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Innovative Methods in Career Guidance Activities of Universities: Meeting Interests of Graduates

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Abstract

The article is devoted to the problems of career guidance among students and the integration of new forms and methods of work using innovative methods. The introduction of innovative measures in the career guidance program determines the formation of a professional personality of students, as well as the performance of the educational Institute's function of professional recruitment and supply of the market with qualified personnel motivated to develop and improve their skills.

The purpose of the study is to introduce an innovative modeling method into vocational guidance activities of universities, taking into account the interests of graduates in obtaining higher education.

The research was conducted at Kazan National Research Technical University named after A. N. Tupolev. The research tools employed were the forum and a school contest. The study of the problem was conducted in three stages. As a result of the research, a structural and functional model of the formation of pedagogical conditions for attracting talented youth to a technical University was developed. The model ensures the interconnection of blocks, determines the integrity and efficiency of the formation of pedagogical conditions for attracting talented youth to a technical university. The model reflects the goals, tasks, principles and approaches to the formation of pedagogical conditions; conditions are defined; criteria and expected result are defined.

Keywords: modeling, structural-functional model, career guidance, technical university, talented youth.

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Introduction

At the heart of the effective work of any higher education institution today is a successful career guidance program aimed at informing students, as well as helping them choose their future profession.

In view of that, the author believes that one of the most relevant methods in the implementation of the professional program is modeling, which is widely used in pedagogical research. The modeling method determines the possibilities of combining empirical and theoretical aspects in pedagogical research, therefore, the construction of a logical structure and scientific stylization within the framework of the pedagogical experiment (Klimov, 2010).

The research problem is in the lack of implementation of innovative methods of career guidance at universities that take into account the interests of graduates in obtaining higher education.

Purpose and objectives of the study

The purpose of the study is to introduce an innovative modeling method into vocational guidance activities of universities, taking into account the interests of graduates in obtaining higher education.

Literature review

The article presents the methodology of career guidance activities to attract talented youth, thus, the author has developed the structural-functional model for the formation of pedagogical conditions for attracting talented youth to a technical university. The model consists of five interconnected blocks – targeted, substantive, the block of pedagogical conditions, procedural, and the block of demonstrating result (Osipova, 2000).

The presented model ensures the interconnection of blocks, determines the integrity and effectiveness of the formation of pedagogical conditions for attracting talented youth to a technical university. The presented model reflects the goals, objectives, principles and approaches of the formation of pedagogical conditions; conditions are defined; criteria and expected result are identified. During the developing stage of a structural-functional model for the formation of pedagogical conditions for attracting talented youth to a technical university, the authors set the following tasks:

- 1) The research of the interests and professional guidelines of potential applicants, including those of which a significant proportion are talented youth.

- 2) The formation of a structural plan of ongoing career guidance activities that are innovative in nature.
- 3) The creation of all necessary conditions to implement the concept of career guidance (Klimov, 2010).

The presented model will determine the integrity and effectiveness of the formation of pedagogical conditions in order to attract talented youth to a technical university.

Methodology

The research was conducted at Kazan National Research Technical University named after A. N. Tupolev. The research tools employed were the forum and a school contest. The study of the problem was conducted in three stages. At the first stage, the theoretical analysis of existing methodological approaches to philosophical, psychological and pedagogical scientific literature was performed; dissertation work on the problem, as well as theory and methodology of pedagogical research was carried out. The problem, purpose, and methods of investigation are highlighted, and the plan for experimental research is compiled. At the second stage, experimental work was carried out; the conclusions obtained during the experimental work were analyzed, tested, and clarified. At the third stage the experimental work was completed, the theoretical and practical conclusions were refined; the results obtained were generalized and systematized.

Results

As a result of the research, a structural and functional model of the formation of pedagogical conditions for attracting talented youth to a technical University was developed. The presented model ensures the interconnection of blocks, determines the integrity and efficiency of the formation of pedagogical conditions for attracting talented youth to a technical university. The presented model reflects the goals, tasks, principles and approaches to the formation of pedagogical conditions; conditions are defined; criteria and expected result are defined. The model is shown in Figure 1.

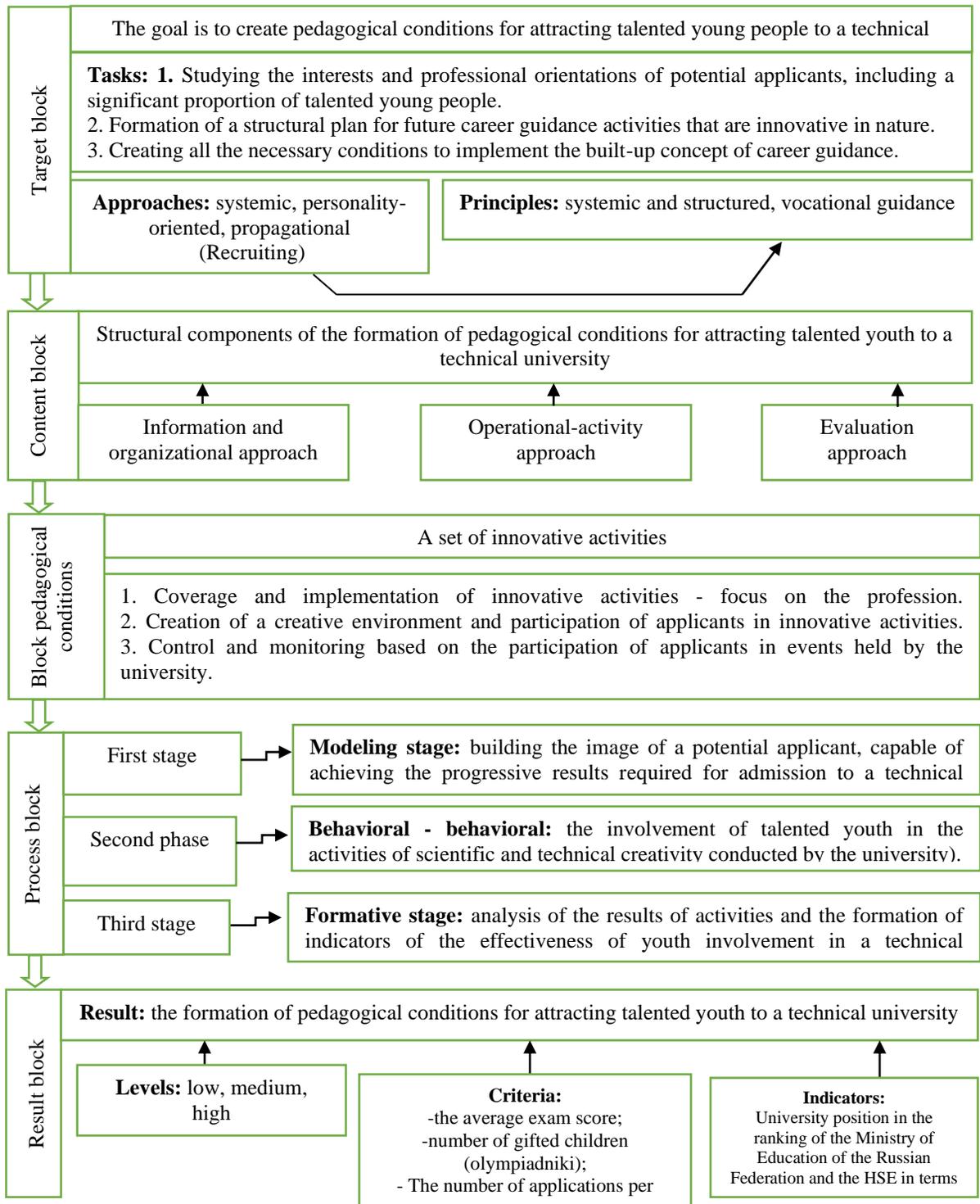


Figure 1. Structural and functional model of the formation of pedagogical conditions for attracting talented youth to a technical university

The first block is the target block, which includes the goal, tasks, approaches and principles. When developing a structural-functional model, the author defines the goal as a system-forming element. To achieve any goal, you will need a “Bank” of tools that form the result of career guidance, which is reflected in the technical university ranking. There are two ways to achieve quality indicators as part of career guidance:

- creating a strict goal structure that includes successive stages, levels and categories;
- the ability to achieve this goal is a reflection of the theoretical aspect in practice with the help of certain tools, skills and abilities (Maslennikova, 2015).

When developing a structural-functional model for the formation of pedagogical conditions for attracting talented youth to a technical university, the author sets the following tasks:

- 1) The study of the interests and professional orientations of potential job seekers, including those that make up a significant proportion of talented youth;
- 2) Formation of a structural plan for future innovative career guidance activities;
- 3) Creation of all necessary conditions for the implementation of the built concept of career guidance.

Certain approaches are needed to achieve the goal and implement the above tasks; therefore, the target block cannot consist without their description. Therefore, the author considers from the point of view of a systematic, student-oriented propaganda approach.

The systematic approach in pedagogy, as well as in other disciplines, is based on several positions: multiplicity, hierarchy, integrity and structuring. Hierarchy is expressed in the mutual subordination of one element to another. Structuring is expressed in the combination of components into subgroups, between which certain relationships are established.

A personality-oriented approach to the content of career guidance involves considering the classic triad of career guidance “I want” - “I can” - “I must” by E. A. Klimov (Zagrebina, 2009).

This concept is a shadow of the formation of career guidance activities at a technical university, where “I want” is the student’s abilities, interests, requests, “I can” – his abilities, skills, “this is necessary” – the technical university’s needs for talented youth. From here, it is logical to include another component – “To demand” – the requirements for the profession.

In the framework of a personality-oriented approach, the main attention is paid to the “I want” and “I can” components; therefore, there is a risk of insufficiently competent career guidance activities that have an excessive pressure on the student, which may have the opposite effect (Maslennikova, 2015).

The propaganda approach is an element of the completely talented youth professional self-realization system. The propaganda (recruiting) approach aims at building career guidance work of educational organizations of secondary and higher professional education to identify talented youth. Thus, the author points out that the professional approach used in the work of a technical university to attract talented young people is selective and can be defined as selective career guidance aimed to select the best job seekers. The key point underlined by the author is the principles of creating pedagogical conditions for attracting talented youth to a technical university.

The principle of consistency and structure: this principle is aimed at streamlining and organizing of individual elements, forming an integrated structure of a professional program. Thanks to this principle, the ultimate goal (strategic setting) is noted, within the framework of which tactical tasks are built, filled with a clear structure of knowledge, a logically built installation, fully reflecting the essence of objects, methods, forms and means, as a result of which it is achieved, therefore it allows us to consider the formation pedagogical conditions for attracting talented youth to a technical university in an integral form with its subsystems, relationships and mutual influence, built into a single system (Kostyuk, 2010).

The principle of career guidance: the principle reflects the career orientation of the applicant for a particular profession, as well as the career orientation of general education and training. The career guidance of the applicant is related to the ratio of abilities and interests with a particular profession. The effectiveness of professional training, labor productivity on the chosen path, and, ultimately, satisfaction with own activities and life, depend on how seriously a person approaches the choice of a future profession. Formation of orientation to the profession of applicants promotes to the competent choice of a future profession.

The content block is formed due to the expressed structural components in engineering education in the formation of pedagogical conditions for attracting talented youth. Among the structural components, the following approaches can be distinguished:

- Information and organizational approach. The career guidance program of a technical university aims to familiarize and inform about events in which students can become familiar with their future profession.

- Operational-activity approach. The operational-activity approach is used in the framework of the formation of pedagogical conditions, i.e., the conduct of career guidance measures at the university to attract young people to the profession. This approach will cause understanding and a possible subsequent interpretation of knowledge gained in the field of technical creativity.
- Evaluation approach which is expressed in the ability of the researcher to independently transfer his contribution to the formation of pedagogical conditions on the university basis to attract talented young people, the ability to control and evaluate taking into account the individual abilities of the applicant. Based on the results of the work done, the level of effectiveness of measures that have a direct impact on the quality indicators of reception is determined.

The block of pedagogical conditions determines under what conditions the complex of career guidance measures is integrated into the engineering educational environment and acts as a means of pedagogical conditions forming for attracting talented youth to a technical university. In accordance with the process of mastering an innovative professional program, as well as during practice-oriented activities, the complex of these measures is determined by the stages of the formation of pedagogical conditions for attracting talented children to engineering universities.

A set of innovative career guidance measures has been created with the aim of providing a real contribution to the theoretical and technological training of potential applicants for the formation of their orientation to a future profession (Knyazkina et al., 2016). The initial incentive for the implementation of the innovative professional program was the lack of resources for the procurement of technical materials and the insufficient competence of professional orientalists at the university (Kostyuk, 2010).

The structure of the complex forms a set of elements: the subject of the program, the script, participants, the role and functions of the participants in the assessment. The subject of a professional program is the participants' subject of activity in a special (individual) form that replaces the subject of real professional activity. The scenario of professional events is the main document in oral or graphic form of a certain content, according to which the event is organized. It contains the main tasks, conditions and describes the concept, systematic work of university employees (professional orientalists). The script shows the general sequence of events, divided into main stages. Participants in a professional event are those who are directly involved in the events themselves. Students, parents, SPO students, university staff and tutors can participate in them. Role is the position of a career consultant, which consists in identifying yourself or a professional specialist. The functions of participants (professional orientalists) are in that they should

adequately reflect the "official picture" of a professional activity fragment, which is modeled in a career guidance event.

Evaluation should provide, on the one hand, quality control of professional decisions in the field of engineering education in terms of standards and requirements of career guidance and assessment of professional activity in terms of "solid" (Dabula & Makura, 2013). The assessment category performs the functions of both control and self-control of employees' activities, and ensures the formation of cognitive motivation of participants in professional activities.

Note that the system of career guidance is not universal, a lot depends on professional orientalists, so the organization and conduct of a certain thematic block of work may change. The choice of one or another form of career guidance diagnostics and training, first, should be based on such indicators as reliability, validity, ability to solve tasks, reliability of the data provided and ability to solve the main problem, i.e. to satisfy the demand of modern applicants. Career guidance activity is carried out in order to identify effective models of career guidance in educational organizations at all levels of training and education, to popularize and disseminate the experience of educational institutions in the field of career guidance of youth. Accordingly, it becomes relevant to introduce the practice-oriented forms of professional self-determination into the educational process that will help students to try themselves in various types of professional activity, to determine the profession that best suits their interests, abilities and opportunities in society. As a result, the block of pedagogical conditions at the first stage covers a complex of innovative measures that allow the applicant to orientate himself to a future profession.

Introduction of the creative content of career guidance activities and their further implementation in the practice of career guidance will allow students to:

- demonstrate their knowledge of the profession or professional activity field;
- build their professional guidelines, starting to build a training and professional route “immersion” in the “heavenly” environment of the university, to study the system of career guidance and career support, mentoring in an educational organization;
- obtain skills and competencies of real profession, mastering new tools and technologies.

Activities of scientific and technical creativity are professional tests that simulate the elements of a certain type of professional activity, which have a completed form and contribute to a conscious, reasonable choice of profession. Through a series of events at the university, the applicant will demonstrate a desire and a

desire to become better acquainted with a future profession. With the results in the block of pedagogical conditions in the structural-functional model, we turn to the statements of Nikola Rodichev (Chistyakova & Rodichev, 2011, p.15):

“Even in the middle of the last century, the idea of a professional test disturbed the minds of career counseling specialists. In Japan, Professor Shigekazu Fukuyama created a measuring tool called the F-test (Fukuyama test) to assess readiness for the profession selection. It would seem that you can come up with a country that seeks industrialization, after the ancestor of American career guidance, F. Parsons? Yes, first we learn to determine the degree of development of our personal qualities and abilities, abilities and intelligence. After that, you need to study the current state of the world of professions, choose one of them – “your own”, and compare the first and second. However, the disadvantages of the Parson model have become apparent over the decades of its use. Therefore, the most important component of career guidance for Shigekazu Fukuyama was a practical strength test”.

The process block includes the modeling, behavioral, forming stages. Modeling stage includes building the image of a potential candidate who is able to achieve the progressive results necessary for entering a technical university. Behavioral stage allows considering the student as an object and allows studying the student’s behavior, thereby involving the student in the activities of scientific and technical creativity conducted by the university. The forming stage includes the analysis of performance and the identification of performance indicators for attracting talented children in the field of engineering. After selecting and summing up, the last block will be completed. As part of the study, the set of measures will be reflected at one of the levels: low, medium and high (Batygin, 1986).

After defining the level in the structural and functional model, we defined the criteria and concept. From a philosophical point of view, criteria as specific rules and regulations allow one to decide whether each individual step is correct. Criteria do not record the most promising and productive principles and methods of action but only express objective laws and the logic of the phenomenon. In sociological literature, this concept acts as a measure of the assessment, determination, comparison of a phenomenon or process.

In the practice of pedagogical research, several approaches to the definition of criteria and indicators are considered. In particular, the criterion can be interpreted as an indicator that can be used to assess effectiveness of the process. With this approach, the criterion is a set of key indicators that reveal a certain level of the phenomenon. This approach is characterized in that the degree of indicator formation is determined by establishing its criteria at different levels.

Discussions

The very concept of “criterion” in modern scientific literature is interpreted ambiguously (Athanasou & Van Esbroeck, 2008). This is especially evident when comparing the concepts of “criterion” and “indicator”. Sometimes it is allowed to mix these ambiguous categories. The criterion is the measure by which the assessment of the phenomena, processes, conditions, formation and development of the personality in education is carried out. In general, a criterion means a point of view, which is a measure for determining, evaluating an object, phenomenon; a sign that is the basis for the classification of objects, phenomena, concepts.

Within the framework of literary sources, when managing a system of career guidance activities, it is possible to identify problems in determining the criteria and indicators of the effectiveness of career guidance. Key performance indicators for career guidance include:

- 1) Sufficient information about professions. In the absence of a clear idea of the content and working conditions in the chosen profession, the applicant will not be able to make an objective choice. An indicator of information sufficiency in this case is a clear idea of the requirements of the profession for the younger generation, the need of society in these specialists.
- 2) The need for an objective choice of profession. The indicators of the formed need for an adequate choice of a future profession are the activity of young people to get the necessary information about a particular profession, the desire to try their hand at specific areas of activity and the independent preparation of their professional plan.
- 3) Student’s confidence in the social significance of the work, i.e. the formed attitude towards it as a life value.
- 4) The degree of self-identification. How deeply a person can determine his professionally important qualities will largely depend on the right choice of profession. At the same time, it should be borne in mind that only a qualified specialist can give sufficiently complete and adequate information about their professionally important qualities.
- 5) The applicant has an objective professional plan. The adequacy of professional choice is rightfully considered one of the main criteria for the effectiveness of career guidance. An indicator of validity is the ability to correlate the requirements of the profession to a person with knowledge of

their individual characteristics, those that directly affect success in professional activity, that is, professionally important qualities (Osipova, 2000).

The criterion can be interpreted as an indicator that can be used to assess the effectiveness of the process. With this approach, the criterion is a set of key indicators that reveal a certain level of the phenomenon. In the structural-functional model, we determined the following performance criteria: average score of a technical university; the number of talented children entering the university; number of applications per place. The final stage in the development of the model is focused on the following indicators: the position of the university in the ranking of the Russian Federation Ministry of Education and the HSE in the quality of admission. A criterion can be interpreted as an indicator that can be used to judge the effectiveness of a process. In this approach, the criterion is a set of basic indicators that reveal a certain level of a phenomenon. In the structural and functional model, we determined the following performance criteria: the average exam score of a technical University; the number of gifted children admitted to the University; the number of applications for a place. The final stage in the development of the model focuses on indicators: the position of the University in the rating of the Ministry of education of the Russian Federation and the HSE in terms of quality of admission.

Conclusion

It often seems that the choice of a future profession depends on the teacher. However, in many cases, the student should have a mentor who can help make the right choice. Therefore, the university develops various activities so that the student is interested in future profession and the mentor can guide the student and give the right advice.

Thus, the presented model includes innovative components necessary for vocational guidance activities of universities and can be of practical value for the development of the theory of General pedagogy.

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