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THE CHALLENGES OF INTRODUCING ESD INTO CURRICULA IN RUSSIA AND KAZAKHSTAN

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Abstract

The article raises the problem of readiness of pedagogical staff of the Russian Federation and Kazakhstan for realization of task 4.7 of Sustainable Development Goals in general education. The results of research on teachers' awareness and their attitude to education on sustainable development and for sustainable development are analyzed in two countries. Teachers' opinions on education for sustainable development and ways of its implementation are described and systematized. Similar problems are identified, their causes are discussed and directions for improvement are proposed. It is concluded that the process of greening of both the content of general and professional pedagogical education is a common direction to ESD for both countries. The areas of mutual interests and cooperation between scientists and teachers of both countries in this direction were identified. The Russian Federation does not have a state program on training of teachers in the sphere of education for sustainable development and education of global citizenship, but the Concept of general environmental education for sustainable development has been developed. The project "Green University" on preparation of teachers for implementation of task 4.7 of Sustainable Development Goals was launched in Kazakhstan. Cooperation between scientists of the two countries in developing a common model of Green School/Higher Education, based on mutual reinforcement of key ideas of pilot projects on greening the content of general education in Russian schools and greening the content of teacher training in Kazakh universities on the basis of a general institutional approach, seems promising.

Keywords: Education for sustainable development, sustainable development goals, international cooperation, greening of education, whole institutional approachlity.

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1. Introduction

The Roadmap of the Global Action Programme for ESD identified five priority areas for action, including reform of education and training through the integration of sustainable development principles into education and training systems (area 2) and professional development of educators and trainers for better implementation of ESD principles (area 3) (Roadmap…, 2014). More than ever, the quality of education is determined by whether students have access to education for sustainable development and global citizenship needs to become a core guiding principle of educational change.

Sustainable development can and must find an appropriate place in curricula. Obviously, the transformation should take place not only in school textbooks, but also in educational policy and teacher education.

Teachers must be prepared not only in terms of professional competence, but also in terms of general cultural competencies in SD, including global one, and global citizenship (OECD, 2019).

What do teachers think about the SD? Do teachers understand their tasks? These questions will be answered by questions, feedback, comments from teachers that have been encountered by the authors in the last years after the UN Decade of ESD.

The synthesis of these questions sets a common challenge for the two countries in ESD, which stimulates the search for cooperation to address them. The common methodological basis for such cooperation is the ways of greening of general education in Russia and higher teacher education in Kazakhstan, as well as implementation of the whole institutional approach.

2. Problem Statement

In Russia, there is no state system of teacher training for ESD. Including the principles of SD and CSD into the content of teacher training and retraining is implemented only in a few universities (Chelovek i innovacii, 2018). The experience of colleagues from Kazakhstan can be useful in this situation. Kazakhstan has launched a programme on greening of higher education content at the level of public institutional approach - Green University project, which includes more and more universities of Kazakhstan, Belarus and Russia (Dlimbetova, Bulatbayeva, & Abenova, 2017). The task of the project is to prepare future teachers for ESD implementation. Cooperation between educational systems of the Russian Federation and Kazakhstan in the field of ESD seems to be perspective and productive. In Russia in general education, an effective interregional pilot ESD networking project "Learning to Live Sustainable in a Global World" is being implemented, which is supervised by the UNESCO Chair of the Global Processes Department of Lomonosov Moscow State University and its network Chair of the Institute of Educational Development Strategy of Russian Academy of Education. The All-Russian festival of ESD scientific and practical developments, held in December 2019 on the basis of the network, allowed to create a large bank of exemplary educational materials, which can be useful not only for general education in Russia, but also in Kazakhstan. In order to determine the direction of cooperation, it was important to identify the most frequent mistakes of teachers in the implementation of ESD, which hinder the embedding ESD in general education.

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3. Research Questions

3.1. What are the common problems of teachers in Russia and Kazakhstan in understanding SD and embedding its principles in the content of school education?

3.2. What are the opportunities for cooperation in overcoming common problems?

4. Purpose of the Study

What are the common problems of teachers in Russia and Kazakhstan in understanding SD and embedding its principles in the content of school education? What are the opportunities for cooperation in overcoming common problems?

5. Research Methods

Our analysis has been informed by questions, feedback, comments from educators that the author and his colleagues have encountered over the past twenty years on "sustainable development" and "education for sustainable development", as well as answers to the questions of UNESCO expert questionnaire "Assessment of the state of ESD in the country".

6. Findings

Russia and Kazakhstan were among the initiators of the adoption of the UNESC Strategy on ESD, holding the UN Decade, adoption of the Sustainable Development Goals and their implementation. Statistics on SDG is annually collected.

SDG 4 is presented by the UN and UNESCO as a new concept of world education, which is to transform people's lives through education, recognizing the important role of education as a key driver of development and in achieving the other proposed sustainable development goals (Sustainable Development Goals, 2014).

More than ever, the quality of education is determined by whether students have access to content and pedagogy designed to help them learn to live together on a planet under pressure. Education for sustainable development and global citizenship needs to become a core guiding principle of educational change.

The United Nations' Sustainable Development Goal (SDG) Target 4.7 offers the international consensus and momentum to achieve this. SDG Target 4.7. - provision of knowledge and skills necessary for achieving sustainable development - is based on the transformation of the entire school environment, which requires appropriate training of teachers of all subjects. ESD needs to be reflected in the content of what teachers must teach and the pedagogy they implement. Embedding ESD into core subjects is one of the most effective and efficient ways to achieve SDG Target 4.7 (Textbooks for Sustainable Development: a Guide to Embedding, 2017).

If this goal were simply to inform students and provide them with experiences of practical actions for sustainable development, then perhaps the challenges of ESD have long been overcome. But no country can claim to have done so yet. Education for sustainable development has a cultural and attitudinal dimension, and it is necessary to form a culture from early childhood (UNESCO, 2017).

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Just imagine the enormity of the task facing education (and the responsibility entrusted to education for a sustainable future)!

So it is very important to review common problems in the state of education for sustainable development in general education schools in Russia and Kazakhstan.

General education in our countries is faced with serious problems in ESD implementing. One of them is insufficient pedagogical development of theory and practice of ESD. Teachers are disoriented by common places about ESD and lack the concrete professional instructions and educational technologies of ESD. They are poorly oriented to understand the difference between education for sustainable development and education about sustainable development. Therefore pilot training courses of ESD duplicate school subjects. They are attempts to reduce ESD to a separate, even isolated, direction of education; bringing ESD down to subject outcomes; misunderstanding that an extra hour on the timetable will not be able to create a new culture; an attempt to solve ESD by introducing new forms of work rather than types and content. These problems are typical for many countries (UNESCO, 2018; Sinclair, 2018).

In Russia, there is no national ESD system supported at the institutional level. There is no teacher training taking into account SDG Target 4.7. Professional development courses on ESD are very rare. The federal state educational standard contains a mention of SD only in passing.

In Kazakhstan the state of environmental education is similar. It is noted the necessity of development of special measures ensuring the creation of normative-legal, organizational, scientific, educational-methodical, informational components of general education development. The beginning of this work is seen in increasing the readiness of teachers to form an environmental culture of students.

According to the results of an international survey of specialists in the field of ESD (researchers, university teachers, methodologists, activists of public organizations) conducted by Professor Ermakov and Petrov (2004) , the assessment of implementation of the UNECE Strategy for ESD in the Russian Federation was only 0.5 (on a 3-point scale). Presentation of the three schemes of interaction of environmental, economic and social components of SD to teachers showed that the right choice (circles) was only 1.5%. Less than 2% of teachers can draw an analogy of the SD principles with folk sayings and fairy tales. 84% of teachers involved in the development of work programmes take an anthropocentric position. They believe that the laws of ethics and law, rather than those of nature, determine human life. Only 1% of teachers can explain what SD is. Recent conferences and competitions often use the brand of ERM and CSD only in their titles (Ermakov & Petrov, 2004).

In general, ESD is perceived as another fashionable trend that over the years will yield to new trends, new "cosmetic" changes in education.

What aspects of ESD are most often confusing for teachers, and what questions do they ask?

"Sustainable development of what?" - even representatives of pedagogical journals, scientific pedagogical community are asking when they meet the expression "sustainable development". When they learn that this notion is commonly accepted, they start using it everywhere, for example, the ' programme for sustainable development of the schoolchildren's personality'.

Most importantly, not all teachers have yet understood that CSD 4.7 cannot be achieved through new knowledge, skills, and competencies alone. It is necessary to form new relationships, values, world understanding, a new culture - culture in, for and as sustainable development. Many of UNESCO's methodological recommendations emphasize that it is the values and worldviews that underpin ESD. The

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introduction to pedagogy of the concept of 'global competence' (PISA 18) is therefore essential. Education for Sustainable Development (ESD) is not a stand-alone subject, but a cultural vector of lifelong human education, a vector that aims to create a new type of relationship and production.

In Russia very often, in different audiences, we meet the opinion that the translation of the term "sustainable development" into Russian has failed, when the meaning of each of the two words is analyzed separately. Then the further discussion about ESD gets stuck on it. In Russian, "sustainable" is translated as stable, constant. This makes sense in terms of the theory of self-organizing systems. Any self-organizing, self-developing, "living", self-recovery systems are characterized by a stable non-equilibrium state, which provides them with adaptability, vitality, preservation of self-identity (parameters, functions, development trends), stability when the environment changes. "Sustainable development" is an indivisible word combination, it is a concept which, like the concept of "black hole" should be characterized in a holistic way. The content of the concept of sustainable development has become well defined, justified and accepted at the international level. Addressing the problem of translation, which has already become customary in unscientific discourses, forms a negative attitude of people not only to the term but also to sustainable development itself. And this is very worrying.

Some educators in Russia are against the use of the term "education for sustainable development". They argue that any subject serves something (socialization, democratization, humanization...) but does not include the word 'for' in its title. Accordingly, ESD is seen as yet another area of education, rather than the focus, purpose, meaning of all human education throughout life. The issue of education for SD is transferred to education about sustainable development. It is delegated to complementary education, extra-curricular activities that do not involve all schoolchildren and are not systematic and continuous. This is extremely depressing. There is an instruction from the President of the Russian Federation to consider including sustainable development issues into state standards at all levels, but this has not yet been done. Awareness of researchers in the field of pedagogy about sustainable development, the historical mission of education for sustainable development, and their moral responsibility as developers of educational content to present and future generations remains low. The reason for this is the very narrow specialization of educators, the isolation of developers of different subjects from each other, and the separation of science of learning and education. The conclusions of the Club of Rome's anniversary report that education needs the renewal of content that has been disastrously neglected for decades, have so far been taken into account by only a few textbook authors. They look like transplants from the future that have not yet taken root. Textbooks retain stereotypes of utilitarian human relations to nature. Teachers continue to raise children based on anthropocentric attitudes 50 years ago.

In Kazakhstan, problems of forming an environmental culture among young people also persist. Therefore, the introduction of the Ecology subject in schools is being discussed at the state level. It is planned to develop environmental education by integrating environmental aspects in various subjects, even in mathematics.

In Russia and Kazakhstan ESD is seen as a continuation of environmental education, which has more then 40-year history, but did not lead to meaningful results. School teachers consider ESD as biology, local history, the practice of garbage collection and planting trees. But the Decade of ESD has shown that traditional approaches to environmental education just do not work. Outside the framework remain such problems of ESD as interrelationships - in society, economy and nature; between them, at the

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local and global levels; citizenship, rights and responsibilities; needs and rights of future generations; quality of life, equity and social justice; "sustainable" changes - development within the framework of the carrying capacity of ecosystems; the future is predictable and unpredictable.

However, it's not that simple. Today, there are dissimilar areas of environmental education that differ from each other in terms of object, subject, methods and results, but are called equally - ecological education. One of these directions, based on social ecology, human ecology becomes a platform for education for sustainable development through integration with humanities, art, national traditions, etc. Actually "ecological" in the title of such education mean a cognitive tool - ecosystem thinking, environmental ethics, ecocentric picture of the world - global evolutionism, as well as SDG, each of which has an environmental component, as well as the method of subject greening, which today has become a method of embedding and dissolving, rather than adding "bolts" (Textbooks for Sustainable Development: a Guide to Embedding, 2017). In addition, keeping the word "ecological " in the title is a way of implementing ESD if it is not officially included in normative documents. The greening of such subjects as geography, social sciences, economics, technology and literature with integrated, natural-scientific-socio-humanitarian content makes them "crystallization centers" of ESD at school. Such education becomes transparent and transdisciplinary in nature, based on a holistic approach to human beings, society and nature, on the unity of modern scientific knowledge and humanistic values and attitudes. It is clear that teachers of all subjects should be trained in such subject greening. That is why ecological education for sustainable development is implemented only in those regions where the necessary regulatory framework has been established and in those pilot schools where all teachers have been trained.

References by ESD specialists to the international nature of ESD agreements and the importance of consolidation at the global level are often met with skepticism, too. There are opinions that SD is a foreign idea for the country. Meanwhile, although the term "sustainable development" has indeed come to us from the "west", its scientific and philosophical roots are in our common country. In the 19th century, these ideas were laid by the remarkable scientists and thinker V.I. Vernadsky, Dokuchayev, K.I. Tsiolkovsky, in the 20th century - A. Kunanbaev, S.A. Bogdanov, D.S. Likhachev, N.N. Moiseev etc. The concept of sustainable development embodied the ideas of V.I. Vernadsky about the transformation of mankind into a geological force, which can lead to global changes in the biosphere and destroy the very foundations of human life, if society does not move to a new stage of its development, governed by the mind, science about the laws of interaction between nature and society and their conjugate joint development without catastrophic consequences (noosphere). A special place in the culture of human civilization is occupied by the holiday of human unity with nature, Navruz, explanation and mythologization of which have left their mark in the ancient, medieval and new history of almost all peoples of the world.

Unfortunately, today the mass of teachers is disoriented by the banalities of ESD, they do not have specific professional instructions and educational technologies on ESD, they do not understand the difference between education on sustainable development and education for sustainable development, they equate ESD with subject learning. Reductionism in education remains. Isolation of subjects content hinders the formation of a holistic view of the world. Academician Moiseev (2010) wrote that the school

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seeks to give more and more knowledge about the less, but it is important to teach to see more, neglecting the smaller.

But most importantly - the theory of learning is well developed only for subjects. The theory of integrated content, especially the trans-subject, institutional approach is still poorly developed (Rakhkochkine, 2011). It all starts with the language, but the pedagogical dictionaries are silent about SD (Jensen, 2006; Karlsson, 2016).

However, when teachers begin to teach key messages about ESD, their attitudes change dramatically. 76.7% of trained teachers begin to see ESD implementation as a professional success story. 9% of trained teachers "do not see" the pedagogical possibilities of ESD. 14.3% do not think that ESD can have a positive impact on the quality of education. 81,5% of trained teachers consider it possible to use SD principles in lessons, 83,9% - in extra-curricular activities (Pustovalova, 2016).

Scientists in our countries are doing a lot to change the situation. They have made some progress in developing the theory and practice of embedding/infusing ESD in both general education and higher teacher education.

In Russian general education, according National strategy of environmental education in Russian Federation (Moiseev, Stepanov, & Snakin, 2000) an effective interregional pilot ESD networking project "Learning to Live Sustainable in a Global World" is being implemented, which is supervised by the UNESCO Chair of the Global Processes Department of Lomonosov Moscow State University and its network Chair of the Institute of Educational Development Strategy of Russian Academy of Education.

A new method of greening the content of all school subjects and upbringing was developed based on didactic metaphors of the key concept of sustainable development - environmental imperative. The developed "green axioms" serve as a pedagogical tool for disclosure in the existing material of all academic disciplines of the implicit context for SD and generation of personal sense of behavior for SD. Axiomatization of the concept of sustainable development and the metaphorical form of its presentation can deepen the understanding of ideas of sustainable development and personal experience of their application in real life at all levels of education, starting from preschool. Approbation of the methodology in 18 regions of the country has shown its productivity for all levels of general education. Ideas of sustainable development become clear and recognizable in life and for kids, parents and grandparents (Dzyatkovskaya, 2015).

The All-Russian Festival of Scientific and Practical Developments in ESD, held in December 2019 on the basis of the network, allowed to create a large bank of exemplary educational materials, which can be useful not only for general education in Russia, but also in Kazakhstan.

In Kazakhstan, the Green University project has become widespread. It is based on greening of all spheres of training of future teachers, educational process, pedagogical practice, way of university life, educational space of the university. The initiator was Gumilyov National Eurasian University. The green passport of university is developed. It assumes a system of greening of education of the future teachers through the content of curricula, the technology of the educational process, active research activities, extra-curricular practical activities (volunteerism). The environmental component in the curricula of teacher training has been defined. These programmes are Russian language and literature, mathematics, physics, foreign language, pedagogy and psychology; social pedagogy and self-knowledge, preschool education and upbringing, comparative linguodidactics, ecology of media text.

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The first Russian-Kazakh experience of fruitful cooperation on mutual enrichment of experience in greening of general and professional pedagogical education and holistic institutional approach of school-university continuity was received. These are joint scientific forums, summer schools, development of pedagogical dictionary of ESD, monograph.

7. Conclusion

The conducted research has revealed both general problems in general environmental education and training of pedagogical staff for ESD implementation in Russia and Kazakhstan as well as strengths of pedagogy of the two countries as a potential area of cooperation.

In Russia, the methodology "green axioms" was developed as a pedagogical tool for disclosure in the existing material of all academic disciplines of the implicit context for SD and generation of personal sense of behavior for SD. The Green University project is being successfully implemented in Kazakhstan.

The area of Russian-Kazakh cooperation is harmonization of theory and practice of content greening of both general and professional pedagogical education, implementation of a holistic common institutional approach to organizations of general and professional education/

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