Abstract. The article reveals the factors of transition of the education system in the interests of sustainable development. This process involves the transition from traditional education to an environmentally oriented model, which should be based on broad interdisciplinary knowledge based on an integrated approach to the development of society, the economy and the environment.

Keywords: sustainable development, higher education, economic prosperity, social security, personnel training, environmental education.

The term “education for sustainable development” has been introduced into the vocabulary and is used by didacticians working in the environmental protection, ecologists, education experts, its relevance is undoubted.

Widespread ideas of environmental education in the 20th century and impact of globalization on all areas of social life were prerequisites for development of new type of education.

It is important to mention that historically environmental education and education for sustainable development are in mutual connection; a new direction as education for sustainable development emerged by means of environmental education; it includes the best methodologies and modern forms of education. Obviously, the concept of education for sustainable development is much broader than environmental education; most innovations here depend on methodical preparation of teachers and professional skills of educators. Continuing the tradition of environmental education, education for sustainable development applies all its achievements and at the same time includes new enriched social and economic components.

Main objectives of education for sustainable development could be defined as aspiration for achieving higher degree of economic development and prosperity of population, respectful attitude towards natural environment and protection of natural resources for next generation.

Sustainable development was first introduced in 1987 in the report Our Common Future by the International Commission on Environment and Development, chaired by Norwegian Prime Minister Gro Harlem Brundtland. In her report, Brundtland laid out the guidelines for what environmental global problems humanity was facing. These include the accumulation of large amounts of industrial and household waste in the world, climate change caused by man-made factors, environmental pollution, consumption and production imbalances.

Another innovation was the definition of the term “sustainable development”, which was defined as “development that provides a balanced resolution of social and economic tasks and problems of preserving a favourable environment and natural resources potential and meets the needs of the present without compromising the ability of future generations to meet their own needs”.

If we return to the history of education for sustainable development, we can trace the dynamics of its development. The origins of this trend can be found in the decisions of the 1972 Stockholm Conference of the United Nations Environment Programme and...

This declaration proclaimed that “Environmental education, properly understood, should constitute a comprehensive lifelong education, one responsive to changes in a rapidly changing world. It should prepare the individual for life through an understanding of the major problems of the contemporary world, and the provision of skills and attributes needed to play a productive role towards improving life and protecting the environment with due regard given to ethical values. It should involve the individual in an active problem-solving process within the context of specific realities, and it should encourage initiative, a sense of responsibility, and commitment to build a better tomorrow. Environmental education must look outward to the community” [2].

One of the milestones in the development of education for sustainable development was the United Nations Conference on Environment and Development, Rio de Janeiro (1992). The conference was attended by the heads of state and government of the world. The conference participants came to a consensus that the economy should serve the needs of people, not people and natural resources should serve the economy.

The conference resulted in the definition of the basic goals of education for sustainable development:

- Environmental – issues of ecosystem disturbance, human interference in the biosphere, respect for biological diversity and the state of the global environment;
- economic – issues of growth of digital economy, its efficiency, economic inequality;
- social – improvements in livelihoods, social justice, ethnic cultural preservation and respect for constitutional provisions.

One of the most important documents of our time, Agenda 21, was adopted unanimously by the heads of all countries in Rio de Janeiro. This document identified key milestones on the road to sustainable development.

Agenda 21 stated that environmental education should be seen as a level of development of moral and spiritual education, necessary for development of the environmental awareness of young people, it is necessary to introduce relevant topics and practices into existing educational curricula and to seek new ways of professional development and training of teachers and educators. The curricula should reflect the formation of a humane attitude towards nature, which should be taught through innovative and interactive methods and forms, it will give an opportunity to really help in environmental and ethical values, behavior, which are necessary to ensure sustainable development.

The UNESCO International Conference on International Conference Environment and Society, held in Thessaloniki, Greece, in December 1997 adopted the Declaration of Thessaloniki. This declaration affirmed the awareness that all living creatures on Earth are interconnected, all depend on each other, the disappearance of any link disrupts the biological balance and at the same time, each has an ecological niche to fill. Along with the traditional focus on the study of nature, it is necessary to develop their emotional sphere there must be a balance in learning the social sciences and humanities.

Students need to be taught how to develop critical thinking, to reflect on what place we occupy in the world, to use different forms that need to be successfully integrated into all activities, to consider how sustainable development can be developed. They need to look at ways of development in reality, they need to create an educational environment where the educator will demonstrate the importance and seriousness of the topic by personal example. Examples could be joint visits to parks and squares, watching educational films and videos, didactic games on the topic of sustainable consumption, mastering the latest knowledge in the field, learning to discuss and understanding the difference between
theories, as well as participating in the implementation of the conceptual framework into practice. Such skills, developed through the learning process, make Education for Sustainable Development part of the process of educating a new, informed population.

In October 1998, the first World Conference on Higher Education – Higher Education Higher Education in the Twenty-first Century was held in Paris. The conference participants addressed governments to address the world’s higher education system as a major contributor to the optimization of the entire education system.

The report of the UN Secretary General in May 2001 in Johannesburg to the World Summit on Sustainable Development “Education and Public Awareness for Sustainable Development” is also worth mentioning. The report stated that “education is now seen as a lifelong process, which must not only be corrected, but also changed and transformed”, i.e. education should accompany a person throughout their life – lifelong learning.

In today’s society, fostering a culture of correct perception and adherence to ecological behaviour is too important for the formation of an efficient economy to ignore. It is obvious that a key role in many educational models in developed countries has been given to collaborative student projects to solve synergistic problems. It is not enough to realise that sustainable development and education have to develop together. It is important to teach learners to plan in advance the course of work that will enable them to complete their tasks on time and with quality, to understand that sustainable development in any field cannot take place unless new experiences are generated. Sustainable development must therefore create the right behaviours and interactions, through which the education system will include the best ways to improve teaching in the best possible way.

Four challenges for education for sustainable development have now been identified:

– **Improving access to high-quality basic education**, Cost-benefit analysis of education reform clearly shows that investments that improve the quality of learning are extremely beneficial to society. These trends are inevitably more qualitative than quantitative;

– **Refocusing existing education curricula**, as cognitive skills are determined by many factors, government efforts to achieve greater efficiency are mainly focused on improving the provision of educational services. The paradox is that it is the countries with high levels of education that do the most damage to the environment, consuming huge amounts of resources and energy to maintain a habitual way of life. Modern learning curricula are of great importance for the future of society, as they indicate that relevant educational programmes can expect to have a significant overall impact on learning outcomes. The inclusion of interdisciplinary knowledge in curricula is particularly important. The curriculum needs to encompass as many principles, knowledge, skills, beliefs and values related to sustainability as possible in all three spheres: ecology, society and economy;

– **Raising awareness and developing understanding of sustainability issues among the wider public**. To succeed in this direction, statistics show that increased awareness is more likely to be achieved through the selection of more highly qualified teachers. This points to the need for plans to improve learning and teaching, including systematic outreach to all age groups;

– **Professional training**. A new environment calls for innovation in the training of future professionals. Human resources are a crucial part of any country’s intellectual potential. It is important to include representatives of business, industry, and nongovernmental organizations in the educational policy. It is necessary for managerial staff to receive advanced training and to complement their previous education, as managers are the carriers of innovative ideas and technologies on sustainable development issues, and ordinary employees are directly familiar with practical experience in the field of sustainable development.

The primary goal of education for sustainable development is recognised as the development of
the intellectual potential of society, whereby current activities and meeting people’s needs do not harm future generations, but strike a balance between the two. Education for sustainable development provides scientific knowledge and technical skills. Countries which apply the principles of sustainable development in their governance will be able to give themselves a competitive edge, including attracting investors.

Building education for sustainable development implies reorienting education towards environmental stewardship, moving away from destructive production technologies, achieving social stability and introducing knowledge, which is based on an integrated approach to economic and environmental development.

Justification of theoretical and practical steps on the way to sustainable development presupposes mastering of corresponding economic knowledge. The content of this knowledge includes:

– studying the contradictions between sustainable development and peculiarities of economic modernisation, and the ability to build models of possible civilisational responses to it;
– economics is an integral part of sustainable development, but environmental education alone is not enough. People need to reconstruct mindsets, change the scale of values, learn to be responsible, design and implement solutions together;
– Developing and implementing sustainable development programmes at global, national and local level is a practical mechanism for solving environmental problems. This is where specialists are needed who can better respond to the needs of national economies.

It is important to recognise that in the twenty-first century, learning must be a lifelong process. While traditional learning learners learn from the past, and learning knowledge lags far behind the modern advances of science and technology, education for sustainable development must be oriented towards the challenges of the future.

There are two words for the term lifelong learning in English: *lifelong* (Education for the whole of life duration) both continuous and periodic and *life-wide* or learning that takes place in the whole range of human life, in all its manifestations; lifewide learning implies a high proportion of informal and non-formal education and learning that takes place in a person’s life, which can and does happen in families, leisure time, social life and daily work.

By now, a certain academic community of researchers has developed around the world who understand that providing high quality life-long learning, accessible to all, is the main goal of modern educational policy.

The role of higher education institutions in this area cannot be overlooked. The active work of higher education institutions leads to the initiation of ideas in the field of sustainable development. Higher education institutions have great educational resources and can solve such global problems as the transition of society to sustainable development.

Higher education institutions conduct systematic monitoring of curricula undertaken in traditional education, create an educational environment for relevant innovations. Modern higher education institutions are the basis for training of a new generation of specialists, they act as innovation platforms, where information and experience are exchanged, dialogue and partnerships between stakeholders are established.

University graduates – professionals working in various sectors of the economy, must be able to consider the interests and the need for sustainable development of society, have the skills to forecast (design) such development or at least create models of regional socio-economic and environmental systems and based on them to develop projections of effective socio-economic and environmental development.

The main challenge for scientists and educators working in the field of education for sustainable development, within the development of teaching and learning tools, is that most students and pupils need to master the curricula which support scientific research. In addition, there is the challenge of imparting a broad practical knowledge base for sus-
taining development, from everyday life to society as a whole.

There is an urgent need to teach people how to better understand our environment, to develop competencies such as environmental awareness, systems thinking and creativity.

Introducing elements of education for sustainable development thus requires a new educational paradigm. Introduction of ideas of education for sustainable development to some extent and in some form in educational programmes at all levels of education will create values and behavioural attitudes, models of behaviour and activities of young generation.

By now, European countries have accumulated interesting experience in restructuring school education towards the values of sustainable development. UNESCO has developed a special practical course for teachers on education for sustainable development (http://www.unesco.org/education/tlsf/TLSF/theme_d/uncofrm_d.htm).

For example, in Finland there is the ENO-Environment Online – A global virtual school and portal for sustainable development (http://eno.joensuu.fi) in which students learn about sustainable development topics once a week throughout the school year.

The UK has a dedicated website for pupils and teachers – www.schoolsfootprint.co.uk – which provides a toolkit and identifies what is known as the Ecological Footprint. The aim of the website is to enable schools to calculate the school’s Ecological Footprint, i.e. to measure the impact of each individual school on the planet.

Sweden is the undisputed leader in this field in Europe. The Swedish government has not had to take up the challenge of moving society in this direction. It did not take long for the Swedish government to recognise this, and it has acted decisively to green the country’s education system.

In recent years, the Central Asian countries of Kazakhstan, Kyrgyzstan and Uzbekistan have published textbooks and implemented numerous projects to introduce elements of sustainability into the curriculum at the secondary school level.

Today, the quality of the new education – education for sustainable development – depends to a large extent on access to information and communication technologies. Information and communication technology-based methods as well as innovative teaching methods based on an interdisciplinary approach to SD seem promising from the perspective of widespread dissemination and integration of education for sustainable development into curricula.

There is no ideal model of education for sustainable development in any country at the moment. Each country must define its own agendas and priorities, as well as goals and objectives in the implementation of education for sustainable development. In implementation, the greatest educational impact is achieved if the examples used to explain sustainable development issues are related to the learners’ own country, region or locality, and then move on to the global level.

References:
