

Development management professional orientation of students

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Abstract—Purpose of work was to reveal the essence of professional orientation of schoolchildren in the aspect of deepening the relationship of education and production, the choice of areas of professional education by graduates of the municipality, to justify the need to manage the development of vocational guidance on the basis of the formation of educational and innovative environment and assess the effectiveness of vocational guidance activities of the school. The analytical part of the article is based on the research of domestic scientists and teachers on the problem of vocational guidance of schoolchildren. The paper uses the method of comparative analysis, tabular and graphical methods of presenting information, the method of modeling career guidance activities of the school. The necessity of further development of the scientific basis of the theory and practice of development of vocational guidance of students; the structure and functions of vocational guidance, the use of which contributes to the formation and implementation of the program of development of educational and innovative environment of the school, as well as the assessment of the level of development of such environment in the schools of the municipality. It is revealed that: 1) the vocational guidance directed on preparation of school students for labor activity is a basis of interaction of education and production; 2) there is a relationship of vocational guidance of students with the choice of direction of vocational education graduates of the Republic of Dagestan; 3) vocational guidance should be carried out in close relationship: a) the need for the labor market in the region of workers and specialists; b) in accordance with the ranking of factors in the degree of influence on the choice of profession graduates of the Republic of Dagestan. It is shown that all the innovations should be correlated with the activation of career guidance in educational institutions. The scheme of management of vocational guidance activities and methods of assessing

the effectiveness of management of vocational guidance activities in the school on the basis of criteria of efficiency, efficiency and diligence. The results of the study can be used by the heads of secondary schools, teachers in vocational guidance and educational work with students, specialists of the departments of education of municipal administrations, as well as in the teaching of the disciplines "Pedagogy" and "Economics of education".

Keywords—*professional orientation, secondary school, educational and innovative environment, structure and functions of career guidance, factors of influence, career guidance, the effectiveness of the program*

I. INTRODUCTION

Activation of management of development of vocational guidance of schoolchildren can be achieved only with the organization of joint purposeful work of school leaders, teachers and municipal education authorities, taking into account the individual interests, abilities of children and the needs of the labor market in the region in workers and specialists. At the same time, it is necessary to proceed from the features of the basic, sectoral and individual components of career guidance, to form an educational and innovative environment for the purpose of effective career guidance at school.

The complexity and versatility of the problems of managing the vocational guidance development in Russia predetermine the need to develop a modern scientific base, to study the theory and practice of the functioning and development management of the vocational guidance of young people. On this basis, it is possible to choose the ways and directions of its improvement, taking into account the specifics of

diverse forms of vocational guidance and the needs of society in the workforce and specialists of various profiles and level of training. Scientific and practical support contributes to the creation of effective and well-functioning management of career guidance development, both at school and in the municipality and the region.

In modern society, education, especially the vocational orientation of schoolchildren, is becoming the main factor influencing the level of human capital development. This significantly changes the requirements for educational organizations, so it is necessary to include students in the vocational guidance process, the formation of labor skills, preparation for work. All this leads to the development of education and the creation of a market for career guidance services.

The main goal of vocational guidance is the acquisition of theoretical knowledge, practical skills corresponding to the interests, abilities of the individual, learning from the experience of creative activity for the conscious choice and mastering of the elementary skills of the profession, which organically combines personal abilities with the public need for specialists of different profiles. In accordance with this, the structure of vocational guidance for schoolchildren includes three main components: basic, sectoral and individual training.

II. RESULTS AND DISCUSSION

The development and use of human capital is carried out in the form of a set of general educational and professional qualities and competencies of a person, realizing the productive interaction of education and production. One of the leading resources of such interaction is the professional orientation of schoolchildren, which is not currently being implemented.

The professional orientation of students is the informational, organizational, and pedagogical activity of the family, educational organizations, state, public, and commercial organizations that provide assistance to children in choosing a profession, taking into account the individual interests of children and the needs of the labor market.

The most important and necessary condition for the success of solving the tasks of career guidance development management is the use of innovation in the school's educational process. This will facilitate the coordination and integration of all career guidance activities into one system.

The Federal Law "On Education in the Russian Federation" emphasizes that "innovative activity in the field of education is carried out in order to ensure the modernization and development of the education system, taking into account the main directions of the socio-economic development of the Russian Federation, the implementation of the priority directions of the state policy of the Russian Federation in the field of education" [1].

The main innovative activities in the Russian system of general secondary education are:

- 1) innovative technologies of education (creation of a system of additional and vocational guidance education), information (creation of websites, a bank of ideas, the Internet), full-time schools, etc.;
- 2) creating a system for working with gifted children;
- 3) informatization of the educational process;
- 4) the use of innovative technologies (student-centered learning, gaming technology, technology of developmental learning, problem-based learning).

Innovative education can be considered as a purposeful process of vocational guidance and innovative training of a person, which is characterized by the presence of pedagogical innovations, the innovation process and innovation activities. All this forms and develops the educational and innovative environment of secondary schools.

The process of developing and implementing an appropriate program for the development of an educational and innovative environment for municipalities seems to be a sequence of the following steps.

1. The study of the existing situation in the educational and innovative sphere allows determining the advantages and disadvantages of this system. Based on the analysis of the collected information, pedagogical, economic, financial, innovative and other problems are identified that need to be resolved as soon as possible.

2. For the successful development of educational and innovative environment, it is necessary to form a list of innovations that can be used in a general education school. Innovative ideas can be obtained from sources such as research; studying the interests, opportunities and abilities of children and adolescents; activities of the best educational institutions and teachers; new laws, regulations, etc.

3. To develop an educational and innovative program, it is necessary to select the most promising and real ones for the implementation of innovation. Then an innovative program is developed in accordance with the features and specifics of the educational institution. When developing such a program, it is necessary to take into account the experience of introducing such innovations in other educational institutions. For example, the transition to new curricula and programs, the use of information technology in the educational process, the creation of a system for working with gifted children, a modular form of education and knowledge control, the organization of vocational guidance at school and others. An innovative program is a complex of interrelated resources, timelines and event implementers. It should be noted that there are always limitations both in time and in personnel and financial support of the educational and innovative program.

4. It is better to implement the educational and innovation program by a team, which is a temporary organizational association of teachers, managers and other employees created to develop a specific innovation. At the same time, it is necessary to identify whether the goals of the educational institution coincide with the goal of the innovation being performed. At this stage, all issues related to the provision of personnel, finance, premises, equipment are investigated.

5. The control of performance and the evaluation of the results of the completed work stages make it possible to identify omissions and deviations from the established norms and requirements of the educational process. This provides feedback by amending the work program for the development of the educational and innovative environment of both a separate educational institution and the education system of the municipality.

Organizational measures to ensure an educational and innovative environment include: the creation of a working group for the scientific substantiation of the choice of innovations, schools, classes for innovations; studying the current state of innovation in the schools of the municipality; determination of material, financial and other costs of innovation and their distribution; drawing up an educational and innovative program, monitoring and evaluating the results of the development of an educational and innovative environment, Et cetera.

The pedagogical components include: the definition of pedagogical limitations in the formation of the educational and innovative environment; justification of the pedagogical idea of innovative education; the choice of methods, forms, methods, tools for the development of educational and innovative environment; pedagogical and informational, communication technologies for the implementation of an educational and innovative program; monitoring and evaluation of the pedagogical results of the development of the educational and innovative environment of the municipality, Et cetera.

Based on the analysis of program documents [1-3], we have developed a system of indicators for assessing the level of development of the educational and innovative environment of the municipality.

1. Index of innovative development of the education system in the municipality:

$$I = I_t : I_{t-1},$$

where

I_t – the number of innovative projects implemented in the educational process of the education system of the municipality in the t -th year;

I_{t-1} – the number of innovative projects implemented in the educational process of the municipal education system in $(t - 1)$ year.

2. The participation rate of employees of the education system of the municipality in innovation:

$$PR = E_n : E,$$

where

E_n – the number of employees of the education system of the municipality involved in the innovation activities of educational institutions;

E – the total number of workers employed in the education system of the municipality.

3. Index of the introduction of innovations in the field of vocational guidance of schoolchildren to the municipality education system

$$Intr = K_t : K_{t-1},$$

where

K_t – the number of innovations in the field of vocational guidance for schoolchildren in the t -th year in the municipality;

K_{t-1} – the number of innovations in the field of vocational guidance for schoolchildren in $(t - 1)$ year in the municipality.

4. Professional index of the development of the education system in the municipality:

$$P = N_e : N_t,$$

where

N_{ee} – the number of people employed in the education of the municipality (thousand people);

N_t – the total number of employed in the municipality (thousand people).

5. The staffing indicator for the education of the municipality:

$$S = N_s : N_t,$$

where

N_s – the number of employees with higher and secondary special education engaged in the education of the municipality;

N_t – the total number of employees with higher and secondary special education employed in the municipality.

6. The coefficient characterizing the financial and technical costs of innovative education in the municipality:

$$F = S_i : S_t,$$

where

S_i – the amount of financial and technical costs in the municipality for innovative education for the year;

S_t – the amount of total financial and technical costs in the municipality for the education system for the year.

Based on the calculated data of these indicators and comparing the values of the actual presence of minimum social standards with the values of the required minimum of social standards in the

municipality, it is possible to determine the level of organizational and pedagogical support of the educational and innovative environment of the district (city). This makes it possible to analyze the activities of education authorities at the local and regional level and to make adjustments to their work on the vocational guidance of schoolchildren.

The most characteristic disproportions that exist in the organization and structure of vocational guidance and vocational education in the Republic of Dagestan of the Russian Federation include:

- 1) the discrepancy in the number of personnel training sector and regional needs;
- 2) insufficient development of a network of educational institutions in the vocational education system that train personnel for the consumer services and housing and communal services;
- 3) the discrepancy between the technical base of vocational education and the requirements of modern production;
- 4) the complete loss of the relationship of the basic and mainstream secondary school with the system of vocational education, which was previously implemented in schools through training and production facilities and directly introduced children to work.

This situation is explained by the fact that today the interaction “school - profession - production” has not been established. To solve this problem, it is necessary to create a republican data bank in three areas:

- 1) what professions should high school students be oriented in the context of cities and rural municipalities;
- 2) for which professions (specialties) and in what quantities personnel are trained and for which specialties the training is still to be carried out;
- 3) graduates of which professional educational organizations and in which specialties do not meet the requirements of production and what to do to correct such a discrepancy.

Such information is necessary and mandatory to equalize demand in the labor market with the supply in the educational market. In order to practically achieve such compliance in the conditions of the Republic of Dagestan, the following measures should be taken:

- in accordance with the plans for the socio-economic development of municipalities of the republic, it is necessary to determine which enterprises (sectors) are developing more rapidly in the territory;
- to determine for each municipality which specialists (personnel), what level of education and how much is required;
- the preparation of the necessary number of future employees according to the level of education should be carried out in educational institutions of higher, secondary and primary vocational education.

The practical implementation of these measures in the field of vocational education determines the need to enhance the vocational guidance of students in educational institutions of basic and secondary general education of the republic. The following activities should be organized for this:

- stepwise system for studying the personality of children (self-analysis, analysis of the profession and analysis at the stage of vocational guidance);
- providing students with ample opportunities in the choice of profession at the stage of professional tests;
- close cooperation of schools (gymnasiums, lyceums) with enterprises of the economy, the service sector, business, government, municipal structures, employment services to determine the need of the republic for personnel and bring this information to students.

All this is becoming especially important today, as scientifically based guidelines are needed in preparing students for life and choosing a profession. It is also important that the academic work of schoolchildren be combined with the present productive social work demanded by society, which provides a high level of vocational guidance.

Particular attention to the development of vocational guidance work with students is required in rural municipalities of the Republic of Dagestan. The concept of the federal target program “Sustainable development of rural territories for 2014-2017 and for the period up to 2020” approved by the Government of the Russian Federation provides for the use of an integrated approach to the development of rural territories [3]. These include the provision of rural settlements with the necessary complex of social and engineering infrastructure, the presence of long-term plans for their development, the growth of the economic potential of rural areas, the implementation of investment projects in the agro-industrial complex.

Currently, the rural youth of the republic is associated with such negative concepts as wilderness (25%), terrorism (23%), devastation (18%), hopelessness (14%) and poverty (11%).

More than a third of respondents (41%) consider work in the countryside more repulsive than attractive, 17% consider unattractive and uninteresting. However, many of the 17% will move into the first group if the state and society do not take more active measures to prevent migration. 22% of respondents consider work in rural areas more attractive than repulsive, 14% find it interesting and attractive. Representatives of these groups should be associated with the future of the village, but with careful attention to them, their needs and interests.

Taking into account the diversity of climatic conditions, features of population distribution and way of life, state of the economy and infrastructure in rural settlements of the republic, such a model of career guidance is needed, which corresponds to the specifics

of these territories. In this model, the “economy-man-territory” interaction system should be fundamental, in which development will come only when the connection in it is multilateral. This can be achieved under conditions when municipal bodies (territories) will take initiatives to solve common, rather than private problems, and when education management structures will be open to such initiatives and will be sensitive to the demands of the population.

In the future, many professions will disappear. The functions of an accountant, travel agent, notary, translator, diagnostician, dispatcher, courier, driver, security guard will be performed by robots, that is, a person will be replaced by a machine. It is very important to foresee all the consequences of the digitalization of the economy today, to predict how we will go the next 20-50 years to avoid a catastrophe. Therefore, when planning the development of vocational education, it is necessary to proceed from the market demand for the professions. Thus, the dynamics of mass vacancies is positive for 2017 in relation to 2016: drivers - 37%, porters - 28%, manicurists - 27%, sellers, cashiers - 25%, couriers - 24%, administrators - 22%, call center operators - 21%, barmen - 20%, waiters - 14% [4].

It is necessary to correlate these dynamics with factors according to the degree of influence on the choice of profession by graduates of schools. Such a ranking for 2017 for individual schools of the Republic of Dagestan is given in Table 1. The factor “parents and other adult family members” was in the first place, “the availability of complete and objective information about the chosen profession” was in the last place.

TABLE 1. RANKING FACTORS ACCORDING TO THE DEGREE OF INFLUENCE ON THE PROFESSION CHOICE BY GRADUATES OF THE XI CLASSES OF SCHOOLS OF THE REPUBLIC OF DAGESTAN*

No	The name of the factors	The degree of influence (in% of respondents)
1.	Parents and other adult family members	39,6
2.	Opinions of friends, comrades, girlfriends	16,7
3.	School, the position of teachers, teachers	14,9
4.	Personal professional plans	10,1
5.	Individual abilities, interests	9,4
6.	The level of claims to public recognition, a place in society	5,1
7.	Availability of complete and objective information about the chosen profession	4,2

*The questionnaire was attended by students of correspondence courses "Dagestan State Pedagogical University"

There is a certain relationship between the rank of a region and the structure of a vocational school: the higher the rank of a region, the wider the network of vocational and technical educational institutions, the more varied the list of professions for which professional training of young people is necessary. A similar dependence, complicated by the action of objective and subjective factors, exists between the “offer” of the choice of professions in the economic

complex of the region and the “demand” for these professions from school graduates. In this regard, compulsory vocational training for schoolchildren should be carried out in two stages: training in a profile in the VIII-IX grades and in a specific profession in the X-XI grades. In the process of specialized vocational training, it is necessary to envisage the study of issues common to a group of related professions of one industry or industry. This decision is due to the fact that, firstly, at the end of the ninth grade, students can continue their education not only in a secondary school, but also in a secondary vocational educational institution; secondly, students in grades VIII at the age of 12-13 still, as a rule, are not psychologically ready to choose a profession.

The analysis shows that career guidance activities in the school can be aimed at

- school management system;
- organization of the educational process;
- methods, technologies, techniques, forms and means of the educational process;
- educational content and others [5].

This is especially important in the present conditions, when the spontaneous stage of the computerization of the education system is coming to an end and information technologies have already become part of everyday teaching practice. Therefore, vocational guidance innovation in school should be implemented primarily on the basis of information and communication technologies [2].

On the other hand, vocational guidance activities at school are considered by us as a managed process. Therefore, in the structure of this management system, a special place is occupied by research pedagogical institutions. Research pedagogical institutions with schools and municipal departments of education should develop a program of vocational guidance activities: where, when, how, in what forms, by what technologies to organize such a process. Moreover, they should be variable depending on the specifics of urban and rural schools, secondary school levels and specialized education of children. These and other activities of an organizational, pedagogical and research nature are the basis for the development and implementation of a career guidance program in the schools of the municipality. Vocational guidance occupies an intermediate position between pedagogical theory and pedagogical practice: it is aimed at transforming various aspects of pedagogical practice and is drawn to the achievements of pedagogical theory.

The external environment affects the organization of vocational guidance activities through social, educational, economic, legal, financial, scientific and technical laws, restrictions and development prospects.

The internal environment is influenced by existing regulations, standards, curricula and programs; teaching and methodical, personnel and research

support and career guidance activities in educational institutions [3].

The list of didactic tools used in practice, intended to prepare students of secondary schools for vocational guidance, is extensive. These include problem situations, business games, design techniques, analogy methods, brainstorming, information and communication technologies and others.

To improve career guidance activities, various types of didactic situations can be used: search, decision making, analytical, design, career guidance self-regulation, etc. [6], on the basis of which it is possible to assess the effectiveness of the implementation of the guidance program in vocational guidance at school.

The following criteria are used as the basis for evaluating the effectiveness of the implementation of the relevant program:

1) profitability - the implementation of the program of management of vocational guidance activities at school optimizes the costs of financial, labor and material resources;

2) efficiency - the implementation of the program of management of vocational guidance activities at school ensures the rational management of the process, reduces the time for the implementation of management decisions;

3) diligence - the implementation of the program for the management of vocational guidance activities at school ensures a reduction in interference management, eliminates unnecessary, ineffective interaction, increases the timeliness and quality of execution of decisions.

We introduce the following notation to assess the effectiveness of the implementation of the program of management of vocational guidance activities in the school:

k – school index;

I_p – indicator of the profitability of the program of management of vocational guidance activities in a particular school;

I_e – indicator of the efficiency of the implementation of the program of management of vocational guidance activities in a particular school;

I_{pp} – an indicator of the performance of the program for managing vocational guidance activities in a particular school;

E_{pk} – the efficiency ratio of the implementation of the program of management of vocational guidance activities in a particular school;

O_{tk} – the total number of decisions on the implementation of the vocational guidance management program in the k -th school, fully and timely implemented in a year;

O_{ik} – the total number of decisions on the implementation of the program of management of

vocational guidance activities in the k -th school to be executed for the year;

F_k – financial resources necessary for the implementation of the program of management of vocational guidance activities in the k -th school for the year (thousand rubles);

T_k – time for which the implementation of the program of management of vocational guidance activities in the k -th school (year) is assessed:

$$I_{pp} = \frac{O_{tk}}{O_{ik}}; \quad I_e = \frac{T_k}{T_k + T_k(1 - I_{pp})};$$

$$I_p = \frac{F_k}{F_k + F_k(1 - I_{pp})}; \quad E_{pk} = I_p \cdot I_e \cdot I_{pp}$$

Then the dynamics of changes in the effectiveness of the implementation of the program of management of vocational guidance activities in the k -th school is determined by the following formula:

$$C_k(t) = E_{pk}^t - E_{pk}^0,$$

where E_{pk}^t – coefficient of efficiency of the implementation of the program of management of vocational guidance activities in the k -th school for the reporting (planned) year;

E_{pk}^0 – coefficient of efficiency of implementation of the program of management of vocational guidance activities in the k -th school in the base year.

III. CONCLUSIONS

Analysis of career guidance activities on the above criteria will allow, on the one hand, to evaluate the work of the school in terms of the success of this activity; on the other hand, to identify the general directions for improving the management of vocational guidance activities.

The weak point of the whole system of vocational guidance activities at school is the lack of responsibility for the decisions made, the results and consequences of the activities of its employees, managers and specialists of the district (city) educational authorities. This circumstance determines the special relevance of the purposeful and reasonable development and implementation of the career guidance program in the school.

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