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Sustainable development in higher education

Abstract

The effectiveness of human activities is strongly conditioned by education. The same applies to the dissemination of the idea of sustainable development. The strategic documents emphasize that education for sustainable development should be implemented at all levels of education. Core Curriculum and the National Qualification Framework guarantee the presence of content in the field of sustainable development in education programs at the lower levels of education (from pre-school to upper secondary). The article analyzes the presence of sustainable development in the programs of higher education.

Key words: sustainable development, education for sustainable development, educator, competence

The need for sustainable development in an unsustainable world

The modern world is a closely associated system. The process of globalization makes that decisions on one continent affect the lives of people across the globe. The omnipresent progress, rapid technological change, demographic, and economic and lifestyle-oriented consumerism made the exhaustion of natural resources more real. Besides, the world is struggling with a variety of negative consequences of uneven development and unlimited exploitation of the environment. The most important are: exploitation, poverty, hunger, civilization diseases, the destruction of fauna and flora, and the greenhouse effect. In this situation, steps have been taken to mitigate these effects. The guarantor of their effectiveness are changes in mentality of modern people and the formation of ecology and pro-social behavior.

Sustainable development (SD), defined in the 1987 Report of the World Commission on Environment and Development, is a “process designed to

meet the developmental aspirations of the present generation, and to enable the same aspirations to be realized by the next generation”¹. It is possible to achieve a fully sustainable development, but taking into account all spheres of human activity. They are included in the three areas, defined as pillars of sustainable development. The first relates to economic development, including economic growth and equitable sharing of benefits. In this area sustainable development is intended to offset the economic growth in different parts of the world and reduce the negative impact of the economy on the environment. The second pillar is the social development to ensure adequate quality of life for all inhabitants of the globe. The last includes the eco-friendly development. The premise of sustainable development in this area is to protect natural resources, rationally use it and to halt or reduce the degradation of the environment.

Actions taken in the context of sustainable development have long-term dimension and are geared to achieve the following objectives: improving social and individual welfare, harmonious arrangement of the relationship between man and nature, justice (intragenerational and intergenerational) and safety understood as security in ecological, food, health, demographic, social and energy area².

Sustainable development is largely determined by the active participation of the conscious and professionally educated society. Changing current selfish and consumption attitudes and habits is not easy. It requires making a series of educational interactions, at all levels.

In the past few decades many documents were created, in which emphasis is placed on conducting extensive educational campaign. One of the first was the Stockholm Declaration adopted in 1972. Content includes implementation of extensive demands of educational action. Its aim was to stimulate and strengthen the awareness of key environmental issues³. Conference in Stockholm initiated a number of different meetings devoted to reflect on issues connected with education for sustainable development.

¹ *Unesco a Zrównoważony Rozwój*, <http://www.unesco.pl/edukacja/dekada-edukacji-n-t-zrownowazonego-rozwoju/unesco-a-zrownowazony-rozwoj>, access: 14.12.2014.

² *Johannesburska Deklaracja o Zrównoważonym Rozwoju*, www.ietu.katowice.pl/wpr/.../Lista.../Deklaracja_z_Johanesburga.doc., access: 13.01.2015.

³ P. Domeracki, W. Tyburski, *Podstawy edukacji i kształtowania świadomości społecznej w duchu zrównoważonego rozwoju. Priorytetowy charakter ekoedukacji*, [in:] W. Tyburski (ed.), *Zasady kształtowania postaw sprzyjających wdrażaniu zrównoważonego rozwoju*, Wydawnictwo Naukowe UMK, Toruń 2011, pp. 233–281.

Education for Sustainable Development as a holistic education

One of the most important events for the development of Education for Sustainable Development (ESD) could be, convened in 1992 in Rio de Janeiro, the second World Conference of the United Nations. The meeting went down in history as the “Earth Summit” and resulted in the development of several key documents: the Declaration of Rio, referred to as “the Earth Charter”; Global Programme of Action – *Agenda 21*, United Nations Framework Convention on Climate Change, the Convention on Biological Diversity and the “Forest Principles”. Educational issues are most extensively developed in *Agenda 21*⁴. The document indicates that the previously understood environmental education should be changed to include all elements of the learning process.

The implementation of education for sustainable development should be based on the guidelines written in Strategy on Education for Sustainable Development⁵, prepared by the United Nations Economic Commission for Europe. The document points out that education “[...] is a prerequisite for achieving sustainable development and an essential tool for good governance, appropriate decision making and promoting democracy”⁶. This education, in its assumptions, is part of a concept of lifelong education and is understood as a “continuous learning process, exploring issues and dilemmas, where appropriate answers and solutions may change as far as our experience increases”⁷. It can be implemented formally, non-formally and informally. Educational activities on sustainable development should be carried out in a systematic manner “[...] by primary, secondary and higher education [...]”⁸.

The development of Strategy on ESD is primarily: the promotion of sustainable development, ensuring access to adequate teaching and learning materials, promotion of scientific research and providing education professionals (educators) with the right skills (skills for the future)⁹. For this purpose training programs, at every level of education, should include issues related to sustainable development. This postulate is most often carried out as

⁴ Ibidem.

⁵ *Strategia edukacji dla zrównoważonego rozwoju*, p. 3, https://www.mos.gov.pl/g2/big/2009_04/4f3f267429420f4dfcb32b98f1ac8605.pdf, access: 12.12.2015.

⁶ Ibidem.

⁷ Ibidem.

⁸ *Strategia Zrównoważonego Rozwoju Polski do 2025*, http://snep.edu.pl/obywatele_malych_szkol/publikacje/strategia%20zrownowazonego%20rozwoju%20polski%20do%20roku%202025.pdf, access: 12.12.2015.

⁹ *Strategia edukacji dla zrównoważonego...*, op. cit., p. 5.

part of the environmental education, natural sciences and technology. Point 20 of Strategy was devoted to higher education, which “should significantly contribute to the ESD by development of relevant knowledge and skills”¹⁰. It is important to maintain consistency and compatibility of policies and measures at universities with what is happening in the labor market. This demand will be satisfied if university education is open to professional and life experience of individuals. It is impossible to undertake educational activities in isolation from the practice that generates daily life.

Educators play a key role “in the [...] dialogue between [...] students, authorities and civil society”¹¹. The success of implementation of sustainable development principles depends on the degree of openness and willingness to cooperate. The complexity of today’s problems requires the involvement of representatives of various disciplines and institutions. This idea was developed in section 26 of the Strategy, which emphasizes the need for collaboration between the various stakeholders. Currently, it is difficult to talk about effective education and preparation for work without the public consultation and verification of what is happening in the labor market. Education must be flexible, focused primarily on the development of competencies. Curricula should take into account the latest scientific information, and comply with current social needs. This task is not easy. The structure of the programs must include obligatory courses. The number of hours remaining available is insufficient to reliably plan and implement content related to specialization.

The programs taking into account the assumptions of education for a sustainable society¹² should include content concerning:

- local, national, and regional conditions with global context. The purpose of this content is to capture the balance between global and local processes;
- various aspects of sustainable development, depending on the country and the areas of teaching;
- the evolution of the meaning of sustainable development;
- key issues of sustainable development, including poverty reduction, citizens’ rights¹³.

¹⁰ Ibidem, p. 9.

¹¹ Ibidem, p. 10.

¹² J. Sandner, Idea zrównoważonego rozwoju w holistycznej edukacji przyrodniczej, *Problemy Ekorozwoju / Problems of Sustainable Development*, 2007, vol. 2, no 2, pp. 101–105.

¹³ E. Gajuś-Lankamer, A.M. Wójcik, Edukator zrównoważonego rozwoju odpowiedzią na potrzebę kształcenia zrównoważonego społeczeństwa, *Problemy Ekorozwoju / Problems of Sustainable Development*, 2007, vol. 6, no 2, pp. 157–164.

The key issue in the education planning process are the goals. With regard to education for sustainable development, objectives should include knowledge, skills, understanding, attitudes and values. Sustainability must have a strong philosophical and axiological substrate.

All educational activities must be subject to monitoring and evaluation. The effectiveness of education for sustainable development is determined by various factors, like finding a place for it in the school system, in formal education, shaping appropriate attitudes and transmission of values (e.g. tolerance, respect for the views of others, respect for others, the resignation of consumerism, attachment to spiritual and intellectual values, respect for the lives of others, combining activities of educational institutions with national and local activities)¹⁴.

Education for sustainable development turned out to be an important issue, so in 2002, the Assembly of the United Nations adopted a resolution establishing years 2005–2014 as a Decade of Education for Sustainable Development, with UNESCO as a coordinating agency. Implementation of this education and support for changes is conditioned by development of special plans and educational programs. They should take into account issues related to all three pillars of sustainable development. Practice shows that most attention is paid to environmental education¹⁵.

In 2007, during the meeting of the working groups Consumer Citizenship Network in Istanbul, Julia Heiss pointed out the most important activities of the Decade for ESD. Worth to notice is the aspect of rebuilding education at all levels, so that education could become a vehicle for patterns and values needed to build a sustainable world¹⁶. The decade was full of all sorts of initiatives to achieve the various demands of the Strategy. In order to summarize the previous activities, World Conference in Nagoya (Japan) was organized in November 2014. The motto of this meeting was the statement of Hideki Niwa – the Minister of Education, Culture, Sports, Science and Technology of Japan: “Education for Sustainable Development does not end with the last year of the Decade. On the contrary, we should now increase our commitment to ESD, using our experience gained during the last ten years”¹⁷. The

¹⁴ M. Howaniec, Edukacja na rzecz zrównoważonego rozwoju w Polsce – czego brakuje?, *Problemy Ekologii*, 2010, vol. 14, July–August, pp. 178–179.

¹⁵ A. Kuzior, Dekada Edukacji dla Zrównoważonego Rozwoju, *Zeszyty Naukowe Politechniki Śląskiej*, 2014, p. 6, vol. 72, <http://www.woiz.polsl.pl/znwoiz/z72/6.%20A.%20Kuzior.pdf>, access: 27.12.2014.

¹⁶ J. Kostecka, Dekada edukacji dla zrównoważonego rozwoju – wizja, cel strategia, *Problemy Ekorozwoju / Problems of Sustainable Development*, 2009, vol. 4, no 2, pp. 101–106.

¹⁷ *Światowa Konferencja Edukacji dla Zrównoważonego Rozwoju*, Polski Komitet ds. UNESCO, <http://www.unesco.pl/edukacja/dekada-edukacji-nt-zrownowazonego-rozwoju/>

culmination of the meeting was to develop new goals and objectives, which are the “Roadmap for Education for Sustainable Development”, designed to implement the Global Action Programme on ESD – GAP, which is a continuation of the Decade. Map of commitments, developed by UNESCO, allows the acquisition of potential partners for the implementation of the initiative submitted. The Round Table of Ministers of Education exchanged experiences of the past ten years. They were focused around four key questions:

- Why the implementation of education for sustainable development in some countries has been a success, but in others became a failure?
- Which factors determine the success, and which determine failure?
- What are the main obstacles for the development of educational policy friendly to ESD?
- What action should be taken at national and international level to effectively support the implementation of ESD?¹⁸

Greece has become a leader in the implementation of the objectives of the Decade. They established more than 50 centers of ESD, in which 45,000 programs were implemented, involving 1,5 million students and 83,000 teachers. The deliberations resulted in principles of *Agenda after 2015*. In the Global Action Programme such issues have become priorities: training of teachers, quality of education and its financing. The results of the Conference will be discussed at the World Education Forum in 2015 in Incheon (South Korea).

The requirements of the Ministry and the presence of SD in curricula

In Poland, the Ministry of Education and Ministry of Science and Higher Education control training programs. As noted by specialists, content related to sustainable development in the core curriculum occurs relatively rarely and not directly. Objectives and contents include the issue of sustainable development, but there is no specific reference to it. It is difficult to understand this situation, since the content of sustainable development can be implemented within each school subject, at every level.

ESD Strategy contains a record, which requires formal education institutions to transfer knowledge, awareness amongst pupils and their influence on respective behavior. The best form of educational impact is an example, so facility should work in accordance with the SD too. All stakeholders were

article/37/swiatowa-konferencja-na-temat-edukacji-dla-zrownowazonego-rozwoju/, access: 07.12.2014.

¹⁸ Ibidem.

invited to cooperate in the implementation of this idea: students, teachers, managers, other staff, parents and other people from the environment¹⁹. The essence is best illustrated by the statement of former British Prime Minister Tony Blair: “Sustainable development will not just be a subject in the classroom: it will be in its bricks and mortar and the way the school uses and even generates its own power. Our students won’t just be told about sustainable development, they will see and work within it: a living, learning place in which to explore what a sustainable lifestyle means”²⁰.

Implementation of SD-related content can be carried out using the full range of forms and methods of teaching. Among them, the most frequently are mentioned: group forms, problem methods (discussions, simulations, situational methods, role play, case studies, projects) and practical methods (research, excursions, fieldwork, practical analysis). The most important element of all these methods is the ability to exchange opinions and common, practical action to deal with the various problems of human existence. It is important that they are real.

According to A. Hłobił or T.P. Durbin, higher education should promote and pursue lifelong education for sustainable development. It can be implemented on: postgraduate studies, thematic courses and trainings²¹.

ESD in higher education is frequently a component of the natural sciences (environmental protection, ecology), social (sociology, tourism, security theories) and economics (macroeconomics, marketing). You have to remember that in addition to the guidelines of the National Qualifications Framework, each university has autonomy in terms of curriculum development. Besides, in college there is a directory of courses to choose from, which may differ in content from realized specialization. As is clear from the analysis of educational offers of the universities, education for sustainable development is most often performed in the system of postgraduate courses, which last two or three semesters. Most of the offers was established in the last five years and no new arrives. Interestingly, the interest in this specialty is small²². This condition may result from a lack of knowledge of applicants for studies on the principles of sustainable development, as well as potential places of employment and employers.

¹⁹ *Strategia Edukacji dla Zrównoważonego Rozwoju Europejskiej Komisji Gospodarczej ONZ*, Ministerstwo Środowiska, Warszawa 2008, pp. 8–11.

²⁰ After: A. Batorczak, *Szkoła jako modelowa placówka zrównoważonego rozwoju*, <http://www.eko.edu.pl/pliki/prezentacje/batorczak.pdf>, access: 06.01.2015.

²¹ E. Gajuś-Lankamer, A.M. Wójcik, *Edukator zrównoważonego rozwoju...*, p. 158.

²² *Ekspertyza dotycząca edukacji dla zrównoważonego rozwoju w Polsce. Raport końcowy*, Poznań 2012, p. 15, http://www.mos.gov.pl/g2/big/2013_01/5be891622543678831acb-68b4d83fa1a.pdf, access: 24.11.2014.

Today, young people in choosing an educational path are guided by information on the labor market. Sustainable development experts are employed in many companies and institutions, including those with high prestige. The most common purpose of their actions is to optimize the working conditions to the assumptions of the SD. The problem is that information on this topic is not posted on the official website of the institution. In addition, the prospective students identify sustainable development with environmental protection and ecology. There is no reliable information on the multi-dimensionality of the problem.

Sustainable development in the education of future teachers and pedagogues

SD strategy repeatedly scrolls the idea that the aware, knowledgeable and reflective teacher is a guarantor of implementing the SD. As you can see, the SD goals in the school and in the teaching process are not easy, so you need to properly prepare teaching staff. They should have the professional knowledge and ability to select strategic objectives and procedures for their implementation²³.

In the case of future teachers training, the guidelines indicate very briefly ESD components. Actually, they are limited to the development of social skills and ideas of self-education. At the BA studies, the student:

K_U11. can animate the work on the development of the participants and support their independence in the acquisition of knowledge, as well as to inspire actions for lifelong learning.

At the MA studies students:

K_U11. are able to animate creatively work on their own development and the development of educational process participants and to support their independence in the acquisition of knowledge, and inspire action to learn throughout life²⁴.

The introduction of additional content for programs is the responsibility of people responsible for the development of programs at university level. Qualification framework does not oblige the transfer of knowledge on issues bordering on the environment, economy and society to pedagogy students.

²³ E. Samonek-Miciuk, M. Pedryc-Wrona, Edukacja dla trwałego i zrównoważonego rozwoju w procesie kształcenia profesjonalnych przyszłych nauczycieli przedmiotów przyrodniczych, [in:] L. Tuszyńska (ed.), *Edukacja środowiskowa w społeczeństwie wiedzy*, Wydział Biologii Uniwersytetu Warszawskiego, Warszawa 2010, p. 90.

²⁴ Rozporządzenie Ministra Nauki i Szkolnictwa Wyższego z dnia 4.11.2011 r. w sprawie wzorcowych efektów kształcenia, Dz. U. Nr 253, poz. 1521.

Another issue is the level of awareness of researchers. Often they do not see the need to deal with the issues of sustainable development, and treat marginally educational activities. They forget that universities have a huge impact on the development of different ideas and concepts. Universities conduct research into the social changes taking place to capture and identify innovative solutions.

This situation requires a multi-directional corrective action. Among the demands arising from the mentioned expertise, we find: the development of national standards obliging for sustainable development education in all fields of study, especially teaching, obliging universities to create internal regulations and the introduction of legal obligations for individual departments to implement the content on sustainable development²⁵. Besides, the list of references in developed courses cards should be expanded and include items devoted to the issue of sustainable development. Student would be required to read the idea and the ensuing activities from the area.

Sustainable development specialist

In describing this new profession, you have to refer to the initial assumptions of the education process in this regard. According to Welfens, aim of education for sustainable development is to achieve the entity's ability to actively shape their environment, in accordance with the principles of environmental sustainability, economic efficiency, social justice. It should mobilize human to create a successful future, for which he would feel responsible²⁶. At the local and global levels M. Łuszczuk believes that goal of education for sustainable development is the formation of a group of human traits and actions to support this development. These include: emotional relationship to nature, responsibility, free will, the ability to predict the future, the ability to cooperate, empathy, ability to communicate, creativity and the ability to learn (lifelong learning)²⁷. At the ministerial list of professions and specialties we find Ecological Educator profession

²⁵ *Ekspertyza dotycząca edukacji...*, op. cit.

²⁶ *Strategia edukacji dla zrównoważonego rozwoju*, <http://ekorozwoj.pol.lublin.pl/no12/p.pdf>, access:11.02.2015.

²⁷ M. Łuszczuk, *Kształtowanie postawy homo sustinens wśród ekonomistów*, [in:] B. Poskrobko (ed.), *Ekonomia zrównoważonego rozwoju. Zarys problemów badawczych i dydaktyki*, Wyższa Szkoła Ekonomiczna w Białymstoku, Białystok 2010, pp. 109–122.

(code: 325501)²⁸. This person may carry out training in ecology, shape patterns and attitudes friendly to natural environment and what is important – to sustainable development of human health. In addition to educational activities, it can realize advisory in this regard. In the description of the purpose of the work the following activities appear: “improving knowledge, developing skills and responsible behavior for the protection of the natural environment, the implementation of the principles of sustainable development and healthy lifestyle”²⁹. The educator is obliged to develop original programs and promote behaviors and technology solutions beneficial for sustainable development.

A person with such profession will find employment in institutions conducting environmental education (education centers, foundations, associations and institutions working for the environment) and areas of public space, such as city parks, places of mass events, shopping malls, etc. One of the informative and educational forms of communication is a social campaign. It reaches the general public and contributes to changing attitudes. Certainly, the list of potential employers would expand.

A person wishing to take up employment as an ecological educator should have completed upper secondary education in fields related to ecology and environmental protection. But keep in mind that the impact to sustain development must be multidisciplinary and interdisciplinary. Therefore, a candidate for the educator should take professional improvement actions and have pedagogical training. It is necessary to undertake educational activities. In addition, he should have personality traits (as for the teacher) and well developed social skills.

SD specialist can also be a lecturer at the courses (code: 235915) or coach. He is prepared to supervise the tasks related to support adults in lifelong learning. Due to the nature of the profession and area of operation, lecturer at the courses can be theoretically and practically trained SD specialist. Its mission is to organize and conduct training and to coordinate the activities: preparation, evaluation and sharing teaching materials and teaching aids to the audience.

In the list of professions there is also the Cultural Animator profession (code: 343901). In the discourse on sustainable development, proponents

²⁸ *Klasyfikacja zawodów i specjalności*, http://psz.praca.gov.pl/rynek-pracy/bazy-danych/klasyfikacja-zawodow-i-specjalnosci/wyszukiwarka-opisow-zawodow/-/klasyfikacja_zawodow/zawod/325501?_jobclassificationportlet_WAR_nnportlet_backUrl=http%3A%2F%2Fpsz.praca.gov.pl%2Frynek-pracy%2Fbazy-danych%2Fklasyfikacja-zawodow-i-specjalnosci%2Fwyszukiwarka-opisow-zawodow%2F-%2Fklasyfikacja_zawodow%2Flitera%2FE, access: 04.01.2015.

²⁹ *Ibidem*.

appear to introduce the concept of the culture of sustainable development. Assuming, we could educate to an Sustainable Development Animator profession.

Of course, you can always submit a new profession in the register. Applicants may be ministries or central offices, associations, trade unions, employers' organizations and other institutions factually competent for the profession/specialty. Each application must include a justification of the need to enter the classification, a brief description of the profession and the professional tasks, and information about the requirements in terms of education. If your profession requires legislation, such information also should be included in the application³⁰.

E. Gajus-Lankamer and A.M. Wójcik developed a unique concept of education of sustainable development educator. The holder of such profession can look for a job in the organs and institutions of public life, responsible for the wider civic education for the environment and society. The list of potential workplaces included: "schools at all levels, education departments in local government units, libraries, community centers, regional environmental education centers, foundations and organizations working to protect the environment and environmental education, environmental protection departments of local government units, marshals' offices, offices of municipalities and cities, settlements administrations and local governments, forestry environmental education centers and educational centers at national and landscape parks"³¹. This list is very extensive and it shows in how many institutions there is a need for action in the field of sustainable development. Professional responsibilities of educator are equally extensive and multi-faceted. They are focused around organization and coordinating research, animation, management, negotiation, fundraising and evaluation. What is noteworthy – authors proposed skills educator should demonstrate. They relate to ability of developing of original ESD programs, creating conditions favorable for the implementation of the curriculum (schedule, location, teaching aids and the required human resources) and to raise funds for the implementation of these programs³².

A person with pedagogical training and interdisciplinary knowledge in the field of sustainable development can become an Educator. Theoretical foundation in the field of sciences such as biology, chemistry, geography,

³⁰ *Klasyfikacja zawodów i specjalności, Jak zgłosić nowy zawód?*, <http://psz.praca.gov.pl/-/15252-klasyfikacja-zawodow-i-specjalnosci>, access: 15.02.2015.

³¹ *Ibidem*, p. 159.

³² E. Gajus-Lankamer, A.M. Wójcik, *Edukacja dla zrównoważonego rozwoju. Poradnik dla studentów i nauczycieli*, UMCS, Lublin 2010, pp. 83–84.

ecology and teaching experience are preferred. Teachers are also predestined to this profession. For the implementation of the educational offer for future educators are obliged: universities and teacher training centers, foundations and non-governmental organizations³³.

Difficulties with the implementation of SD into programs

As noted by various experts, in formal education still prevails the approach derived from natural sciences education. There is a lack of systemic approach and presentation of the whole idea of education for sustainable development. This situation leads to skipping many strategic issues.

People directly involved in SD teaching indicate the following reasons hindering the full implementation of ESD: lack of funds, but also the lack of materials, time, support or sufficient knowledge.

Introduction of education for sustainable development in the academic education is left to the authorities of the university. The problem is that not all academics are convinced to this idea. It is therefore necessary for universities to create units associating scientists dealing with this issue.

Reports from research conducted among students of different directions show that there is a need for training in this profile, but practically. Universities should create new faculties and departments in the SD, which will provide an answer to the needs of different environments.

Another issue is the development of study programs. Sustainable development requires an interdisciplinary approach, you need to develop learning outcomes, include content from different disciplines (human, social and natural sciences) and hire prepared teaching staff. In addition, the curriculum should be practical, which implies an increase in hours of practice.

Conclusions

In preparation of future teachers and educators Higher Education plays a key role. Unfortunately, the issues of sustainable development in small degree are included in the study programs, especially in pedagogy. This situation has a negative effect on the preparation of future teachers. If we want to have informed and educated society, we must begin by training those who will teach and educate.

³³ Ibidem, p. 161.

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