The formation of professional mobility of students of an economic profile on the basis of modeling pedagogical situations

La formación de movilidad profesional de estudiantes de perfil económico a partir del modelado de situaciones pedagógicas

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ABSTRACT:
The contradictions revealed in the higher education system in Russia and China, the insufficient information of the problem, the professional mobility of students determined the relevance of the research topic of this article. It is about identifying the psychological and pedagogical conditions of students for their training in the face of the great professional mobility that they are expected to have in the future. As a result of the study, it was concluded that it is necessary to select a set of pedagogical techniques, methods and means, in several stages of their passage through the university, to influence the basic qualities and characteristics that allow the mobility of these students in their professional future.

Keywords: professional mobility, modeling, pedagogical situations.

RESUMEN:
Las contradicciones reveladas en el sistema de educación superior en Rusia y China, la insuficiente información del problema, la movilidad profesional de estudiantes determinaron la relevancia del tema de investigación de este artículo. Se trata de identificar las condiciones psicológicas y pedagógicas de estudiantes para su formación ante la gran movilidad profesional que se prevé tendrán a futuro. Como resultado del estudio, se concluyó que es necesario seleccionar un conjunto de técnicas pedagógicas, métodos y medios, en varias etapas de su paso por la universidad, para influir en las cualidades y características básicas que permitan la movilidad de estos estudiantes en su futuro profesional.

Palabras clave: movilidad profesional, modelización, situaciones pedagógicas.

1. Introduction

We will consider the phenomenon of “professional mobility” as the process of moving specialists between professional and qualification groups as a result of the acquisition of professional experience, practical knowledge and skills, including on the international labor market.

1.1. The urgency of the research problem
The problem of formation of professional mobility of students of economic profile updated a number of factors: the accession of Russia and some foreign countries to the international Bologna agreement, one of the main purposes of which is the creation of conditions for increasing academic mobility of students in the international labour market; the entry of Russia and foreign countries in the world trade organization, which will stimulate professional mobility and cause greater competition among specialists on the international labour market; high rates of development of branches of economy, high rate of introducing new information and communication technologies.

Examination of the relevant provisions of the pedagogy confirms the urgency and necessity of solving these challenges:

- study the prospects of formation of the mobility (academic, professional, pedagogical) in the works (Dementieva, 2009; Tyry, 2009; Shutkina, 2002);
- psycho-pedagogical aspects of professional mobility in scientific works (Derkach, 2004; Dyachenko, 1991; Farmhouse, 2001; Fedoryak, 2008);
- examination and regulation of labour mobility in the international labour market (Apanasyuk, Soldatov, Kireeva & Belozertseva, 2017; Apanasyuk, Kaziakhmedova, Belozertseva, & Kireeva, 2019; Merkulova, Krasnoschekova, Smirnova, Meteleva, & Kireeva, 2019);
- theory of teaching design and modeling (Surtaeva, 2009; Yakimanskaya, 2000);
- theoretical foundations of professional training of economists at the University (Andreev, 1992; Romanchuk, 2002).

However, the nature and structure of activities in the economic sphere, and consequently, the possibilities of effective professional implementation in the modern international labor market, have changed qualitatively over the past two decades: it is extremely insufficient for a modern economist to be a competent specialist in only one area of practical activity - he must be able to quickly learn new information, master skills and abilities that, for objective reasons, not formed at the university. In our opinion, such a problem has not been sufficiently studied in the above studies. This circumstance determined the choice of the research topic in the article: "Formation of professional mobility of students of an economic profile on the basis of modeling pedagogical situations."

2. Methodology

The authors are grateful to the scientists whose research served as the theoretical basis in the article: the works of Russian scientists (Dementieva, 2007; Sorokin, 2005) address the problems and prospects of mobility (academic, professional, pedagogical); psychological and pedagogical aspects of professional mobility are revealed in the works (Khakimova, 2005; Tatur, 2006). Many researchers consider the role and importance of a foreign language in the formation of professional mobility of students in the international labor market (Kireeva, Apanasyuk, Grigor’eva, Bogatyreva, & Alekseeva, 2018; Merkulova, Smirnova, Kaziakhmedova, & Kireeva, 2018).

Scientists note that with the competent use of pedagogical tools and technologies, the effective use of the potential of the educational process, many qualities and properties that form the basis of professional mobility of students in economics, receive a powerful incentive for development.

The foundations of professional mobility, as well as other universal personality traits of a student of an economic profile, are laid and formed in the process of mastering higher education programs, and are modeled during various pedagogical situations within the educational process.

2.1. Theoretical and methodological bases of formation of professional mobility of students of economic profile on the basis of modeling pedagogical situations

The theoretical and methodological basis of research was made: a study of problems and prospects of formation of the mobility (academic, professional, pedagogical); psychological and pedagogical aspects of professional mobility; study and regulation of labour mobility in the international labour market; theory of teaching design and modeling; theoretical foundations of professional training of economists at the University.

Basic research methods: theoretical (systematic analysis of socio-psychological, psychological-pedagogical and methodological literature); interpretation, modelling, classification and
It appears that the process of formation of professional mobility of students of economic profile on the basis of modeling pedagogical situations will be effective if:

- planning this process will continue during the whole period of specialist training in the University, taking into account the continuity of the main stages and regularities of formation of professional mobility;

- will be complex leading qualities of the personality of the student that form the basis of professional mobility of a modern specialist;

- there are the identified psychological and pedagogical conditions necessary for formation of professional mobility of the future specialist in the educational process of the University;

- in the educational process of the University will be simulated pedagogical situations that require students manifestations of qualities and characteristics that define a professional mobility specialist of economic profile;

- the use of basic tools, forms and technologies of formation of professional mobility of the future specialist will be implemented in the framework of the conceptual and methodological field of the corresponding models of pedagogical situations;

- in the process of formation of professional mobility of a specialist will include principal training and extracurricular activities involved the capacity and ability of key employers, all structures functioning and sustenance of the University.

The theoretical significance of the research is that: expanded the list of theoretical ideas about psychological and pedagogical conditions of formation of professional mobility of students in Economics; developed research model qualities and personality traits that form the basis of professional mobility of the future specialist; made polyurethane the synthesis of complex scientific theories on the basis of the pedagogical basis for the justification of the conceptual approach to the development and application of models of pedagogical situations, directed on formation of professional mobility of the future specialist in the educational process of the University; proposed the conceptual approach and basis for classification of pedagogical situations and the formation of professional mobility of students of economic profile in the educational process of the University.

2.2. Development and testing of models of pedagogical situations in the formation of professional mobility of students of an economic profile in the educational process of the university

The study was conducted over three years (2016-2019) and included three stages. The first stage is a search and diagnostic, which consisted of:

- analysis of psychological, pedagogical and scientific-methodical literature on the problems of the educational process at the university, the formation of professional mobility of students of an economic profile in the learning process;

- definition of basic concepts and research methods, definition of goals and objectives, research hypotheses; diagnostic sections in order to identify students' knowledge of the components of professional mobility and its level of formation.

The second stage is organizational design and activity and correcting. Before they were studied and presented theoretical and practical significance of modeling pedagogical situations, directed on formation of professional mobility of students of economic profile in the course of the study; the formation and refinement of conceptual approach. In addition, it was identified the factors and conditions determining the efficiency of formation of professional mobility of students of economic profile during the training.

Activity-corrective stage is an experiment, testing models, means and technologies of formation of professional mobility of students of economic profile; identification of possible difficulties in the application of models of pedagogical situations and the formation of professional mobility of students, correction of the learning process to resolve the difficulties.

The third stage of control including: control of dynamics of level of formation of professional mobility of students of economic profile; synthesis and analysis of scientific and practical results of research and their design in the article.
The experimental base of the study: "State University of Land Use Planning"; "Southern Federal University"; "Togliatti State University"; "Jiangsu Normal University". Number of participants in the experiment: 232 students; 44 people from among the teaching staff.

Testing and implementation of the results was carried out in a number of areas:
- the authors' appearances at scientific and practical seminars in Russia and in China;
- participation in international, all-Russian, interregional, regional, scientific and practical conferences, meetings and round tables in Russia and in China, in 2016-2019;
- coverage of the main provisions and results of research in scientific publications in the form of scientific articles, abstracts, including those published in refereed journals in Russia and in China, as well as indexed in the Scopus and Web of Science databases;
- use of research results in teaching practices at universities in Russia and in China.

2.3. Organization and results of a formative experiment on testing models of pedagogical situations in the formation of professional mobility of students of an economic profile

The approbation of models of pedagogical situations in the formation of professional mobility of students of an economic profile is built taking into account the theoretical and practical provisions obtained as a result of the study.

1. During the ascertaining pedagogical experiment, a connection was established between the formation of the qualities and properties of a professionally mobile person and the presence of prerequisites for their formation in the form of personal properties and potential, the properties of the educational process and the educational environment of the university, as well as the presence of various internal factors and conditions. The study was based on a correlation analysis, the results of which also suggest that the factors of the educational process have the greatest impact on the formation of the quality of professional mobility of students of an economic profile. The average number of significant correlations for this group of factors is 5.54. Individual factors were in the second position (the average number of significant correlations was 5.40), and third were the internal factors (the average number of significant correlations was 4.23).

2. At the same time, a correlation analysis showed that the contribution of the factors of the educational process to the formation of the quality of professional mobility of students of an economic profile remains insufficient (good health and physical condition; creativity; leadership qualities, adequate self-esteem; organization, efficiency management). Partially, these deficits are compensated by such individual factors associated with extracurricular, amateur, informal forms of activity, such as: participation in public, cultural and mass work; playing sports; creativity in the field of economics; participation in competitive activities; participation in entrepreneurial activity, business.

3. The basis of the conceptual approach to the development and application of models of pedagogical situations in the formation of professional mobility of students of an economic profile was made up of a number of ideas, principles, requirements and provisions that reflect modern trends in professional education. And also: the requirements of the international labor market, the norms of educational and labor legislation, the current state, potential and theoretical basis of a set of scientific disciplines: general and professional pedagogy and psychology, systemology, qualitology, management, etc.

4. In the course of the study, we came to the conclusion that the interpretation and disclosure of the conceptual approach to the development and application of models of pedagogical situations in the professional mobility of students of an economic profile will be incomplete without appropriate classification procedures. The educational process at the university is a complex, controversial, stochastic process, carried out in the social system. The required results in the form of the core competencies of university graduates, their willingness to work independently in their specialty, and to improve professionally and personally are determined by a significant number of factors. In this regard, in our work, we turned to the problem of classifying types of situations that could potentially contribute to the formation of professional mobility of students in the economic field, both in general and in its individual components. The classification of types of situations, the formation of professional mobility of students of an economic profile, was performed by us for a number of reasons.

5. The result was the allocation of the following types of situations:
- on the volume of tasks; by types of activity during which situations are created;
- on the degree of students' independence in the process of solving the situation;
- on terms of resolving the situation;
- by providing temporary resources to solve the situation;
- by the presence of a preliminary task or script;
- according to the level of complexity, compliance of situations with the current level of preparedness of students in a particular area.

In addition, the classification of types of situations can be distributed:
- to the extent possible of the student, when in the process of resolving situations, he can resort to outside help, to additional sources of information;
- by the degree of relevance to upcoming professional activities;
- according to the degree of requirements for the decision algorithm and the final result of solving the situation;
- to the possibility of predicting a particular result;
- on the pace of the formation of professional mobility;
- in focus on the formation of a specific type of professional mobility.

6. In determining the conceptual approach to the development and application of models of pedagogical situations and professional mobility of students of economic profile, we focused on the modern scientific understanding and interpretation of the educational process at the University as an innovative process, which is dominated by the subject - subject relations, applied design, interactive, distant, reflective technologies are used outside the universities, the network capacities.

7. Based on the above conceptual provisions of formation of professional mobility of students of economic profile during the educational process we have developed graphic and verbal descriptive model. In General it distinguishes a value-oriented, normative, resource, procedural, functional, managerial, diagnostic, and result blocks.

8. The range of growth in the values of individual qualities and properties of professional mobility in the experimental groups was based on the results of the formative experiment from 0.28 ("Creativity, critical thinking, developed intuition") to 1.37 ("Ability to navigate in the virtual information space"). A significant increase in the values in the experimental groups, in addition to the "Ability to navigate in the virtual information space" property, turned out to be in such qualities and properties of professional mobility as: theoretical knowledge in several professional areas - an increase of 0.97; organization, performance management -0.96; good health and physical condition - 0.68; self-management skills - 0.54; learning ability - 0.54.

9. During the second forming pedagogical experiment the obtained data objectively indicating that the pedagogical design of the whole spectrum of professional mobility of students of economic profile in the experimental groups had their results a significant increase in the range of 0.54 to 2.14 values of the formation without exception, all the qualities and characteristics of professional mobility. The largest shifts recorded on such qualities and properties as:
- professional experience real involvement in the production process - a gain in the first experimental group amounted to 2.14 points in the second experimental group - 2,05;
- skills in self-management - of 1.88 and 1.73, respectively;
- the ability to navigate in virtual information space -1.79 and 1.66;
- organization, management efficiency of 1.70 and 1.79.

10. A comparison of growth indicators in the control groups, the first experimental group and second experimental group shows significant higher values of growth rates in the experimental groups directly associated with the modeling of situations of occupational mobility, the real involvement of students in these situations.

3. Results
The results of the study were introduced into the practice of forming professional mobility of students of an economic profile on the basis of modeling pedagogical situations in Russian and foreign educational institutions of higher education ("State University of Land Use Planning");
Based on the results of the work, certain provisions were substantiated and formulated.

3.1 Theoretical and methodological results

The problem of professional mobility of students in economics appears as a relatively new scientific problem, which has a complex interdisciplinary nature, requiring philosophical, sociological, psychological and pedagogical approaches for its solution. The multidimensional and semi-scientific nature of this problem necessitates the development, in relation to a specific object-objective situation related to professional mobility, of a private conceptual approach.

The basis of the conceptual approach to the development and application of models of pedagogical situations focused on the formation of professional mobility of students of an economic profile in the educational process of the university is a series of ideas, principles, requirements and provisions that reflect current trends in vocational education, labor market requirements, educational and labor law standards. As well as the current state, potential and theoretical basis of the complex of scientific disciplines: general and professional pedagogy and psychology, systemology, qualifications, management, etc. In general, the model for the formation of professional mobility of students of an economic profile in the educational process of the university can be represented as a value-targeted, normative, resource, procedural-functional, managerial, diagnostic and resulting blocks.

3.2. Scientific and practical results

In the application of models of pedagogical situations in the formation of professional mobility of students of an economic profile, the problems of classifying types of situations are of significant importance. The typology of such situations can be determined based on the classification of types of situations on such grounds as: the volume of tasks to be solved; the types of activities during which situations are created; the degree of independence and involvement of students in the process of solving the situation; terms of solving the situation; the availability of temporary resources to solve the situation; the presence of a preliminary task or script; the level of complexity, the compliance of situations with the current level of preparedness of students in a particular area. In addition, the types of situations may have the following reasons: the ability of students in the process of resolving situations to resort to outside help, to additional sources of information; the degree to which situations are related to upcoming professional activities; the degree of requirements for the solution algorithm and the final result of solving situations; the availability of the ability to predict a particular result; the pace of formation of professional mobility; focus on the formation of a specific type of professional mobility.

The effectiveness of the proposed models of pedagogical situations, the formation of professional mobility of students of an economic profile is confirmed by the results of pedagogical experiments covering the field of educational and extracurricular activities and involving the creation of the following pedagogical situations:

- Preparation of educational express reports;
- realization of student self-employment programs in their free and vacation time;
- commercialization of ideas, products of intellectual activity, students' creativity;
- possession of learning skills and competencies in related professions (specialties);
- independent choice of the topic of the graduation project by order of a specific employer;
- independent choice of place for industrial (pre-diploma) practice;
- participation of students in the formation of technical tasks.

The forming pedagogical experiment showed the real possibility of pedagogical influence on the positive development at the stage of University education qualities and characteristics that form the basis of professional mobility of graduate - future specialist of economic profile. Namely, the ability to navigate in virtual information space; organization, performance management; reflexivity; skills in self-management; innovation, acceptance of new ideas; creativity, critical thinking, development of intuition; leadership, adequate self-assessment; learning; professional experience and real involvement in the production process; good health and physical condition; theoretical knowledge in several professional areas.
4. Conclusions
In conclusion, the most important results of the study are presented.

4.1 Theoretical and methodological conclusions

Professional mobility of students of an economic profile in a pedagogical context should be considered as an integrative quality of a person, which is manifested in their social activity, self-discipline, perseverance, optimism, professional competence, competitiveness, acmeological improvement of their personal potentials, the desire for self-realization, self-development, self-education and ability successfully change their own activities in accordance with modern requirements.

The formation of professional mobility of students of economic profile becomes the target of the educational process and requires a new approach to its implementation. As a key solution to the problem identified in the competence-based approach to learning, providing the greatest efficiency of development of personal qualities that make up the structure of professional mobility, a means of modeling pedagogical situations.

Modeling pedagogical situations of formation of professional mobility of students in the educational process of the University should be directed to the reproduction of students’ professional activities in the learning process in a specific environment when the activity is conditionally-professional character, and when performing actions, transactions are recorded only the most essential features. This allows you to obtain future additional information on the contents and methods of work, the requirements of the profession, to create conditions for the formation of a proactive component of their professional activities.

Methodological and technological conditions of efficiency of realization of models of pedagogical situations and professional mobility are correlated with the interpretation of the principles and approaches to learning. Namely, systemic, competence-based, activity-based, modular and design. The integrity of their implementation is possible through active methods, techniques and ways of organizing learning, student-oriented management of cognitive, creative and enterprising activities of the students.

4.2. Scientific-practical insights

For the formation of professional mobility of students of the economic profile system required the integration of the University scientific, educational, instructional, recreational and other resources for the development of information and communication infrastructure, information and education of the highly competitive environment for the development of professional mobility of future specialists.

The results of the experimental work has allowed to formulate pedagogical conditions of realization of models of pedagogical situations, creating the opportunity to effectively shape the professional mobility of students of economic profile:

- planning for the formation of professional mobility of students of economic profile, based on the whole period of specialist training at the University of the succession of main stages and regularities of formation of professional mobility;
- inclusion in the process of formation of professional mobility of the main types of educational and extracurricular activities, the use of capacity and capability, resource and production base and representatives of key employers, all structures functioning and sustenance of the University;
- the use of basic tools, forms and technologies of formation of professional mobility of students of economic profile in the context of conceptual-methodological field of the corresponding models of pedagogical situations. Creation and simulation in the educational process of the University of pedagogical situations that require from the students manifestations of qualities and characteristics that define the professional mobility of modern specialists of economic profile;
- design and application of a complex of qualimetric techniques in the system of internal university pedagogical control for diagnostics, assessment and monitoring (including self-assessment) of the development of the qualities and properties of professional mobility, as well as the impact on the process and dynamics of the formation of individual university, extra-university and personality factors and conditions;
- conducting special training at the university for the faculty, representatives of the administration and functional units in the field of problems of forming professional mobility among students in the economic profile, including training in the field of modeling relevant pedagogical situations;
- realization of innovative technologies, such as: design, development of critical thinking, modular-rating, informational, communicative, as part of the competency-based model for preparing students of an economic profile; systems of forms, methods and training tools that ensure the most effective achievement of goals in the field of forming professional mobility of a future specialist; increase of efficiency and return in terms of the formation of professional mobility of students of economic profile; disciplines that form general cultural qualities: ethics of business communication, psychology of business communication, mother tongue and speech culture, a foreign language in the professional sphere, fundamentals of entrepreneurial activity; the organization of specialized forums and the inclusion of students in them as a means of shaping professional mobility;
- system integration at the university of scientific, educational, methodological, leisure and other resources for the formation of information and communication infrastructure, information and educational highly competitive environment for the development of professional mobility of students of economic profile, the development of youth entrepreneurship;
- realization of a competency-based model of education and professional self-determination of students in the economic field, the formation of financial and other types of literacy and competencies of a modern specialist, career design skills and positioning themselves on the international labor market.

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