and systematic ways. Scott & Gough (2010), emphasize that sustainable development makes best sense as a social learning process in which we find balance between tangible and useful outcomes in terms of understanding and skills, and their application in real life situations that reinforces the motivation and capability for further learning. This means that link between sustainable development and learning should be also achieved regarding, not only the content, but also the process of education and learning in schools. Namely, the goals of education for sustainable development should not only be implemented in the part of the official curriculum, but it is necessary to change the ways in which these contents are realized. Thus, the process of education for sustainable development in schools opens up the issue of methods and forms of work during the realization of these contents, and above all, it opens the issue of the locations where the learning process takes place. In that sense, education for sustainable development tends not to be reduced to school, classrooms and cabinets, but it encourages schools to get learning out of the narrow school context, and realize its contents in authentic environments. It is also important to establish a mutual communication and interaction between the learning process in and outside the school, and in a wider and closer social environments.
The spectrum of diverse school activities, both curricular and extracurricular, provides
ideal opportunities for the realization of the content of education for sustainable
development. Different places in the immediate environment of the school, primarily the
natural environment, provide ideal conditions for acquiring knowledge, developing skills
and habits, and developing desirable ecological behavior of students. When realized in
authentic natural environment, the content of education for sustainable development
achieves its full meaning, potential and significance. According to some authors, up to the
age of 16, the main goal is to develop general understanding, sense of and concern for
sustainability, and they believe that it is best achieved in internal and external social
contexts that are not only places that provide good surrounding for learning, “but also
where socio-economic change is both possible and necessary” (Scott & Gough, 2010,
3736). This kind of learning will support further motivation and interest in environmental
and other issues of sustainable development. In this regard, connecting the school with the
immediate environment is a necessity, despite the current structure and organization of
school and school work (which is still largely traditional), that makes the link between
school education and education for sustainable development more fragmented and
unsystematic in building positive relationships and synergy. Changes in this segment are
necessary, as education for sustainable development requires active participation of all
members of the society, that is, active involvement of students, schools, and other
institutions and organizations as well as interested individuals from the social surrounding.

Contents and methods of education for sustainable development, if realized in a
socially engaging and motivating environment form a mutual supportive connection with
schools. Joint learning, teamwork and active participation of all members outside the
classroom allow for a certain positive influence coming from the environment and
changing the learning process and educational outcomes in schools. Learning in schools
then transcends initial idea of education for sustainable development and has a broader
impact on students’ development, supporting a social learning process, open-mindedness,
engagement with the main existential issues that can be experienced in the family, the
community and workplace, and motivation in all aspects of a lifelong learning. (Petrović

We witness the desired changes in contemporary schools and can notice the changes
in organization of the school that correspond all the above mentioned conditions. First,
the school is actively involved in in the life of local community. It is sensitive to the
needs and changes in its closest surrounding, actively participates in ecological projects,
either part time or long term actions, and calls upon local organizations to involve in the
school projects. This cooperation takes the form of lectures, visits, excursions, volunteering
of the students, or organizing the actions corresponding to those of the wider scope
(Andelković & Stanisavljević Petrović, 2013). The second change is made in the sphere of
goals and contents, and it is easily noticed in the school curricula that incorporate the
ecological and other content supporting sustainable development and even the legal acts
concerning school organization (Zakon o osnovnom obrazovanju i vaspitanju, 2017). And
finally, the new methods of learning are based on active participation, problem solving
and teamwork. The children are not only taught about and instructed, they are asked to find
the solutions for environmental problems, they discuss the possible actions and finally are
encouraged through school activities to actively involve (Andelković & Stanisavljević
Petrović, 2013; Terhart, 2001). The ways these changes are implemented into the school
systems, along with the difficulties that follow this implementation are discussed in the
second part of this paper.
2.2. School learning as the base for lifelong learning and sustainable development

In the European Union countries, the concept of lifelong learning has been elaborated as a means to pursue the goals of the Lisbon Declaration, which aims to increase the competitiveness of the European economy based on knowledge and social cohesion. The concept of lifelong learning encompasses all types and ways of learning that individuals can undertake throughout their lifetime. In essence, it includes competencies and knowledge in the sphere of personal, civic and professional education that can be acquired both in formal institutions and through various non-formal forms of education. It overlaps in many cases with the adult education, but it is not equal to it. The adult education practice has shown us that there is a growing interest in higher education because it offers advancement in the profession, opportunity to change profession or because it fulfils personal needs and aspirations of individuals (Mitić, 2010). Life-long learning is often seen as a factor creating the link between the demands of competitive market and the quality of life. It implies introduction of more flexible forms of learning which enable people of different ages to have equal and open access to quality education. Thus, basic features of lifelong learning are related to flexibility and fluidity, in contrast to traditional school education characterized by rigidity, both in relationships and in the organization. In this regard, lifelong learning is closely related to the requirements of education for sustainable development because it has a broader platform, unlike traditional education that aims to prepare well-trained, motivated, highly specialized workforce. Also, life-long learning aims to enable every individual develop its potential by providing access to tools and resources and theoretical background of the process. In that way it supports education for sustainable development and is recognized as an important factor of sustainable development (Pastuović, 1999). The concept of sustainable development, on the other hand, explains learning as a means and a goal for self-development, but with a broader aim of preserving the natural and social resources of the environment.

In order to make school the institution that adequately lays the foundation for lifelong learning and develops education for sustainable development, changes are necessary, primarily in the part of school education or learning. Some authors even do not see a change as sufficient, but call for complete restructuring of the school education (Pastuović, 1999, 36), meaning that changes are great and should be marked through both: qualitative and quantitative measures. The good life-long education does not follow the equation: school education plus adult education equals life-long education, it calls for a school education to change its structure, methods, even goals. It calls for the change of complete learning paradigm. The change of the learning paradigm is based on a new concept in which development of students' competences imposes as a priority. It is generally known that information are quickly outdated and that the encyclopedic way of learning in schools represents an obsolete concept of learning and acquiring knowledge. With the development of science and technology, there is an increasing number of information that cannot, and need not be memorized or adopted mechanically, so changes in the process of school education, primarily in the part of methods of acquiring knowledge, become the priority of modern school. The new learning paradigms are aimed at developing abilities, key competences necessary for life in modern society. For this reason, the process of school education strives for changes aimed at the development of such competences, which will enable the student to fully develop his/her capacities, as well as competences for continual learning after completing the formal education. In other words, the process of learning does
The process of connecting school education and sustainable development has two major forms. The more conventional one, and the easier to implement is integrating education for sustainable development and sustainable development issues in existing school subjects or designing new subjects that would cover these themes. The other, more innovative and comprehensive is ‘adopting a ‘whole school’ approach to these issues’. Both of them could be seen in different countries during last decades, and their experiences are basis for further development (DESD, 2009). The schools which decided for ‘whole school approach’ adopted seven basic elements, yet their structure remained flexible enough to be adopted in any country and at any level of schools’ previous environmental achievement. The basic element and integral factor of all elements was student involvement throughout the process. The other elements are: Establishing of the Eco-School Committee (pupils, teachers, cleaners, caretakers, parents and governors, stakeholders); Reviewing the environmental impact or assessment of the school (level of litter on school grounds, checking infrastructure or inefficiencies…); Action Plan (made on the grounds of the Review); Monitoring and evaluation (making environmental education and care an on-going process in the school); Curriculum work; Informing and involving (making ties with external organizations in order to benefit from their experience and expertise); Eco-code (statement outlining the main goal of the school) (DESD, 2009, 50). This kind of approach calls for restructuring and reorganizing in the realm of goals and methods, not only content. The common basis for change in school education and education for sustainable development is contained in a holistic orientation in which social, natural phenomena and man are seen as unity, and understood through the context, environment, time or wider systems to which they belong. In this approach, a student is perceived in the context of wider systems such as global society, state, local environment, family, natural systems. The starting point is understanding that all these systems are interconnected, dependent on each other and in constant interaction (Andelković & Stanisavljević Petrović, 2013). The National Strategy for Sustainable Development in Serbia (2008) supports this vision of the concept of education for sustainable development. It recommends not only the application of content on sustainable development in the education system, but also building a new educational system that would support the knowledge-based economy and represent a pillar for the sustainable development of the economy and society as a whole (Nacionalna strategija održivog razvoja, 2008, 35). The Strategy writers were well aware that, unfortunately, there are many obstacles in achieving these goals, and they named some of them such as unsupportive educational infrastructure and financial drawbacks.

The whole school approach is completely aligned with the concept of lifelong learning and the new paradigm of learning, in which natural and social environment have
the great potential for the process of education. In this context, schooling is gaining new meaning and significance, and the school must gradually reject the character of the institution that specializes in knowledge transfer and become a comprehensive space for the development of students' competencies and the practice of different experiences (Fauser et al., According to Terhart, 2001). In this part, education for sustainable development implies new types of learning that, in contrast to transmissive models (learning through reproduction), offer models that have transformational value, in which learning is perceived as change. Transformational learning models enable students to acquire functional knowledge, skills, attitudes and values that are necessary for shaping a sustainable future. Better understanding of the person and the world surrounding it helps choosing better teaching methods. Those will be methods in which the teacher does not have a dominant role, but the role of a coordinator, a person who provides assistance and support during the process of acquiring knowledge and skills. Changing the role of teacher significantly influences the role of a student who is now an active participant, ready to get involved in the process of developing his/her own competencies. Participatory learning methods motivate students and train them to change their behaviors, as well as to take actions for sustainable development. Unlike transmissive learning methods (characteristic of classical school learning), they promote new ways of learning that improve student competencies related to the development of critical thinking, decision making through cooperation, projection of future scenarios, and so on. Application of these methods requires changes in the school itself, education and learning, and finally, implementation of environmental and sustainability issues (Snider, 2011; The UNECE Strategy for education for sustainable development, 2005).

Changes in the methods of school education related to sustainable development are supported by many academic articles and national and international documents (Andelković & Stanisavljević Petrović, 2013; DESD, 2005; DESD, 2009; Scott & Gough, 2010; The UNECE Strategy for education for sustainable development, 2005) addressing education strategies in the field of environmental issues and sustainability. Recommendations are directed towards active methods of learning in the education process, where scientific data, information and facts are objectively presented first, followed by discussions, debates, role plays and work on projects that deal with environmental protection. The goal of such activities is to develop the ecological conscience as well as the ecologically responsible behavior of individuals involved in the education process. In order to achieve such valuable goals, the process of school education has to follow recommendations and enrich the learning experience by putting it in authentic natural environments, which are considered not to be sufficiently utilized in the learning process. Immediate natural environment outside the school offers many opportunities for developing students' competencies through experience and personal engagement, in direct contact with learning objects. By learning in authentic ambient, in direct contact with nature, learners gain experience through touch, movement, listening, watching, and through their own actions. It involves their feelings, decisions and the sense of responsibility, they are involved physically, cognitively and emotionally. By exploring the immediate environment, students enter into different social relationships, both with each other and with other actors from the local environment, usually experts, from whom they can obtain all relevant information that contribute to the development of pro-ecological behavior. In line with the above recommendations, and in order to improve the quality of school education and education for sustainable development, it is necessary to use the natural environment resources as parks, gardens, forests, meadows,
the sea, the lake, the river. Moving the teaching activities to these authentic spaces opens up the possibility for the school to become the cornerstone of lifelong education and education for sustainable development, in the true sense of the word.

Considering all examples above, we should emphasize that the realization of teaching activities outside the classroom and implementing education for sustainable development through extracurricular activities has a high pedagogical value, both in the realm of learning, and in the realm of acquiring and developing competences for sustainable development. The benefits go far beyond individual development, fulfilling teaching and learning experience and gaining awareness over sustainability issues. They help exercising responsible citizenship and developing citizenly awareness, understanding, skills, and motivations and making competent real-life decisions (Scott & Gough, 2010, 3738).

3. Conclusion

In the process of education for sustainable development, schools have a major role as basic institutions for the education of young generations. Elementary schools, especially, are recognized as the places where the foundations for personal and social development are laid, and having in mind that values of education itself and sustainability are mutually shared, it is expected from them to build the base for sustainable development also. Especially because they already have the tools to implement education for sustainable development in already existing curriculum as an integrative, intercultural topic, or as many individual issues that unite throughout the educational system.

However, the traditional schools, with their traditional work organization, are often not adequate to the needs of modern society, nor to the newly emerging educational needs of individuals. For this reason, in a number of European countries, especially in the countries in transition, the reforms of school systems and school organization are actively being implemented. Changes in school encompass all aspects of school work, especially in the realm of methods of teaching, opening of schools towards the immediate environment, and establishing cooperative relationships with other institutions, organizations and associations. These processes should move the process of learning in schools towards acquiring knowledge that will enable students to adequately navigate in everyday situations, and in the specific conditions in which they live. Those changes in modern schools are aligned with education for sustainable development, the links between education for sustainable development and the content of the official school curriculum is constantly being strengthened and more active and systematic ways of integration developed, and consequently better coherence of mentioned goals is achieved.

Education for sustainable development is a lifelong process in which schools play a special role because they provide students with sufficient knowledge about the environment in which they live in a systematic and planned manner, but also they build the habits of adequate pro-ecological behavior and more importantly, the interests in environmental issues. Schools do not aim at knowledge itself, but at its application in the real life situations that reinforces the motivation and capability for further learning. Different places in the immediate environment of the school, primarily the natural environment, provide ideal conditions for acquiring knowledge, developing skills and habits, and developing desirable ecological behavior of students. This kind of learning supports further motivation and interest in environmental and other issues of sustainable development.
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In this regard, connecting the school with the immediate environment is a necessity. Contents and methods of education for sustainable development, if realized in such a socially engaging and motivating environment form a mutual supportive connection with schools and contribute to the quality of school learning and intensity of learning experience.

The concept of lifelong learning is closely related to the requirements of sustainable development education and the described changes in school learning. It has a broader scope of influence and encompasses all types and ways of learning that individuals can undertake throughout their lifetime. It can be acquired both through formal institutions and various non-formal forms of education and it is fluid and flexible. When connected properly with the education for sustainable development and school reconceptualization, its benefits can go far beyond individual development, fulfilling teaching and learning experiences and gaining awareness over sustainability issues, they lead toward responsible citizenship, and building reliable decision makers in the ever changing world.

Changes in school are consistent with the concept of education for sustainable development, because they are based on participatory methods that enable active involvement of students in different actions that are organized in immediate surroundings and close environment. Whether they adopt the ‘whole school’ methods, or content based learning, the school are important factor in building sustainability. They develop learning and teaching methods, many curricular and extracurricular activities, and organize experimental learning in the authentic environment. The process of teaching in authentic environments, on the other hand, enriches school education, enables the use of different teaching strategies, as well as other types of learning, primarily experiential learning, and learning through active participation. Teaching activities in the natural or social environment provide active positioning of students, their acquaintance with problems from the immediate environment and searching for ways of solving them. Finally, the emergence of these new forms of learning is likely to have implications for another questions (DESD, 2009, 51) that have not been discussed in this paper, but will have the great significance in the years to come. It is teacher education, school administration and professional development of educators in the light of described processes.

REFERENCES


ŠKOLA KAO PRIPREMA ZA CELOŽIVOTNO UČENJE I ODRŽIVI RAZVOJ

U radu se razmatra odnos savremene škole i koncepata doživotnog učenja i održivog razvoja. Rad takođe objašnjava činjenicu da sama škola pruža kroz brojne promene kako bi uspjela da odgovori na zahteve savremenog društva od kojih su neke usmerene ka doživotnom učenju i obrazovanju za održiv razvoj. Najznačajnije promene u delu školskog učenja idu u prilog razvoju koncepta doživotnog učenja i obrazovanja za održivi razvoj.