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VELKOVA-MANOVSKA Klaudija

THE NECESSITY OF IMPLEMENTING EDUCATION FOR SUSTAINABLE DEVELOPMENT IN EARLY CHILDHOOD

Abstract: We live in a present time in which we face great challenges on a daily basis. Therefore, to respond to these huge challenges and overcome them, it is necessary to find solutions that completely support brand new and more sustainable ways of living. It is an unquestionable fact that children around the globe are also exposed to such issues. For this reason, there appears a need for introducing Education for Sustainable Development starting from the early years. This kind of education equips students with knowledge, skills, values and behaviors, which help them in making informed and reasonable decisions to solve current and upcoming obstacles.

In this paper, the necessity of Education for Sustainable Development implementation in all systems of education (including early childhood education) is emphasized, which can be achieved by: supporting ESD, promoting sustainable development in formal, non-formal and informal education, developing the competencies of the professional staff, providing appropriate tools and educational materials, and promoting research and cooperation. During the research on this matter, besides the analysis of pedagogical documentation, ESD declarations and early learning curricula, the views and understandings of head teachers, teachers, students and parents will be examined. The international initiatives and programs that fulfil the idea of sustainability, may certainly confirm that the empirical application of Education for Sustainable Development is a promising mission. Through the principles mentioned in the Early Learning and Development Program in our country, the author sees the connection, as well as the possibility, for implementing ESD in the kindergartens and centers for early childhood development in the Republic of North Macedonia.

Keywords: Sustainable development, Education for Sustainable Development, Early childhood, Global goals

Introduction

Sustainable development has been defined since 1987 as: "Development that meets the needs of the present without compromising the ability of future generations to meet their own needs" (UNESCO, 2012).

From the 3rd to the 14th of June 1992 in Rio de Janeiro, a UN Conference on Environment and Development was held. At this conference, the Education for Sustainable Development was formally established. The ESD establishment became the basis for adopting future declarations and documents, such as Agenda 21, which is an all-embracing plan of actions to be taken at global, national and local level by UN agencies, governments and leading organizations and networks in order to reduce the human impact on the environment.

Chapter 36 is included in the plan, which refers to the importance of education, training, and public awareness in achieving the goals and activities stated in Agenda 21. The three aspects from this chapter can also be observed through the four general goals towards which the Education for Sustainable Development should be directed:

- To promote and improve the quality of education – the goal is to refocus lifelong learning by acquiring the knowledge, skills and values that people need to improve their quality of life.
- To reorient the curricula – from preschool to university level, education must be redesigned and reformulated to be the bearer of the knowledge, thinking patterns and values needed to build a sustainable world.
- Raise public awareness of the concept of sustainable development – this will enable the development of enlightened, active and responsible citizenship at the local, national and international levels.
- Train the workforce – continuing technical and vocational education of directors and workers (especially those in trade and industry), which will be enriched in order to enable people to adopt sustainable methods of production and consumption.

Within the Strategy for Education for Sustainable Development, certain tasks and goals have been set to be fulfilled when applying this kind of education. The ESD inclusion and development in formal education systems within all relevant subjects in both formal and non-formal education, is the key to providing future generations with knowledge 'of' and skills 'for' sustainable development. Through Education for Sustainable Development, people will become more competent and self-confident, they will use the opportunities to act in order to ensure a healthy and productive life in harmony with nature and will also respect social values, gender equality and cultural diversity (UN, 2005). The tasks of this Strategy that assist in fulfilling the main goal, are the following:

- Ensure that policy, regulatory and operational frameworks support ESD;
- Promote sustainable development through formal, non-formal and informal learning;
- Equip educators with the competence to include sustainable development in their teaching;
- Ensure that adequate tools and materials for ESD are accessible;
- Promote research on and development of ESD;
- Strengthen cooperation on ESD at all levels within the UNECE region.

Due to the reason I have already mentioned the tasks of ESD Strategy, there comes a necessity to connect them to the five priority areas that are argued in the global framework for implementing ESD from 2020 to 2030, entitled 'Education for Sustainable Development 2030'. These five priority areas are linked to the Strategy's tasks because they are also oriented towards advancing policies, transforming learning environments, building the capacities of educators, empowering and mobilizing youth and accelerating action at the local level (UNESCO, 2015).

Connection between Education for Sustainable Development and Early Education

In many countries around the world, early childhood learning and development has been raised to the level of a national priority, which receives as same treatment as other subsystems of education (Durchevska-Georgieva, G. and Ajrulai, A., 2018). Apart from the role of parents and family's environment, the organized educational work in the early childhood education is also significant.

Namely, when one thinks of organized work, one must mention the three functions of pre-school development and education: pedagogical, social and economic. The pedagogical function offers children the opportunity to develop, play and learn in a safe environment. Through this function, parents' knowledge and skills are improved regarding family upbringing, and the safe

learning environment is provided for the children. The social function is related to the equal and equitable opportunities that should be enjoyed by all children, in order to achieve greater social integration and cohesion. Preschool education and upbringing helps in children's adaptation to school, reduces the dropout of children in further degrees of education and gives better results at school. Finally, through the economic function, parents are given the opportunity to return to work and/or continue their education. The investment in early childhood development contributes to the improvement of the educational and socio-economic status of each individual (Durchevska-Georgieva, G. and Ajrulai, A., 2018).

The World Organization for Early Childhood Education argues that the process of implementing sustainable development can, and should, start from the early years, as children are seen as active agents in their own lives, capable of engaging in more complex environmental and social challenges (OMEP, 2010). In this context, the famous educator Maria Montessori says in her book: 'The human personality forms itself by itself, like the embryo, and the child becomes the creator of the man, the father of the man' (Montessori, M. 2021), which makes it possible to understand the importance of early childhood development in the growth of one's personality.

The link between Education for Sustainable Development and early childhood can also be recognized through ESD special recommendations that cover early childhood period. The recommendations are the following: to enable access for all to the process of lifelong learning, respect gender, learn for change, form networks, arenas and partnerships in practice, enable professional development that will strengthen this type of education in all sectors, introduce Education for Sustainable Development in early childhood programmes, practice sustainable development and encourage new research (Davies, J., Samuelsson, P.I., Engdahl, I. & Blatchford, S.J., 2008).

How much children learn from the society and environment in which they live and act is shown by the representatives of the two dominant schools, Geneva (Piaget) and Moscow (Vygotsky). They have had a huge impact on the modern understanding of the cognitive development of preschool children, because Piaget's knowledge regarding learning and development of children indicates the active role of the child in the process of acquiring knowledge in the constant interaction with his social and physical environment (Damovska, L., 2019). Similarly, Vygotsky investigated the influence of cultural-historical factors on the development of children's mind, opinion and speech, with a focus on how culture affects the child (Damovska, L., 2019).

The Australian professor and researcher, Julie Davies, believes that children are the ones who are most vulnerable in terms of the impact caused by the unsustainable living (Davies, J., 2010). According to her, the situation should not remain like this, because early childhood education can be the right opportunity for building and developing abilities in children that will turn them into active and informed citizens for the present and the future, who will be able to contribute to healthy and sustainable ways of existing (Davies, J., 2010). Adults often accept the fact that the attitudes and values children acquire toward books and reading, numeracy, social interactions, and issues of gender and race, are formed early; thinking that parents and teachers play a key role within that process. But when it comes to the attitudes and values that children acquire towards the environment, that fact is often ignored by adults (Davies, J., 1998).

How important early development of the child's mind and brain is, can be noticed in the book published by the University of Harvard "The Science of Early Childhood Development", where the most basic concepts of early child development are mentioned.

1. Child development is a foundation for community development and economic development.
2. Brains are built over time.
3. The interactive influences of genes and experience literally shape the architecture of the developing brain.
4. Both brain architecture and developing abilities are built "from the bottom up".

5. Cognitive, emotional, and social capabilities are inextricably intertwined.
6. Toxic stress in early childhood is associated with persistent effects on the nervous system (Harvard University, 2007).

In terms of philosophy and educational practices, there is an overlap between environmental education and early childhood education (Davies, J., 1998). Early childhood focuses on equitable, democratic and inclusive ways of people interacting between each other, building trusting relationships that affirm, nurture and support negotiation rather than dominance, which in turn is important for establishing sustainable social justice.

In early childhood, children's outdoor play and learning have a historical value. Don't we remember how much we wanted to spend the whole day outside on the street, with the kids from the whole neighborhood? Outdoor play is significant because children go through direct experiences by playing with natural materials and learn through those new experiences (Davies, J., 1998). Hence, rethinking outdoor play and advocating for green spaces are some of the challenges that this area faces with in early childhood age (Davies, J., 1998).

What environmental education and early childhood education have in common is the idea of wholeness and the holistic way of looking at the world. Both fields present the integrated curriculum approach as the central one, with practical and relevant experiences for learners, thus preserve a strong commitment to democratic practice. Another common feature of both types of education is that supportive living and learning environments in both environmental education and early childhood education are oriented towards the importance of learning as a set of behaviors, values, skills and content (Davies, J., 1998). There are three ways proposed for the continued development of education for sustainability into early education and all three are related to the whole center approach, systems thinking and action research (Davies, J., 2010).

ESD and Sustainable Development Goals

At the Sustainable Development Summit, UN member countries adopted an agenda for sustainable development with 17 goals incorporated, which generally refer to the three pillars of sustainability – economic, environmental and social. This agenda contains commitments for building a different future for the people and the entire planet, which will be implemented through sustainable development. Also, it represents the first agreement that establishes a universal, all-embracing plan for action.

Within the goals, the three dimensions of sustainability are balanced in areas like poverty, inequality, food security, health, education, sustainable consumption and production, population growth, employment, infrastructure, sustainable management of natural resources, climate change, gender equality, peaceful and inclusive society, access to justice and responsible institutions, etc. For the aim of successfully accomplishing these goals, all resources are expected to be included (local, national, international), together with both public and private.

According to OMEP, sustainability can be practiced through all pillars of SD by appropriate actions. In terms of economic sustainability, certain activities are carried out that are related to sustainable consumption, ethics in production, resource sharing, poverty, social entrepreneurship, waste and its impact on the environment, fulfillment of basic needs (clean water, health, education and home), efficient devices, energy conservation, transportation, and intangible valuation. In terms of social and cultural sustainability, attention is paid to social participation and dialogue, respect for difference (opposing inequality), sense of justice and fairness, diversity, intergenerational knowledge, empathy and compassion, stories about people's daily lives, peace, and cessation of conflicts. Finally, in terms of environmental sustainability, the activities are aimed at gaining experiences in nature, developing critical thinking skills, acquiring knowledge

of the local area, understanding the way people are connected to nature as well as to the past, present and future of the environment, preserving biodiversity, making informed decisions about the present and the future, etc.

These practices are locally adaptable, and therefore the challenges that arise in relation to these topics can be overcome by the societies in which people live. As a country, we can agree that we are also facing alike problems in Macedonia, seen from a different perspective.

In the book "Sustainable development begins with education" (UNESCO, 2014), one can identify the connection of each global goal to Education for Sustainable Development and how it can contribute to the fulfillment of each goal individually. Within the fourth goal, there are seven targets and three means of implementation targets.

Targets are associated with free and quality primary and secondary education for all, as well as with quality early childhood development, accessibility to technical, professional and tertiary education for all, higher education, establishment of appropriate skills (technical and professional), employment, decent jobs, entrepreneurship, elimination of gender differences in education, equal access to all levels of education (especially for vulnerable citizens and people with disabilities), promotion of skills required for sustainable development, sustainable lifestyle, human rights, gender equality, culture of peace, non-violence and cultural diversity. The means of implementation targets are related to constructing and/or improving the school facilities in order to be adapted to the needs and demands of children, building a safe, non-violent, inclusive and effective learning environment, increasing the number of scholarships for enrollment in higher education institutions, vocational and technical training for information and communications technology, engineering, increasing the supply of qualified teachers and international cooperation for teacher training.

As we note, the fourth global goal is related to ensuring inclusive and equitable quality education and promoting opportunities for lifelong learning. That's why, through this goal, everyone is expected to have access to basic quality education. The aim of the fourth goal is to improve the school equipment too, increase the number of training and professional opportunities for people, and grow the number of trained teachers capable of providing a safe and secure learning environment. The guidelines regarding this goal are explained in more detail:

- By 2030, Goal 4 intends to provide early childhood, primary and secondary education for all.
- For adults, the goal is improvements to technical, vocational and job skills education, including university.
- Eliminate gender disparities and ensure equal access for vulnerable populations.
- Ensure all youth and a substantial amount of adults achieve literacy and numeracy.
- Promote global citizenship topics in all subjects including sustainable development, sustainable lifestyles, human rights, gender equality and peace through education.
- Build and upgrade education facilities that are safe, inclusive, non-violent and effective learning environments.
- Increase the number of qualified teachers through training and education investment.

To ensure inclusive and equal quality education and promote lifelong learning, learning goals have been set, which students should adopt in all three developmental domains. Those goals are aimed at understanding the role of education and lifelong learning, understanding the value of education, raising awareness of the importance of quality education, encouraging others to use educational opportunities, implementing quality education, ESD and similar approaches at all levels, promoting gender equality, and similar (UNESCO, 2017).

The right to education is protected within the International Law, in Article 26 of the Universal Declaration of Human Rights from 1948. The article states that everyone has a right to

education and that 'Education shall be directed to the full development of the human personality and to the strengthening of respect for human rights and fundamental freedoms.'

The opportunity to learn about the world around us brings freedom, empowerment and understanding. Education "unlocks" the potential in reaching other sustainable development goals. When people have access to quality education, they can break the cycle of poverty, learn about sustainable living, make wise choices, and educate themselves and others about important issues.

Education has the potential to significantly improve the well-being of women and girls. Access to education can help girls and women increase incomes, reduce wage gaps and promote economic independence. When women are educated and have extra income, these increased resources benefit not only their families, but also the communities to which they belong.

Environmental education can help individuals acquire needed skills to make changes in policies and practices within their community. It is also important to organize lectures about sustainability matters such as environmental protection, human rights, gender equality, peace and global citizenship, in order to encourage people in taking action so to improve their present and future (Council for International Cooperation, 2018, pp. 4.1-4.11).

Practices of Sustainable Development in Early Childhood

Norway is a country that is recognized for its long history of education that practices sustainable development. More recently, the revised plan for early childhood education has officially inserted the section of mandatory sustainable development as one of the core values that should be acquired by children in the early years. Sustainable development is understood as multidimensional (socially, environmentally and economically), and the revised framework pays great notice to intergenerational equity, democracy, diversity and social justice (Hindmarch, T. & Boyd, D., 2021).

Recent policy revisions in Sweden build on a long history of educators working with children and recognizing them as active stakeholders in solving issues related to the environmental, political, economic and social aspects of sustainability. The revised curriculum perceives sustainable development as a fundamental value. Three new sustainability-aligned curriculum goals have been introduced, which highlight children as important agents of change towards a sustainable future. (Hindmarch, T. & Boyd, D., 2021).

In New Zealand, under the Education Council's Code and Standards, all teachers devote themselves to promoting and protecting the principles of human rights, sustainability and social justice, and they encourage students to become active participants in community life and engage with issues important for the well-being of society. This professional responsibility is anticipated not only at the level of formal education, but also at the level of professional development. The social dimensions of sustainability and active democratic citizenship lie at the heart of the revised Early Childhood Curriculum – Te Whariki. (Hindmarch, T. & Boyd, D., 2021).

Japanese educators have a strong tradition of practicing nature-based activities in the delivery of preschool services. Further research in Japanese kindergartens and country's interpretations of Swedish forest programs could promote early childhood sustainability education in Japan. In the revision of its national curriculum in 2017, Japan included the goal – creating a sustainable society, offering opportunities for wider capacity building for Early Childhood Sustainability Education (Hindmarch, T. & Boyd, D., 2021).

The Necessity of Implementing ED in Early Childhood

As emphasized in the Early Learning and Development Program of our country, early childhood is *a time* of tremendous physical, cognitive, socio-emotional, and language development of the child. The holistic approach that is significant for ESD, is also included in the Early Learning and Development Program, intended to be implemented through both theory and practice.

Educators are obliged to create conditions so that children can learn through play, interaction, participation in discovery learning processes and problem-solving situations, while developing their motor, language, cognitive and socio-emotional skills.

If we continue to analyze this program, we can really notice many similarities between the principles set in it, and the values, skills, knowledge and behaviors to be achieved through Education for Sustainable Development. Here, I would mention the principle of equal opportunities and respect for differences and the principle of multiculturalism, which explains that all children must not be discriminated in any way, but on the contrary, all should be included in the education system.

The principle of active learning is extremely important, because it is related to the environment where children learn, and in which, in accordance with their emotional and physical needs, children develop curiosity, discover diverse ways of expressing themselves and bring solutions and answers.

One of the characteristics of today's education is its adaptation to the learner's individual needs, interests and opportunities. This idea is stressed in the fifth principle of the Early Learning and Development Program.

Furthermore, the principle of completeness is also significant, which speaks of contents that cover all aspects of child's personality development through the holistic approach, considering the fact that the child gets to know the world as a whole.

When discussing Education for Sustainable Development, the active participation of parents and community in which the child lives and learns is often mentioned, and therefore, the principle of openness of the educational process is quite similar to this aspect of ESD.

The principle of continuous professional development of the educator is an element that is substantial in ensuring quality in early education, which links to the principle of constant evaluation of the educational process (Ministry of Labor and Social Policy, 2014).

Conclusion

The process of defining sustainable development became the initial motivation for the creation of the global goals that would help in meeting the needs of current generations, without compromising the needs of future generations. The installation of these goals was aimed at improving quality education, reorienting existing learning programs, raising awareness about the concept of sustainable development and training teachers and educators. The global goals were subject to certain changes over time, so that in 2019 a discussion was raised towards acting in the direction of five priority areas: advancing policies, transforming learning environments, building the capacities of educators, strengthening and mobilizing youth and accelerating action at the local level.

Research shows that children do feel today's challenges, even if it appears that they are not affected by them. Studies of early childhood development speak to the fact that early childhood development is based on certain concepts that explain that children are the foundation of community development. Also, their brains are formed over time, through genetic and experiential influences which contribute to make cognitive, emotional and developmental abilities inseparable.

The process of embedding sustainable development in education should start from the early years, in order to offer children an opportunity to become drivers of change in the surrounding in which they live. The challenges that are set before this type of education would be overcome when play in pre-school centers and kindergartens is redirected from an indoor to an outdoor space, when there are enough green areas occupied within centers and kindergartens, when additional educators' training is delivered, and when teachers' networking is opened up.

Sustainable Development Goals address all three pillars of sustainability. Sustainability in pre-school centers and kindergartens can be practiced through appropriate practices. The connection between each of the seventeen goals to ESD sends us the message that education is of a

crucial significance for goals' achievement and establishment of sustainability. The fourth goal related to the delivery of quality education for all, contains learning goals that are expected to be acquired by the learners.

From the revised programs in several countries such as Norway, Sweden, New Zealand and Japan, it can be noted that sustainable development is already introduced in the curricula as a value that children should nurture from the early start. Children are considered to be important drivers in creating changes that lead to a sustainable future.

Finally, analyzing the Early Learning and Development Program in Macedonia, one can understand the connection between its principles and the values, skills and knowledge that are at the roots of Education for Sustainable Development. This relation increases the possibilities for practical implementation of this type of education in our education system, emphasizing one of the main features of ESD, which is, adaptation of this education to the local conditions and opportunities.

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