

Formation of the Environment of Professional Self-Determination in Russian Schools

V. Afanasyev^{1,2a*}, S. Kunitsyna^{3,b}, and M. Nechaev^{3,c}

¹ Moscow City University, 4 Vtoroy Selskohoziaystvenny proezd, 129226, Moscow, Russia

² Moscow Automobile and Road Construction State Technical University (MADI), 64 Leningradsky prospect, 125319, Moscow, Russia

³Academy of Social Management, 3/5 Yeniseyskaya Street, 129344, Moscow, Russia

^a vvafv@yandex.ru, ^b svetlana28061979@mail.ru, ^c mpnechaev@mail.ru

* Corresponding author

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Abstract: Global changes occurring in all walks of life have also had an impact on education. The school must prepare a graduate who is able to successfully socialize and be in demand and competitive. That is why, the problem of professional self-determination and the choice of future profession by students is particularly acute. The training of professionals of the 21st century should be carried out in educational organizations with pre-vocational training, which is the basis for obtaining high-quality professional education in the very near future. The authors of the article describe the environment of professional self-determination on the basis of early vocational guidance and pre-vocational training of schoolchildren, which includes the following blocks: resources, activities, results. The results obtained in this study can be useful for creating an environment of professional self-determination, early vocational guidance and pre-vocational training of students in educational institutions, which will ensure the emergence of a “new type” graduate – a young person who has the ability to consciously choose a professional path in unity with professional mobility.

1. Introduction

Noticeable transformations occurring in the field of science and technology, and, consequently, in social development, can't affect the field of education. The school must prepare a graduate who is able to socialize successfully and be prepared for life in a future society that we still do not know. In the process of such transformations, the problem of professional self-determination and the choice of future profession by students requires special attention.

The training of professional personnel of the 21st century should be carried out in educational organizations with pre-vocational training, which is the basis for obtaining high-quality professional education in the future, ensuring Russia's competitiveness.

In accordance with this, the following questions arise: How to prepare a student for a future life? How to help them to find themselves in this rapidly changing world? How to ensure successful self-determination??"

The article describes the environment of professional self-determination, which will ensure that students receive high-quality professional education in the future.

2. Materials and Methods

Theoretical analysis of psychological, pedagogical, sociological, and philosophical sources on the problems of professional self-determination and vocational guidance, the method of analyzing actual data are the main methods of studying this problem.

The main task is to describe the environment of professional self-determination of schoolchildren, search for mechanisms of their application to the conditions of educational practice.

3. Results

Scientists and practicing educators have always been attracted by the problems of choosing a profession, the conditions for achieving high results in it, the issues of self-realization in professional activities, the mechanisms of “deployment,” and the adequate use of a wide range of abilities and the whole potential of an individual [1, 3, 4, 5].

The relevance of the study of professional self-determination is also due to the practical demand that emerged in the context of profound economic transformations taking place in the world, associated with the emergence of the labor market, the disappearance of some professions and the emergence of others, as well as the reorientation of a number of industries.

The history of career guidance in our country has been around for about a century, and throughout its development, scientists have closely linked career guidance with professional and personal self-determination.

In psychology and pedagogy, such prominent scholars as E. F. Zeer, E. A. Klimov, N. S. Pryazhnikov, S. N. Chistyakova, P. G. Schedrovitsky et al. [7, 9, 11] devoted their work to the problems of vocational guidance, professional and personal self-determination of schoolchildren.

From the point of view of E. F. Zeer, professional self-determination as “an emotionally colored attitude of the individual to his/her place in the world of professions” “presupposes the manifestation of his/her own position in a problem situation characterized by a high degree of uncertainty” [2, 12].

N. S. Pryazhnikov connects professional self-determination with the self-orienting of the student, acting as the subject of self-determination. He argues that professional and personal self-determination have a lot in common, but there are still differences:

- Professional self-determination is a more specific concept (for example, to get a diploma of vocational education), and personal self-determination is a more complex concept (no one has yet been issued a diploma for “personal identity”);
- To a greater extent, professional self-determination depends on external conditions, while personal self-determination depends on the person himself.

N. S. Pryazhnikov connects professional self-determination with self-realization and self-transcendence, i.e. the ability to go beyond oneself [6, 10].

S. N. Chistyakova believes that vocational guidance is a system of interaction between an individual and society (different at certain stages of human development), aimed at meeting the needs of the individual in professional self-determination and the needs of society in reproducing the social and professional structure. Formed personality readiness for professional self-determination should be the result of such interaction [13, 14, 15].

Russian scientists consider the process of professional self-determination not as a single act that takes place at once, but as a long process of finding oneself in the profession (N. S. Pryazhnikov, S. N. Chistyakova, etc.).

Foreign studies confirm the relevance and significance of the problem of professional self-determination and its interdisciplinary nature. Among the foreign concepts that had the most significant impact on the development of the doctrine of professional self-determination, we can mention the concept of D. Super's professional development, E. Bern's scenario theory. Among the foreign concepts that had the most significant impact on the development of the doctrine of professional self-determination, we can mention the concept of self-actualization by A. Maslow, the typological theory of J. Holland, the theory of compromise with reality by E. Ginsberg, etc.

In the US, a directory of popular professions is regularly updated (“Occupational Outlook Handbook 2016-2017,” for instance). In the directory, each profession is described in detail; for the profession, forecasts of further development are given, average salaries in the industry, required skills and recommendations on the choice of specialized education are indicated.

“Designing Your Life: How to Build a Well-Lived, Joyful Life” by B. Burnett, D. Evans, A. Knopf (2016) is a book by Stanford teachers, which helps young people create a “sketch” or “design” of their own lives, helps them find their professional vocation.

Among the popular literature published in Russia in 2015, the following books should be noted that help a person navigate in choosing a profession and identify promising professions for himself:

1. “Atlas of new professions”. The book was published with the support of the Presidential Agency for strategic initiatives in cooperation with the Skolkovo School. A description of new and promising professions that will be popular and in demand in the future, as well as professions that will not withstand the spread of information and automated technologies contained in the Atlas.
2. “The Choice of Profession” by K. A. Dmitrieva, T. B. Ryabinina (2016). The book presents the characteristics of each profession, the necessary character traits, abilities and skills necessary to become an expert in the chosen profession. The book gives the necessary information on the awareness of the choice of future profession.
3. “I and the Profession”. Art album for family counseling by E. Martinez (2016). The book is a complex of 3 manuals: an album for a teenager (designed for 13-16 years), an album for parents, and a methodical guide. The publication helps children and parents in choosing a profession and finding a compromise if their visions do not match.
4. “My Future Profession. Tests on the Vocational Orientation of Schoolchildren (8, 9 class)” by A. G. Serebryakov, K. G. Kuznetsov, N. A. Khokhlov et al. (2017). The benefits are addressed to students in 8 and 9th grades, teachers, and psychologists. The manuals are developed by our specialists, employees of the Center for Testing and Development “Humanitarian Technologies,” who have many years of experience in the psychological and vocational orientation testing of high school students and applicants. The three main components of the right choice of profession include “I want”, “I can” and “I need.” With the help of testing, a high school student will be able to determine his or her own inclinations, interests, and opportunities and build their own “ideal formula” of the profession from these three components.

The already changed environment of professional self-determination, early vocational guidance and pre-vocational training of schoolchildren, should be one of the “growth points” for changes in the education system.

What changes are necessary for the modern Russian education system in order to ensure the emergence of a new type of graduate who is capable of making a conscious professional choice with full responsibility?

First, personnel changes.

It is necessary to consider the problems of succession of staff, active involvement in the educational activities of specialists from other areas, industry representatives, first of all. The solution of these problems is possible on the basis of independent certification of students of additional professional education programs, self-organization based on the principles of crowdsourcing, project training, and so on.

In the educational process for the training of professional education for schoolchildren, we need to include such organizational forms and technologies, the implementation of which will allow us to form an institution of volunteering and mentoring (with the involvement of undergraduate and graduate students).

Personnel audit, the institute of curators of project activities, the concept of “inverted class” included in the system of mixed (distance) personnel training have a special role to play in training and retraining. They will ensure that the vector of education is shifted from knowledge transfer to the process of joint (teacher and students) practices.

The development of the system of advanced training and retraining of teachers of the system of advanced professional education is a necessary condition in the direction of preparing for the organization of scientific and technical creativity of students, above all.

This development implies network Internet interaction, reliance on artificial intelligence technologies, and increasing computing power, neural network technologies and organizing on-site training foresight sessions.

Second, this is a change in hardware and software in the educational process.

The material and technical base must fully comply with the current stage of scientific and technological progress. Convergent technologies, computerized and computer digital educational resources should be included in the educational process. It is on this basis that joint projects of related directions can be created.

We believe that it is necessary to create a unified monitoring system for material and technical support, information centers with access to databases, computing resources, sources of scientific and technical literature, virtual laboratory and research complexes based on targeted financing in the education system.

The creation of a material and technical base will require the use of equipment and software and methodological support for special centers for scientific and technical support, the involvement of most specialized structural units in the development of the education system, and cooperation with enterprises in the real economy. Thus, the equipment and tools of the software and methodological support will be used at the sites of partners of educational organizations who are solving the task of creating the conditions for professional self-determination of schoolchildren and graduates of secondary school.

Third, these are changes in the very activity of subjects of the education system. The activities of all subjects of the education system should be built on the principle of compliance of the educational process (in terms of content and educational technologies) to the areas of modernization and technological development of the Russian economy, as reflected in the National Technology Initiative, the “Atlas of New Professions”.

Adaptation to the educational reality of mathematical modeling, additive technologies, robotics and automation, modern technologies of developing applications for mobile devices, including in the informative and procedural components of the educational system such issues as future energy, nanotechnology, space technology, cognitive technologies, bioinformatics, android technology, neurotechnology, etc., will lead to fundamental interdisciplinarity of educational content. This will require the application in the educational practice of the methods of modern TRIZ-pedagogy, language training in the technical field, the organization of project groups of teachers from various subject areas. Competency cards for specific areas of preparation for participation in pre-professional competitive events will act as a means to solve these problems. Today, such events already exist (Junior Skills).

In activities within the framework of professional self-determination, the close relationship of educational content with the main educational program will be implemented. The school will act as an integrator of educational resources of the city, a platform for testing new educational tools. In this regard, the creation of a specialized publication (journal) with the materials of the best practices in the discussed area will be relevant.

The issues of training professional personnel in the modern world come to the fore, are discussed by the pedagogical community, and are important for parents, students, administrators, and practicing teachers. Modern society is placing increasing demands on education, the need for highly qualified personnel is recognized at all levels. Schools are to provide profile training, personal and professional self-determination of students in the learning process, becoming one of the ways to implement the Russian Education Development Strategy. Profile schools have already firmly entered the educational space of Russia. Moscow specialized schools have long and firmly occupied the leading positions in the ranking of educational institutions. Profile training covers mainly upper grades: 9-11th grades, less often begins with 8 and 7th grades. Pre-profile training is carried out 1-2 years before the start of specialized training.

As noted above, such schools are already successfully operating in Moscow. Among them, the following should be highlighted:

1. “Medical class in the Moscow school”. It is implemented jointly with the First Moscow State Medical University named after I. M. Sechenov and the Moscow health care institutions. Cooperation is carried out on the basis of contracts between schools, universities and health organizations. In the framework of contracts, the equipment is supplied to educational organizations, it allows students to receive primary practical experience in the direction of such industries as the fundamentals of microbiology, biochemistry, anatomy, nanotechnology in medicine, etc.
2. “Engineering class in the Moscow school”. It is implemented jointly with federal state technical universities and high-tech enterprises located in the territory of the city of Moscow. The main goal of the project is to create conditions for pre-vocational engineering education in Moscow schools. Also, cooperation is carried out on the basis of contracts between schools, universities and enterprises.

Educational organizations, on the basis of which engineering classes are opened, are equipped with modern training equipment similar to those used in modern high-tech production: atomic force microscopes, programmable machines, equipment for conducting tests to test the strength and tightness; electrodynamics devices, theodolites; kits for designing electrical circuitry, etc. Using this equipment, students conduct experiments on statics and dynamics, conduct experiments in the field of quantum and molecular physics.

3. “Kurchatov Center for Continuing Interdisciplinary Education”. It is being implemented jointly with the National Research Center “Kurchatov Institute”. The principle of integration of subject areas as a condition of convergent education is laid in the basis of the project. Mastering basic theoretical concepts, the ability to apply them in solving practical problems and obtaining new knowledge is the main result of training. Schoolchildren carry out interdisciplinary research in the field of chemistry, physics and biology.
4. “Academic class” (scientific and technological class in the Moscow school). It is implemented jointly with the Federal Agency of Scientific Organizations of Russia. The main idea is the introduction of a comprehensive integrated program (general, additional, vocational, higher education) on the basis of the interdisciplinary approach (convergence) to achieve new results for students. Schoolchildren learn basic professional skills that will subsequently enable them to make a career choice consciously and competently. Training on the basis of interdisciplinary concepts, research activities in priority areas of science development, organization of training in modern technosphere, development of applied projects implemented in the urban environment, network implementation of educational programs in collaboration with scientific organizations, high-tech enterprises are the main principles of organizing education in academic classes.
5. “Cadet class in Moscow school”. It is implemented in cooperation with the law enforcement agencies of the city of Moscow. Admission of children to cadet classes is carried out considering success in school, the state of physical development and health, the degree of focus on the further choice of the profession of a military or public servant. Additional training programs provide military training for pupils, implement military-patriotic, artistic-aesthetic, and physical-sports programs.

Thus, in the Russian Federation, the situation with pre-vocational education and professional self-determination of schoolchildren has changed over the past few years. New approaches have appeared in the content, forms, methods, learning technologies that are implemented at the school level.

4. Discussion

Obviously, the new format of education should be the answer to the challenges of the 21st century at all its levels. Moreover, preparing the younger generation for successful socialization, finding a profession that is important and necessary for the development of the economy, and, as a result, improving the quality of human life remains the main task of education.

Currently, the problem of preparing the younger generation in the high-tech world, which is rapidly developing and becoming more complex, is particularly acute.

Civilization moves to the newest level of development, industrial society is changing to post-industrial, which is based on information.

5. Conclusion

It is important to understand that the prospect of growth in human development opportunities will primarily affect the economy and, as a result, education. Namely, educational practices focused on an interdisciplinary approach, high technology, advanced training will be required. It is essential that new approaches in the content, forms, methods, technologies of education should be implemented at the school level.

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