

## FORMATION OF THE ENVIRONMENTAL-ECONOMIC ORIENTATION OF THE EDUCATIONAL PROCESS IN THE MODERN RUSSIAN SCHOOL

<sup>a</sup>EKATERINA O. AKVAZBA, <sup>b</sup>VERA P. BOGDANOVA,  
<sup>c</sup>PAVEL S. MEDVEDEV, <sup>d</sup>INGA V. PATRUSHEVA

<sup>a</sup>*Industrial University of Tyumen, Volodarskogo str., 38, Tyumen, Russia*

<sup>b</sup>*Industrial University of Tyumen, Volodarskogo str., 38, Tyumen, Russia*

<sup>c</sup>*Industrial University of Tyumen, Volodarskogo str., 38, Tyumen, Russia*

<sup>d</sup>*University of Tyumen, Volodarskogo str., 6, Tyumen, Russia*

email: <sup>a</sup>kitino@mail.ru, <sup>b</sup>vera.bogdanova.55@bk.ru,  
<sup>c</sup>korolallemonda@mail.ru, <sup>d</sup>i.v.patrusheva@utmn.ru

**Abstract:** The younger generation will have to start an independent life and labour activity in an environment with stringent requirements and they have to face problems not only of the right career and employment choice but also environmental-economic problems directly related to their well-being and health which determines the school graduates' readiness to be socially mobile, initiative, be able to easily and flexibly respond to changing conditions and find adequate ways of self-determination and self-realization. The aim of empirical-experimental work was the adaptation of the developed and tested system of environmental-economic education of schoolchildren aimed at developing students' ability to adapt to society. As a result, objective and subjective factors determining social adaptation and its formation were identified.

**Keywords:** environmental-economic orientation, adaptation, adaptability, social order, educational process, student's environmental-economic culture.

### 1 Introduction

The problem of increasing the adaptedness of schoolchildren to the social environment changing conditions and the use of environmental and economic knowledge for this purpose has already attracted the attention of modern researchers. Environmental-economic knowledge is not considered as a single integrative whole which is confirmed by the absence of a single, universally recognized concept of environmental-economic education (Bibikova, 2018). In foreign countries there is a tradition of environmental education (Bierle & Singletary, 2008). For example, in the U.S.A. environmental education tends to focus on information about environmental problems and topics such as endangered species, global climate change or water quality in local streams and rivers (Smith & Williams, 1999). The search for new approaches to the teaching system does not stop today (Globalization 2.0., 2017). However, in Russia the current socio-political, economic and environmental situation requires not only the renewal of the society structure, but also changes in the Russians themselves and, above all, in those who start independent life (Bogdanova, 2015). At the moment, a modern school does not efficiently perform its socializing function (Goryacheva, 2015). Today, socially useful activities which have previously acted as the means of a successful solution of many schoolchildren's social adaptation problems were almost terminated (Aleksandrova & Kozhakina, 2016). Significant socializing, educational potential of environmental-economic knowledge is not fully used. Scientists began to speak about the active role of a pedagogue in the formation of the environmental world picture in the 1970s (Celine, 2013). In particular, the definition of "environmental education" first appeared in Educational Digest in March 1970 and was authored by William Stapp (Stapp et al., 1970). Later, Stapp became the first UNESCO environmental education director and then the director of the international network Global Rivers. Sometimes environmental education is correlated with outdoor education (Tan & So, 2018).

Environmental-economic data reported in the process of teaching basic disciplines in Russian schools are fragmentary; environmental problems are considered without their economic justification, and economic problems — without taking into account the decisions' environmental consequences (Filippovskaya, 2014). Social experience of schoolchildren is truncated: it poorly represents environmental-economic

component without which it is very problematic to quickly adapt to the conditions of market relations and survive in an economically unfavorable environment. This is especially true in the context of world globalization processes (Irani & Noruzi, 2011, Chigisheva, 2011).

### 2 Literature Review

The analysis of scientific sources investigating the relationship between the individual and the social environment shows that most of the works devoted to the problem of socialization of the individual define the essence of the basic socialization concept as a process and result of assimilation and active reproduction of social experience which is carried out in communication and activity by the individual (Golovin, 1997).

Adaptation to society considered to be one of its most important components and one of its socio-psychological mechanisms is studied mainly within the framework of school socialization most often on the examples of children with behavioural disorders and children with disabilities including the disabled and is associated with another side of socialization which is social rehabilitation (Socialization of Children with Disabilities within Integrative and Inclusive Education: From the Experience of the Participants of the Federal Internship Platform, 2015). However, the study of the specifics of preparing children for independent life in school is of no less scientific and practical importance.

Education as one of the social institutions should take into account the changing social conditions and develop students' qualities necessary for their self-determination and engaging in socially significant activities in the global context (Zapata-Barrero & Triandafyllidou, 2012).

In social psychology, social adaptation is characterized in line with the interiorization theory as the formation of internal structures of the human psyche through the assimilation of the system of norms, values, ways to achieve them and other social environment components. The resulting subjective experience is a unique synthesis of individually internally refracted various kinds of knowledge and skills, ways of activity, thinking and behaviour, value orientations and social attitudes, obtained sensations and experiences, the formation of tolerant-oriented consciousness (Dobbernack & Modood, 2012).

With the accumulation and enrichment of subjective experience, a person gradually moves from the position of the object of social influence to the position of the subject actively building himself, his own life and interacting creatively with the social environment (Arkatova, 2016).

The interaction of a person and social environment is based on the unity of the individual's engagement in social life and becoming independent. This interaction's dynamics source lies in the inevitable contradictions between the person's intentions and their embodiment, the person's intentions and actions, his actions and their results but most importantly between his self-esteem, claims, opportunities and the real social environment (Sinyakova, 2011).

Adaptability — a quality that has been studied in detail by a number of researchers — is the most generalized result and indicator of personal adaptation that reflects the degree of his involvement in the social environment and the nature of the relationship with it.

We consider a person adapted to the changing life in society as a mature person. Social adaptation manifests itself: in the person's social activity, his creative initiative, social responsibility, communication skills, ability for self-regulation, personal

reflection, adequate perception of himself and his social ties (Allport, 2002).

We used generic term "adaptability" for the individual personal properties by analogy with the terms "learnability" and "educability" already included in the scientific and practical terminology (Akvazba, 2013). Individual features of adaptability manifest themselves in the use of personality adaptive mechanisms — identification, imitation emulation, conformity, etc.

The main way to give the desired orientation to the school education content is the inclusion of planned innovations in the basic disciplines. The developed concept of enrichment of the state standard of the school education content with environmental-economic knowledge was based on the ideas of continuity of environmental-economic education and its correlation with general education (Bogdanova, 2000).

We consider education of environmental-economic orientation as a variant of the school educational content which implements the tasks of economic and environmental education of students in addition to the goals of general secondary education (Ryabova, 2012). In environmental-economic orientation of school education, a socially adaptive role of environmental-economic knowledge and its interdisciplinary and integrative nature are reflected (Akvazba & Gavrilyuk, 2016). This education is designed: to engage students in the modern environmental-economic culture, to form functional environmental-economic literacy; to orient students to a conscious career choice. All this meets international standards and education policy (Van Driel et al., 2016).

### 3 Materials and Methods

At the initial stages, the research experimental base was the general educational organization of Noyabrsk (secondary school No. 9 of Noyabrsk of the Yamal-Nenets Autonomous Okrug of the Tyumen region in the period 1994-2000), then there was an update of the results of pedagogical research based on other educational organizations of Noyabrsk (2000-2015). 753 students (from the 1st to the 11th grade) and 48 pedagogues from Noyabrsk participated in the empirical-experimental work.

The object of the research was the educational process in secondary school as a social adaptation base. The content, methods and forms of the educational process providing the formation of environmental-economic orientation of students, criteria and methods for assessing the students' adaptation to the social environment were the subject of the research.

The research aim was to develop a system of environmental-economic education of schoolchildren ensuring the development of their ability to social adaptation.

In accordance with the aim and objectives of the research, the methods of theoretical and empirical levels were used: comparative analysis of philosophical, psychological and pedagogical sources on the problem studied, synthesis of theoretical and empirical information, systematization, modeling, sociological survey, assessment and self-assessment, psychological testing, study of school experience, empirical-experimental work.

The research was conducted in several stages: in the first stage (1994-1995), the philosophical, psychological and pedagogical works on the problem were studied and reflected upon; the asserting experiment was conducted to determine the students' environmental-economic knowledge and understanding of their importance under the present circumstances; in the second stage (1995-2000), the experimental work was carried out the essence of which was to test the effect of the educational standard of general education content enriched with environmental-economic information and methods of activities on the success of students' adaptation to the realities of the socio-economic life; the third stage (1999-2000) included the processing, analysis and

interpretation of the experimental work results, the assessment of the efficiency of the implemented system of continuous environmental-economic education, the formulation of theoretical conclusions; the fourth stage (2000-2015) included work on the dissemination and enrichment of practical and theoretical research materials.

Empirical-experimental work during which the influence of environmental-economic orientation of the education content on students' adaptation to the changing social environment was tested was carried out in two experimental classes and one control class selected on the principle of a single difference. Its programme was a combination of forming experiment with empirical-search work. The logic of the implementation of environmental-economic education programmes was built in accordance with the main components of school education.

The assessment of the statistical reliability level was carried out using a non-parametric Rosenbaum Q criterion which is a method that enables to "weigh" the difference of the units measured (compared) (Glass & Stanley, 1976).

### 4 Results and Discussion

The implementation of the environmental-economic education orientation concept was related to the practical implementation of modern productive pedagogical ideas: personal-oriented approach to education, preservation and development of individual identity of each student, providing students with subjectivity positions throughout their school education, cooperation of children and adults as well as developmental and problem-based education. They are reflected in the educational programmes processed and modified, the educational information selection, the design of training and education technologies, the newly developed didactic materials and special courses.

One of them was the integrated practice-oriented course "Economic Environment" the center of the content field of which was the environmental-economic approach and the conceptual idea of which was the consistency of environmental and economic components in the system "nature - man - society-labour-production".

The conceptual idea of the course is the idea of maintaining a stable balance of nature and its economic support by a man.

Continuous environmental-economic education is a strategy of school pedagogical activity aimed at creating favorable conditions for the development of students' readiness to solve problems related to self-realization and professional self-determination and especially environmental-economic problems. The tactics of the school activity is the socio-humanistic orientation of students, education of their environmental-economic consciousness, social feelings and socially oriented actions, experience of creative interaction with the changed social environment, which were contributed by pedagogical mechanisms embedded in the environmental-economic knowledge and activity methods aimed at the reproduction of the student's social experience and its enrichment: the reproduction of standard samples of environmental-economic behaviour, imitation modeling, democratic discussion of environmental-economic problems, search and research activity, professional role-playing games, engaging students in real life environmental-economic situations and search for the optimum solution ways, reproduction of choice situations.

Environmental-economic education at the primary level (grades 1-4) was carried out through the inclusion of environmental-economic knowledge of propaedeutic nature in general education subjects, in the content of extracurricular activities and additional education.

In the process of environmental-economic education at the middle level (grades 5-7), the objectives of expanding environmental-economic knowledge and experience of

environmental-economic relations, development of value attitude to the nature and products of human labour were solved.

Environmental-economic education of senior schoolchildren (grades 8-9) solved the problem of deepening and systematization of environmental-economic knowledge, the formation of environmental-economic thinking, creating conditions for personal professional self-determination. For example, students worked at the school research and production environmental-economic center, city forest service, subsidiary economy, industrial, social and natural sites of the city.

For students in grades 10-11, environmental-economic education was carried out through an integrated special course. Here the objectives of deepening and further expansion of environmental-economic knowledge about the social consequences of the environmental management process, organizational entrepreneurship forms and interpersonal relations ethics were solved.

As a result of the experimental work conducted, statistically reliable changes in the redistribution of schoolchildren by levels of their adaptability to the changing social environment were revealed as reflected in the table "Results (in %) of Experimental Work on the Level of Schoolchildren's Adaptedness to the Social Environment".

Table 1 Results (in %) of the Empirical-Experimental Work on the Level of Schoolchildren's Adaptedness to the Social Environment

Class index Adaptedness level	5B->10B (experimental)		5V->10V (experimental)		5A->10A (control)	
	2010	2013	2010	2013	2010	2013
High	-	38	-	40	-	15
Average	34	62	33	60	35	44
Low	66	0	67	0	65	41

Source: Bogdanova, 2015

The assessment of the statistical reliability level was carried out using a non-parametric Rosenbaum Q criterion which is a method that enables to "weigh" the difference of the units measured (compared) (Glass & Stanley, 1976). The high level of statistical reliability (P = 99%) gives grounds to consider the results obtained to be objective and significant.

Individual manifestation of social adaptedness of a person is his adaptability, i.e. a property that reflects the individual characteristics of perception, evaluation and acceptance of social attitudes, emotional experience of emerging contradictions and conflict situations, search, selection and use of means of self-assertion, self-determination and self-realization resulting from the individual psychological characteristics of his temperament, character, cognitive, need-motivational and emotional-volitional personal spheres.

Practically implemented concept of environmental-economic education was productive according to the empirical-experimental research results. The social adaptation level has increased, which was manifested in the fact that students began to focus more on cooperation, on generally accepted norms and values, the majority have a stable sense of social responsibility and initiative, the functional environmental-economic literacy has significantly increased. The social activity level has increased: there have been more students engaged in socially useful activities of transformative and creative nature.

The pedagogues, the experiment implementers, combined students' social practice with students' self-education. They oriented the students on developing qualities that ensure the success of any activity: benevolence, perseverance, activity, evaluation of one's own activities, intelligence, initiative and social responsibility.

## 5 Conclusion

The positive results of the research are the basis for the following authors' conclusions.

First of all, giving the environmental-economic orientation to the school education content is an important condition for the successful students' adaptation to social and natural changes in their lives which is necessary in view of the changing conditions of the world community functioning taking into account the globalization processes (Sheffield et al., 2013).

The efficiency of environmental-economic orientation of education is provided by: its continuous nature; integration of environmental-economic and general educational content at the levels of convergence (synchronization), interaction and interference (synthesis); organization of students' social practice, in the process of which their social experience is reproduced and its environmental-economic component is enriched; combination of developing social and adaptive qualities in schoolchildren and their self-education; absence of the negative consequences of the additional educational material introduced for children's health.

The following components have a positive effect on the enrichment of the subjective social experience of students: organization of emotional experiencing of important and understandable environmental-economic situations; the degree of their involvement in the environmental-economic problems of adults; awareness of the scope and social significance of these problems; subjectivity of their position in socially oriented practice; solving environmental-economic issues as part of their activities.

The success of the development of students' adaptedness depends on pedagogues taking into account the specifics of individual characteristics of their adaptation to the changing living conditions and that is their adaptability.

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