

and the society – is Russia eager to invest in its future?” Some of the conclusions were as follows:

- the content of the education is outdated. It lags behind both life requirements and achievements of science and technology;

- the low salary of teachers leads to low motivation;

- the structure of vocational training does not vocational training correlate either with current or perspective labour market demands.

Here we could add: we don't need workers, technicians or engineers training today. There is no division of labour at the present-day manufacture nowadays. All what we need is the continuous training of the whole professional structure of specialists with different levels of professional development, different levels of activity and of personal professionalism, of self-efficiency realization possessing equal rights and responsibilities to work in different spheres of economy as specialist-technologists or specialist-managers.

However, neither comprehensive nor vocational school should influence personal world outlook. The school should assist in obtaining knowledge, developing competence corresponding to the scientific-technical progress level.

These thoughts are not novel. The quotation from Lev Tolstoy's work "Upbringing and Education" can prove it. "School must have one purpose – transmit instructions and knowledge without transition into the moral sphere of convictions, beliefs and character; its purpose is only the science itself, but not the results of its influence on the personality. School mustn't consider any science or even the code of sciences to be necessary, but must transmit the knowledge it possesses giving students the right either to apprehend it or not. The school structure and programme mustn't base on theoretical ideas, or on convictions of necessity of these or those sciences, but on the single possibility science – on teachers' knowledge."

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#### **MODEL OF THE INTEGRATED EDUCATIONAL SYSTEM «SPECIALIST SCHOOL - TECHNICAL COLLEGE»**

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One of the top issues for school leavers in Russia is the choice of a future profession and educational institution. According to some researchers (S.S. Kravtsov, A.N. Leibovich et al), the most available form of vocational guidance is a specialist schools program, aimed at differentiation and individualiza-

tion of education. Continuity of education is important at all its stages and levels. Putting an integrated model of a multidisciplinary school based on network learning, into educational practice could help achieve this objective. Schools with technical specialism could follow the example of the «specialist school - technical college» system, used by the Association of the Izhevsk University Complex and the Izhevsk State Technical University (ISTU). The main advantage of this system, compared with normal schools in the network, is an organic link between general education schools and institutions of primary, middle, higher professional and additional education. The principles of the system are:

- *Social orientation* (taking into account social needs and development of scientific ideology);

- *Linking theory to practice* (choosing future profession with due regard for the current demand for labor);

- *upbringing character of education* (career counseling in order to develop a balanced personality, uniting civil, labor, moral, aesthetic and physical education);

- *polytechnical character* (career counseling in cooperation with polytechnical education, acquaintance of students with the basics of modern production);

- *accessibility and informed choice* (school students can familiarize themselves with a wide range of professions, learn the psycho-physiological requirements of different professions, study options, chances for professional growth and etc., in order to make a conscious choice of the profession);

- *systematic character and continuity* (introduction of vocational guidance at school, starting from the 1<sup>st</sup> grade, under condition of continuity of this work throughout the school years);

- *multidimensionality (complexity)* (career counseling is aimed at preparing a student for a good choice of a profession: in civil, social and economical, psychological and educational, medical and physiological, and professional aspects);

- *taking into account age and individual characteristics* (gradual professional self-determination of schoolchildren, according to their age and personal traits: professional interests, inclinations and abilities);

- *cooperation of school, family, employers and public organizations* (all involved sides have a common approach to vocational guidance);

- *self-determination* (final choice of a profession is made by a schoolchild taking into account advice of school, family, employers and public organizations).

In order to provide an effective management of the «specialist school - technical college» system, an integrated monitoring system for education quality control was developed. It was designed basing on methods of qualimetrics and educational cybernetics. Such a complex approach let standardize and schema-

tize the monitoring procedures and provided objective, qualitatively and quantitatively comparable information about the level of students knowledge.

The suggested qualimetrics technology of a complex monitoring includes four steps: marketing, organization, project and experiment.

The first monitoring step was to conduct a marketing research, in order to estimate real and perspective job opportunities for the graduates of the ISTU, by the example of specialization «Technological education». The aim of the second stage was to set goals and tasks for children education in specialized classes, as well as for the bachelor and master students at the technical college. The third stage related to developing subject thesaurus and creating databases of educational control material and experts, invited for their development and validation. At the experimental stage, an algorithm of the education quality monitoring was developed.

Monitoring of education quality in the framework of the «specialist school-technical college» system, let determine students' individual ratings. For students at the pre-higher education department, it was later used for assessment and admission to university. Results of the monitoring research were obtained, processed and analyzed in the following aspects: meaning of career counseling; advanced knowledge in specialism before entering the technical college; education quality at the ISTU; influence of the students' participation in scientific methodical and scientific practical conferences, on the educational success; importance of practical training for professional development, and other aspects, mentioned in the article. Created information databanks were used for both external and internal evaluation of the technical college.

The monitoring research, conducted at the engineer-pedagogical faculty of the ISTU, has revealed, that it is necessary to intensify the fundamental part of students' education. For this purpose, new courses have been developed and introduced into the bachelor study program, in framework of the following educational aspects: world outlook development, continuing physics-mathematical and technical training, organization and management education, qualilogy and reflexive methodological training. The courses are: «Principal physics in modern technologies», «Modern technical devices and their operation» and «Education quality management».

To sum up, the qualimetric monitoring should be regarded as an integral management part for all integrated educational systems, including the «specialist school – technical college» system.

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## PSYCHOLOGICAL AND EDUCATIONAL CONDITIONS FOR DEVELOPING SOCIO-ECOLOGICAL READINESS AT STUDENTS

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One of the most pressing concerns facing humanity today are environmental problems. This requires an adequate education of students, in order to prepare them for a proper interaction with nature (socio-ecological readiness) in the framework of their future professional activities. Training effectiveness depends on a number of factors. We need to determine, what socio-ecological readiness is; and secondly, find educational mechanisms for its development.

Our studies in this area let define the socio-ecological readiness as a personal characteristic that unites knowledge, abilities and skills. These three components help develop an effective environmental policy based on certain norms, limits and methods. Secondly, this notion expresses a certain psychological state of an individual, when he begins to interact with nature. Such a condition arises, while a person anticipates some objects of the socio-ecological reality. Under condition of compliance with the norms and limits, it provides a stable goal-oriented activity, keeping an inter-element environmental balance and creating a possibility for further functioning and development.

Condition of the socio-ecological readiness means, according to A.S. Prangishvili, «...to balance relations between an individual and environment». Its substance is determined by the environmental values that satisfy some personal needs. Our attention is focused on the socio-ecological values, which can be divided into general values (nature, society, human, culture, their interaction) and specific values (natural, psychological, ethnic, social, labor, economic, educational). These values need to be learned; they determine a general plan of subjective orientations and require, that each and everyone adheres to the common norms, limits and methods of rational nature management.

An important question in research of the socio-ecological readiness is to determine relevant psychological mechanisms of its formation. In framework of this study, we have assumed, that personality is a system. Our considerations were based on V.A. Petrovsky's subjective theory, which explains personal subjectivity as means of self-determination of human existence in the world. According to V.A. Petrovsky, personal subjectivity reflects in human activities, which he one uses to reproduce himself and his existence. Being one of the forms of human interaction with nature, this activity requires a certain training. It involves the whole personal potential, which is presented in three subjective spaces, where an individual acts as a personality: intra-individual, inter-individual and meta-individual.