Abstract—The modern social and economic situation actualizes the personality professional educational problem, the initiatives and competent, corporate, professional and mobile preparation in higher school. Today, the professional mobility determines the higher school social and cultural environment concept and the students’ involvement degree. The main aim of higher school social and cultural environment is to prepare not only an intelligent, creative and professional mobile, but also independent, initiative person who can quickly adapt to all changes and his careers change. The theoretical and methodological foundations of the practice-oriented concept are unity of the theoretical and methodological approaches to the students’ professional mobility development process in higher school social and cultural environment that defines a strategy and tactics of this process organization. For the scientific level, the author chooses a systematic approach, for the concrete scientific level - an integrated active, regional and competence approach; for the technological level - a problem project approach. The foundation of the practice-oriented concept of students’ professional mobility development in higher school social and cultural environment presents laws and principles. The theoretical and methodological approaches have served as the basis for the provisions of laws. The author has determined three laws and three groups of connected principles. The implementation of the concept is the students’ professional mobility development system in higher school social and cultural environment. It presents the integration of the components: the aim component, the diagnostic and design component, the motivation and promotion component, the content component, the organization and activity component, the evaluation and diagnostic component. The students’ professional mobility development system in higher school social and cultural environment - a necessary set of basic components (objectives, approaches, principles, etc.) to create an organized, targeted pedagogical influence on the development of professional mobile ecologists. Thus, the concept expresses the nature and content of the students’ professional mobility development in higher school social and cultural environment. There are all of its sections (general regulations, conceptual framework, basic principles and foundation), the students’ professional mobility development system in higher school social and cultural environment, and organizational pedagogical conditions.

Keywords—professional mobility; social and cultural higher school environment; concept; higher school youth association; theoretical and methodological foundation.

I. INTRODUCTION

The modern social and economic situation actualizes a personality professional educational problem, the initiatives and competent, corporate, mobile specialists’ development in higher school [3].

Today, the professional mobility determines the higher school social and cultural environment concept and the students’ involvement degree. In social and cultural higher school environment, one can use such mechanisms as mutual support, responsibility, and control for the development of characteristics such as the professional mobility and others.

Various forms of social and cultural higher environment extend the social and cultural integration conditions and present the socialization "secondary institutions". In the author’s opinion, the social and cultural higher school environment is one of the most important areas for future graduates and has a great potential for the professional mobility development. One of the aims in higher school social and cultural environment is a graduate preparation for life.

The social and cultural higher school environment includes youth associations [6].

The higher school social and cultural environment main aim is to prepare a not only intelligent, creative and professional mobile, but also independent, initiative person who can quickly adapt to all changes and his careers change.

II. LITERATURE REVIEW

The category "mobility" has been studied in pedagogy relatively recently, but it is widely used in a number of scientific disciplines: psychology, educational philosophy, Economy; vocational education and training [4] and others. The origins of the professional mobility development problem stem from the phenomena of the labor and social movements division. The mobility problem in the professional activity area stems from the need of human beings for the professional activity new conditions through the processes of their differentiation and integration. Many philosophers, sociologists, psychologists, and educators expressed the ideas for education new forms, which are oriented towards the skill development of the expert for creativity and innovation in education activity.
The philosophical approach basis to the professional mobility development problem was the works of Emile Durkheim, Max Weber, A. Shuts, Sheller and others, where the scientists discovered the essence of the category "mobility" in the light of the basic dialectics laws. An important role in the mobility understanding also plays the dialectical law of unity and struggle of opposites. This law determines the movement source and the objects development, processes and phenomena. The development of the category "mobility" passed through the technology revolution: preindustrial, industrial, postindustrial, modern development stages of technology.

The following stages of the professional mobility development problem are identified in the science history: Stage I - «Origin» (V - XIII century); Stage II - «Formation » (XIV - XVIII century); Stage III - "Dynamization" (XIX - XXth century), Stage IV - "Modern Phase" (the end of the XX - beginning of the XXI century).

In the author’s modern perspectives analysis, the different approaches presence was determined in the problem analysis of the students’ professional mobility development. This shows its multifactorial, versatility, causes a scientists’ interest on the psycho-pedagogical, educational and social aspects of the phenomenon.

III. PROBLEM STATEMENT

The author considers the professional mobility as a complex integrative phenomenon that includes the sociological, pedagogical and psychological components. A number of authors in their explorations on the professional mobility phenomenon provide common definitions of this phenomenon [1], [2] and etc., consider sociological aspects of professional mobility.

The literature analysis on the students’ mobility development in higher school helped me to define the conceptualization of "professional mobility".

In summary, on the base of philosophers, educators and psychologists views and the own experience of theoretical research, the author considers the professional mobility definition as an integrative quality in the production conditions on the basic components of professional culture covers (key competencies and qualifications) and professional competence (high intelligence, creative skills, professionalism). This reflects in their ability to move horizontally and vertically on the social professional structure of society and to change a social, economic and professional (including status) position. This captures the motivational, cognitive, competence-based, operative, active components, reflecting a certain level of general cultural, general professional skills and competencies.

The mobility development basis can be the youth associations’ activity in higher school social and cultural environment and represents as an extension and deepening of the general cultural, general professional and professional competences.

As a system phenomenon, professional mobility presents a unit of functional and structural components. Functional components characterize the relationship of the personal aspect (motivation component) and the professional aspect (cognitive oriented and operational active components).

Structural components are general cultural, general professional and professional competences. These competences reflect the qualification requirements for students’ education and skills in this profession.

Thus, a students’ activity is a personality structure formation by general cultural (GC), general professional (GPC) and professional competence (PC). The students’ competences or professional personal characteristics form an integrated system.

The social and cultural environment is a human environment and an integrating system of conditions for the personality development. The social and cultural environment is a reality for life and human development.

The author considers a higher school social and cultural environment as factors to improve a level of students’ mobility development in higher school social and cultural environment.

The theoretical analysis of factors groups influence the students’ career mobility in higher school social and cultural environment and can have four main groups: pedagogical, psychological, educational, psychological, social and economic factors. The analysis of the works on the students’ professional mobility development may identify some effective ways of their development in higher education social and cultural environment. They are various possibilities of vocational counseling, forms and other types of production tradeshows, organization of psychological professional group training and other forms of practical teaching aimed at the formation of students’ mobility various elements.

For the author’s problem analysis of modern youth, there are different definitions "youth". In the approaches of Russian and foreign authors are defined significant differences and the causes for a misinterpretation of this term. The analysis showed that the basis for an interpretations variety of youth as a category with the concrete historical conditions. This conveys a special importance for young people in different historical phases of social development, which determine a social and cultural subject activity of the youth. The term "youth" has appeared in the days of antiquity (Aristotle, Plato, Seneca and others) and is associated with the advent of young people in the age groups associated with the division of labor. In modern society, the interpretation of this concept includes many factors. For example, UNESCO identifies youth as a major advancement of society and as a subject of social reproduction. The higher school youth association is a leisure organization form in social and cultural student environment. It involves a voluntary association and common interests of young people for the needs of social cultural activities.

In the scientific research, the process description of the higher school youth associations in the works [5, 6] and others.

Higher school social and cultural environment includes: student government; amateur creativity (associations, interest groups, student distribution); art and entertainment events.
(festivals, parties); events for health and fitness (sports clubs, competitions, tourism); additional training (courses, optional subjects, clubs at the chairs, additional qualification); voluntary work; enlightenment (meeting with interesting people, concerts, tours); professional orientation.

The theoretical and methodological foundations of the practice-oriented concept are unity of the theoretical and methodological approaches for the students’ professional mobility development in higher school social and cultural environment define a strategy and tactics of this process organization. For the scientific level, I choose a systematic approach, for the concrete scientific level - an integrated active, regional and competence approach; for the technological level - a problem project approach.

The application of the systematic approach allows us to consider the students’ professional mobility development in higher school social and cultural environment as an integrated, uniform system. The principles of the system approach in the research of the students’ professional mobility development in higher school social and cultural environment serve as a prerequisite for the promising directions development of the process development. In this research, a systematic approach considers the professional mobility as a system, determines the components of the system elements and underlines the system features: the presence of the aim and its link with all components.

The systematic approach basis is an object consideration as a system. The object integrity is a part or element of a higher school system.

In this case, all components of the students’ professional mobility development process in higher school social and cultural environment are in direct and reverse relationship. Therefore, a systematic approach is the process as a highly organized, coherent education system; a set of process components as a whole system; the conditions of this process realization as an education system; its relationship; the place of the research process in the higher school social cultural environment, and especially in the higher school youth associations.

The use of a systematic approach is the explanation of the ordered concept and its experimental control. For the most effective theoretical basis in research of the professional mobility, different aspects there are the four major theoretical approaches elements. I choose the systematic approach for the research subject analysis, its description and interpretation; an integrated active approach - for the teaching process organization in the continuing education system;

A competence approach gives an assessment of professional mobility through a series of specific competences;

A regional approach makes it possible to solve the students’ professional mobility problem in higher school, taking into account the specific social economic and social cultural factors of a region;

A problem-project approach is a learning strategy in terms of mobility development that combines a combination of optimal reproductive and creative student activities.

Each of the above approaches reflects the various aspects of the multi-faceted phenomenon as a professional mobility that shows the professional mobility factors.

The most important research approaches analysis helps to determine the conceptual basis constructs of the students’ professional mobility development in higher school social and cultural environment.

The foundation of the practice-oriented concept of students’ professional mobility development in higher school social and cultural environment has laws and principles. The theoretical and methodological approaches have served us as the basis for the provisions of law. I have determined three laws and three groups of connected principles.

The first law - the students’ professional mobility development aim in higher school social and cultural environment is determined by the requirements of the modern society, a dynamic sphere of the production taking into account the long-term economic development and the specific professional activity.

These principles follow from these laws:

1. The objective principle in pedagogical research has an aim and task. The objective of the research process is to develop the future engineers professional mobility in higher school youth associations by their integration into an activities multitude of higher school social cultural environment. The outcome of the students’ professional mobility development in the higher school youth associations the author could compare with the planned result and evaluate the special criteria. In this way, it is possible to determine the degree of the students’ professional mobility development in higher school social and cultural environment.

2. The principle of continuity. The continuity is a sequence of every form in a dialectical relationship with the preceding and in accordance with the usual conditions and aims. The principle of continuity is a cross-sectional characteristic. The principle of continuity requires the achievement of the common learning objective based on the conceptual approaches in the requirements for the level and content of their theoretical and practical training.

The second law - the effectiveness of students’ professional mobility development in higher school social and cultural environment is determined by the developmental level of general cultural, general professional and professional competences.

The following principles follow from this law:

1. The principle of integration determines the students’ professional mobility development strategy in higher school social and cultural environment, an interactions and complex form of the students’ professional mobility development in higher school social and cultural environment.
2. The principle of professional orientation includes the selection of the teaching material for practical application in the future specialists activity and in order to obtain the necessary information in the students’ professional mobility development process in higher school social and cultural environment. This allows the specialists to participate in international programs that show professional mobility and competitiveness on the international labor market.

This principle is a major didactic prerequisite for the motivation of all educational activities for the organization and implementation of the education process. The principle of professional orientation shows the students’ professional mobility development process, for example, in the youth association “Workshop of future engineers in the English language” creates a foreseeable professional reality.

3. The principle of complementarity (optional) is an elimination of opposites by complementing opposites. Niels Bohr formulates this principle. The principle of complementarity realizes in the various forms of training in the higher school social and cultural environment.

The third law of the students’ professional mobility development in higher school social and cultural environment is that the professional mobility development depends on motivation technology in student activity. The activity motif is an interest in professional activity and professional mobility development.

This principle follows the following principles: the principle of feedback; the principle of interactive learning (professional mobility development through experience); the principle of individualization.

The concept implementation represents the students’ professional mobility development system in higher school social and cultural environment. It presents the integration of the components and characterizes determination, continuity, complexity, dynamics: aim component, diagnostic and design component, motivation and promotion component, content component, organization and activity component, evaluation and diagnostic component.

The students’ professional mobility development system in higher school social and cultural environment - a necessary set of basic components (objectives, approaches, principles, etc.) to create an organized, targeted pedagogical influence on the development of professional mobile ecologists.

The main objective of the students’ professional mobility development system in higher school social and cultural environment is to create favorable conditions for this system with different levels of professional mobility, which reflects a level of the formation of common cultural, general professional competences.

The system-relevant factor is an objective. The main features and possibilities for the realization of the individual components were determined based on the following levels of pedagogic research: methodological, theoretical, and technological.

The aim component of the research process includes social needs, purpose and tasks. The up-to-date mobility of the future ecologists in higher school social and cultural environment determines the social need to prepare the future mobile ecologists. Social needs for mobile professional ecologists - a reflection of the interests in the activities of higher school.

Participants are higher schoolteachers, students - future engineers and their parents, a higher school are as a social institution, representatives of society and employers, industrial enterprises, a region, a state.

The systematic tasks of the students’ professional mobility development in higher school social and cultural environment concretize the aim of this process with the structure consideration and the conceptual content of the “professional mobility”. The author distinguishes the following groups of research tasks: the creation of positive motivation in higher school social and cultural environment for the future specialists; the development of general cultural, general professional competences.

The aim component of the students’ professional mobility development system in higher school social and cultural environment has the technical requirements for technical specialists. The function of this component is to determine the outcome of the educational interaction. The awareness of the educational aim determines its analysis of the first data and the formulation of pedagogical diagnosis.

Diagnostic and design component of the research process includes entry-level diagnosis of the students’ professional mobility and this feature development in higher school social and cultural environment. The function of this component is a data analysis and a design summary of the students’ professional mobility development in higher school social and cultural environment.

The motivational and stimulating component reflects the relationship between the developments of students’ internal motives.

The course content component is the responsibility for all the specific and general pedagogical principles. The function of this component is its role as the subject of the activity of the teacher and the student, its practice and the leadership development means. This component contains the principles and contents of the students’ professional mobility development in higher school social and cultural environment.

The assessment and diagnostic component includes the examination and evaluation of the research results. This component fulfills an analytical and productive and correction function. The formation and development of competences (the structural components of professional mobility) begin in the first year of the university, and the development of the individual characteristics there is in all study years. Four levels of the students’ professional mobility development there were in higher school social and cultural environment: preliminary, design and development and result level. All components, are equivalent, so their simultaneous implementation into the education process.

The effectiveness of the developed system depends on a complex of organizational and educational conditions. The system’s organizational and pedagogical conditions are a
series of measures in the social and cultural environment in higher school. They are close to the factors, which have a direct influence on the level of students’ professional mobility development. It is a group of social and cultural conditions creates a system of coordination and social partnership within the university with an innovative pedagogic environment and international cooperation; the group of the scientific and methodological support conditions of the students’ professional mobility development.

The proposed social and cultural conditions always have features of the complex because it characterizes the completeness (the conditions complement each other and affect the different components of the research process.) The necessity of the conditions is justified by the theoretical analysis and in the course of the experimental work.

Thus, the concept expresses the nature and content of the students’ professional mobility development in higher school social and cultural environment. All of its sections (general regulations, conceptual framework, basic principles and foundation), the students’ professional mobility development system in higher school social and cultural environment, and organizational pedagogical conditions for its application are above

IV. RESEARCH OBJECTIVE

The main idea of this research is the thesis that the students’ professional mobility development is an important structural and conceptual component of the social and cultural environment system. This ensures a scientific basis development of social and cultural activities in the professional mobility field and leads to the practical experience in solving this problem in higher school social and cultural environment.

The research objective is to develop the conceptual foundations and to implement the practice-oriented activities in the future engineers professional mobility development in higher school social and cultural environment.

In order to achieve this objective, it is necessary to resolve the following research tasks consistently:

- Support the historical and pedagogical analysis of the conceptual and terminological problems for the students’ professional mobility in higher school;
- Description of the students’ professional mobility development in higher school as a basis for practice-oriented activities;
- Determination of the theoretical and methodological approaches to investigating the students’ professional mobility in higher school;
- Concept development of the students’ professional mobility in higher school includes a methodological basis, the conceptual and terminological apparatus, laws, principles and a conceptual system;
- Organizational and technical support for the students’ professional mobility development in higher school;

Implementation of the practice-oriented activities in the students’ professional mobility development in higher school.

V. KEY RESULTS

Experimental verification of the effectiveness of the system implementation of the students’ professional mobility development in higher school social and cultural environment and organizational educational conditions took place in the Tyumen state university of architecture and civil engineering. Since 2003 to 2015, 255 students of the technical directions and 45 university teachers, 25 specialists of construction companies were involved in the experiment.

The experimental phase was concerned with the definition of the objective criteria for assessing the effectiveness of the system's implementation of the progress and results of the students’ professional mobility development process in higher school social and cultural environment. In selecting the criteria, the author has based on the definition and structure of professional mobility. The following criteria and gradients were defined: motivation (social, cognitive or pragmatic motivation, degree of interest); the cognitive criterion (completeness and system character of the common cultural, methodological knowledge) and activity (accuracy and independence of the ongoing measures).

Taking into account these grades, three levels of professional mobility has high, medium and low levels.

The research object was students from 1-4 courses.

A control group (KG - 31 students) and three experimental groups (EG1 - 34, EG2 - 35, EG3 - 32 students) were formed by the students in the technical direction.

The analysis of the data shows that the majority of students in the fifth year of studies have a high level of the students’ professional mobility development in higher school social and cultural environment. However, in the experimental group, this grade is higher than in the control group. The reason is the implementation in the experimental groups the students’ professional mobility development system in higher school social and cultural environment, the organizational and educational conditions.

The analysis of the results determines the Pearson test ($\chi^2$) by the formula (1), which is the sum of the deviations in the square of the experimental results to the initial values before the experiment, based on the results obtained.

$$\chi^2 = \sum_{i=1}^{n} \left( \frac{1}{n} \left( \frac{n_i}{n_1} - \frac{n_i}{n_2} \right)^2 \right)$$

$$n_i$$ - the group of the students.

In the comparison of the control and experimental groups according to the criterion of Pearson, the following data were the control group and the experimental group 1 - $\chi^2 = 7.9984$; the control group and the experimental group 2 - $\chi^2 = 8.5650$ and the control group and the experimental group - $\chi^2 = 14.2548$. The statistical analysis and processing of the results showed that the implementation of the students’ professional mobility development system in higher school social and cultural environment and a complex of the organizational and
educational conditions successfully developed the professional mobility in higher school social and cultural environment. The differences between the results in the control and experimental groups are statistically significant for all components, which confirms the hypothesis.

VI. DIRECTIONS FOR FURTHER INVESTIGATION

It should also be noted that the theoretical and experimental results could enrich the theory and practice of the students’ professional mobility development process in higher school social and cultural environment in academic and extra-curricular activities, as well as in youth clubs. Taking into account the science and educational practice demands and received results it is necessary to continue the research on the following education areas: study of professional mobility as the characteristics of the various professional fields, development of a science-based criteria system and indicators of professional mobility formation, the students’ professional mobility development process in the region.

VII. METHODOLOGY DESCRIPTION

The most important approaches to the author’s analysis of the students’ professional mobility development in higher school are a systematic approach to the research subject analysis, an integrative approach to the teaching process organization, a competence approach in the personality education, a regional approach in a particular region, a problem-project approach.

Theoretical and empirical research methods are to solve the research tasks and to examine the assumption. Theoretical methods: analysis (sociohistorical, theoretical and methodological, conceptual and terminological), comparison, interpretation, theoretical modeling, generalization. General empirical methods: educational experiment, expert opinions, mathematical methods of data processing. Private empirical methods: observation, testing, surveys, questionnaires, interviews; psychological diagnostics.

Acknowledgment

The research scientific novelty is the problem solving in the conceptual foundations of the students’ professional mobility development in higher school social and cultural environment:

The students’ professional mobility concept in higher school social and cultural environment is developed and justified;

It covers the general provisions, the conceptual apparatus of the theoretical and methodological foundations and the basis; the students’ professional mobility development system the author has carried out in practice at higher school social and cultural environment;

The integration of the components is characterized by the unity of the aim security, complexity, continuity, dynamics: aim component, diagnostic and design component, motivation and promotion component, content component, organization and activity component, evaluation and diagnostic component;

The complex of organizational pedagogical conditions promote effective implementation of the students’ professional mobility development system in higher school social and cultural environment. There is (a) a group of social and cultural conditions creates a system of coordination and social partnership at the university innovative educational environment and international cooperation, b) a group of the scientific and methodical support conditions of the students’ professional mobility development.

In summary, the research tasks are solved and the aim is achieved.

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