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Design activity skills formation in future economists

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Abstract — The paper researches the prospects of quality increasing of future economists during the professional training. It is noted that modern society needs people who are ready able to think independently, analyze, design, creatively apply knowledge, effectively cooperate in the process of activity solve this problem through the organization of project activities. The purpose of this study is to determine the conditions for the effective formation of project activities skills in future economists during the process of professional training.

Research methods are the following: analysis of literature on this problem, the test of cognitive abilities of Shane Frederick. Frederick Shane's test of cognitive abilities to determine the type of thinking was conducted. Having analyzed results of the test we came to the conclusion that 36% of respondents have developed analytical thinking, which demonstrates a manifestation of cognitive reflection. As a cognitive (intellectual) aspect of reflection, analytical and synthetic person skills and the ability to correlate his/her own actions with the objective situation are distinguished. At the stage of direct implementation of professional activity, the future economist uses cognitive reflection as a way of comprehensive analysis of the problem, organization and implementation of project activity. The method of projects as a pedagogical technology involves a set of research, search, problem methods, creative in its essence. The authors emphasize that projects implemented in the university within the framework of the educational program should be aimed at better training of graduates for future professional activities. Types of projects and examples of project task are given. The authors come to the conclusion that for the of the project activity implementation the necessary condition is the creation of a problem situation in the form of cognitive tasks, containing some contradictions in the conditions and concluded with questions which objectify this contradiction.

Keywords — economists, project activity, thinking, cognitive reflection, professional activity, cognitive tasks.

I. INTRODUCTION

The modern stage of social development is characterized by the information society formation. The main features of social transformations are intellectualization and innovation, which lead to increased instability, dynamism, nonlinearity, increasing imbalances and contradictions in social and economic life of society. A person is to live in a rapidly changing environment; each new generation has fewer opportunities to adopt and use the experience of the previous generation. These changes are associated with the adoption "the idea of mastering knowledge not only as an objectively existing phenomenon, but also as having the signs of subjectivity of the process itself, when knowledge becomes personal qualities or competencies" [6]. With a significant time reduction of implementation in practice of the latest achievements of science and technology, many knowledge, skills and abilities quickly become obsolete, so modern society needs people who are ready and able to live in situations of uncertainty, that is able to think independently, analyze, design, creatively apply knowledge, effectively cooperate in the process of activity.

Currently, the Russian Federation has more than 818 educational institutions of higher education and scientific organizations implementing bachelor's, specialist's and master's programs (by academic years) (see figure 1).



Fig. 1. Number of educational institutions of higher education and scientific organizations implementing bachelor's, specialist's and master's programs (by academic years) of the Russian Federation

Source: constructed by the authors on the basis of Russian statistics data.

Number of students in educational institutions of higher education and scientific organizations implementing bachelor's, specialist's and master's programs (by academic years) exceeds 4399 (see figure 2).



Fig. 2. Number of students in educational institutions of higher education and scientific organizations implementing bachelor's, specialist's and master's programs (by academic years) of the Russian Federation

Source: constructed by the authors on the basis of Russian statistics data.

II. PROBLEM STATEMENT

Having analyzed the current state of higher education, we concluded that the university is trying to solve this problem through the organization of project activities. The method of projects is the basis of project training; its purpose is to create conditions for self-learning of educational material in the course of project activity.

In the dictionary project (from lat. "proiectus" – "thrown forward") means: 1) a set of documents (calculations, drawings, etc.) to create any structure or product; 2) the preliminary text of any document; 3) the idea, plan, prototype, prototype of any object [5].

In pedagogy, the method of projects is associated with the name of J. Dewey. To organize project activity is to teach creative procedures of cognitive activity, taking into account personal characteristics and real readiness to implement practical actions. The inclusion of design in the training of future economists develops the ability to systematize and process information and formulating their own conclusions about the work done, develops the skills necessary for the successful formation of educational and cognitive competence in the process of independent work (Abdeen, Haight, 2002). V.P. Bederkhanova, R.G. Borisova, I.A. Zimnaya, I.A. Kolesnikova, E.S. Polat, I.A. Fateeva and N.O. Yakovleva consider various aspects of design and emphasize that this type of activity is the most relevant.

Thus, V.S. Lazarev argues that the project activity has a research component and it can produce results in the form of innovation by means of an effective organization. The main aim of students' inclusion in the project activity remains the development of their thinking [8].

Despite significant innovations in the field of content and technology of education, higher education institutions do not provide the level of specialist's personal and professional readiness for activities that would correspond to the update of the target, substantive and procedural characteristics of production [1].

The quality of modern education has become an important subject of discussion of the pedagogical community. According to A.I. Subetto, "the management of the future is possible in terms of development of human qualities, social intelligence and educational systems in society" [14]. Education regulates the development of society and the individual. Requirements for personal and professional qualities of the graduate, the formation of harmoniously developed professional specialists determines their success in further employment and value in the labor market. The development of new methods, means and forms of education and upbringing of the individual at different levels of education is a priority. However, most of the knowledge is presented in a ready form, and it does not require additional search efforts in many educational institutions.

The main difficulty for students is an independent search for information, obtaining knowledge [2, 3]. "Absolute advantage of project activities implemented by students in educational institutions is the ability to solve a number of educational problems: the development of problem analysis skills, goal setting, elaboration and selection of alternatives in solving problems, assessing the consequences of decisions, teamwork» [6]. For the of the project activity implementation the necessary condition is the creation of a problem situation in the form of cognitive tasks, containing some contradictions in the conditions and concluded with questions which objectify this contradiction. The purpose of this study is to determine the conditions for the effective formation of project activities skills in future economists during the process of professional training. It is important that the solution of problem of project activities skill forming involves the student's thinking and his personal attitude to the assimilated material, so the task should contain a field for search and dialogue of opinions, so that the knowledge is closer to the search, research activities.

III. RESEARCH METHODS

To solve the problem of determining the conditions for the effective formation of project activities skills in future economists during the process of professional training verification of initial assumptions in the study, a set of complementary research methods is used:

• theoretical: (analysis of philosophical, sociological, psychological, pedagogical, social, engineering literature on the problem under consideration; analysis of documentation on the organization of the educational process at the University for the theoretical substantiation of the essence, functions, structural components of the model of formation of the future engineer of professional and creative skills; analysis, synthesis, and systematization for the theoretical generalization of the main approaches to solving the problem of research);

• empirical (study of documents, questionnaires, observation, interviews, testing, self-assessment, study of products, pedagogical design);

experimental one.

For a more detail study of the socio-pedagogical conditions of the university, we have conducted the test of cognitive abilities of Shane Frederick. To determine the indicators of socio-psychological adaptation of the individual in an empirical study, we used F. Shane's method of diagnosis. The sample of the study was 50 people. Students of the first (n = 25) and second (n = 25) courses of the direction of preparation "Economy" took part in research.

IV. FINDINGS

We conducted Frederick Shane's test of cognitive abilities to determine the type of thinking. The tasks were formulated in such a way that they caused the student to give an intuitive rash decision, but some students, despite the instant desire to answer not true, noticed the trick and began to analyze the solution of the problem in more detail – analytical thinking acted from that moment. Economist Shane Frederick called the ability "to notice a trick" as cognitive reflection. If you answered intuitively, it means that the analytical part of thinking which is responsible for "mathematics" did not have time to get involved in the work.

Students were asked to answer 3 test questions. Each of these questions has two answers: one intuitive and one correct.

Intuitive answers come to mind at first. Would you prefer a titmouse in the hand or a crane in the sky? Frederick found that people with low test results preferred a titmouse. They are sure: "it is what that should be". Conversely, those who answered two or three questions correctly preferred the crane in the sky, which is a more risky option. The average CRT in students as a percentage is shown in the diagram 1.



Fig. 3. The average students' CRT as a percentage.

Having analyzed results of the test we came to the conclusion that 36% of respondents have developed analytical thinking, which demonstrates a manifestation of cognitive reflection. As a cognitive (intellectual) aspect of reflection, analytical and synthetic person skills and the ability to correlate his/her own actions with the objective situation are distinguished. The cognitive side of the reflexive process is, in our opinion, crucial at all stages of practical economist's professional consciousness forming. At the stage of direct implementation of professional activity, the future economist uses cognitive reflection as a way of comprehensive analysis of the problem, organization and implementation of project activity.

A indispensable condition for the project activity is the presence of pre-developed ideas about the final product of the project, the design stages (development of the concept, the definition of the goals and objectives of the project, available and optimal resources, the creation of a plan, programs and organization of activities for the project) and the implementation of the project, including its understanding and reflection of the activity results.

The method of projects in higher education institutions is based on the development of cognitive skills, the ability to independently design their knowledge, the ability to orient in the information space, the development of critical and creative thinking. This is the way of knowledge in order to achieve the didactic goal through the detailed development of the problem (technology), which should come to real, tangible practical result, formed in one way or another. The method of projects in higher education institutions is always focused on independent activities - individual, group, which is performed within a certain period of time. The method of projects always involves the solution of any problem. The solution of the problem involves, on the one hand, the use of a variety of methods, means of training, and on the other, includes a need to integrate knowledge, skills to apply knowledge from various fields of science, technology, technology, creative fields.

V. DISCUSSION OF FINDINGS

The method of projects as a pedagogical technology involves a set of research, search, problem methods, creative in its essence. In the process of project activity the following skills are most effectively formed:

Reflexive: the ability to comprehend the problem for which there is not enough knowledge, the ability to answer the question: what you need to learn to solve the problem.

Research: the ability to generate ideas independently, to invent a way of action, attracting knowledge from various fields [7, 4]. Project activity should be an effective form of organization of interdisciplinary activity of the student, which is continuous, systematic and integrate the components of the educational environment [12].

The direction of independent and extracurricular work of future economists in the direction of cognitive activity contributes to their preparation for future professional activities. Implementation of intersubject communications is one of the basic principles of professional competence formation in the future specialist.

Projects can be classified: by target setting; by subject; by terms of implementation.

In practice, the following types of projects are most often used:

- research and creative (business plan, design);

- information-practice-oriented (design and design);

- creative (design of the result in the form of an event).

Mixed types of projects in the substantive areas are interdisciplinary, and creative – monoprojects.

The educational tasks complex of methods mastering of project activities includes the following stages: identifying the actual need for something and setting a practical problem – the problem stage; finding a way to solve the problem – the design stage of the solution; planning to achieve the desired result - the planning stage; practical implementation of the project-the execution stage; completion of the project – the stage of summing up and reflection [8].

Projects implemented in the university within the framework of the educational program should be aimed at better training of graduates for future professional activities.

An example of a project task may be: to create your own business (possibly abroad), to think over the main elements of the business plan, to prepare an electronic presentation and to protect your business idea during an oral presentation.

1. Overview/Business description (decide what kind of business you would like to start, in what form it will be, what market you would like to apply, who will be your potential customers, what will be the difference between your business and competitors, what will be the goals and objectives of the business, its advantage, etc.).

2. Market/Industry (think about how much the market is planned to cover, what are its prospects, what is the target audience of the planned business).

3. Product/Service of Company (determine the main characteristics of your product or service, describe the competitive advantages).

4. Competition and Risks (analyze who can become your real competitor in the market, determine the strengths and

5. Marketing and Sales Strategies (determine your marketing strategy, which advertising campaign you choose, compare prices, what type of sales you prefer).

6. Management and Structure (think about the structure of your organization, what will be the number of employees).

7. Financial Information (determine what the amount of start-up capital will be, whether borrowed funds will be attracted, calculate tax deductions, payroll, etc.).

At the same time, the project activity realization will include the following stages: problem search, formulation of goals and objectives; choice of ways to design the final results; project work, collection, analysis, systematization of the necessary data; presentation of results; reflexive stage.

VI. CONCLUSION

The method of projects in higher education institutions is based on the development of cognitive skills, the ability to independently design their knowledge, the ability to orient in the information space, the development of critical and creative thinking. The solution of the problem involves, on the one hand, the use of a variety of methods, means of training, and on the other, includes a need to integrate knowledge, skills to apply knowledge from various fields of science, technology, technology, creative fields. For the project activity implementation the necessary condition is the creation of a problem situation in the form of cognitive tasks, containing some contradictions in the conditions and concluded with questions which objectify this contradiction. It is important that the solution of such a problem involves the student's thinking and his/her personal attitude to the assimilated material, so the task should contain a field for search and dialogue of opinions, so that the knowledge is closer to the search. research activities.

References

- [1] I.V. Balynin, A.G. Mikhaylova, N.N. Nizhneva, "Promote Development of Knowledge Intensive Activities on the Basis of Improving Management Training by Means of Acmeological Approach", Advances in Social Science, Education and Humanities Research, volume 24 / 2nd International Scientific Conference on New Industrialization: Global, National, Regional Dimension (SICNI 2018), 2018, pp.302-306
- [2] I.V. Balynin, "Evaluation of political culture of Russian youth (based on the results of surveys in February-March 2015". Sociodynamics, 6, pp. 1-19. DOI: 10.7256/2409-7144.2015.6.15561
- [3] F. Behuli, "Project Management", M.: PRESS, 2002, p. 208
- [4] J.H. Blackstone, "Theory of constraints a status report" International Journal of Production Research, 39 (6), 2001, pp. 1053–80.
- [5] K. Haldman, "Management of the project. Quick start", M.: DMK Press; IT Academy, 2008, p.729
- [6] O.S. Kudinova, L.G. Skulmovskaya, "Project activities at the University as the basis of innovations", Modern problems of science and education. № 4, 2018, URL: http://science-education.ru/ru/article/view?id=27928 (date accessed: 06.03.2019)
- [7] S.A. Kustova, "Project activity as one of the conditions for the formation of General and professional competences of students" [Electronic resource]. URL: http://festival.1september.ru/articles/633155/ (date accessed: 23.03.2017
- [8] V.S. Lazarev,"Project activity of students as a form of developing training", Psychological science and education Psychological Science & Education, V. 20, N. 3, 2015, pp. 25-34
- [9] I.I. Mazur, V.D. Shapirov, "Project Management", M.: Omega-L, 2009, p. 960
- [10] C. Minghui, "Analysis in academic settings: from research to teaching", Visual Communication, 17, (4), 2018, pp. 475-478.
- [11] V. Norin, N. Norina, andY. Pukharenko, "Interactive methods of teaching at Russian engineering universities", Education and Information Technologies, 23, (6), 2018, pp. 2801-2820.
- [12] I.N. Smirnova, "Organization of project activities of students in the new educational standard", Proceedings of VSPU, Pedagogical Sciences № 4 (273), 2016
- [13] I.A. Strelnikov, "Implementation of investment projects in agriculture of the Republic of Mariy" El. Almanac of modern science and education, № 11, 2009, pp. 183-185.
- [14] A. Subetto, Noospheric smysloviye. Saint Petersburg. Russia: Asterio, 2014
- [15] L. Tajik, K. Ranjbar, "Reflective teaching in ELT: Obstacles and coping strategies", Journal of research in applied linguistics, 9 (1), 2018, Pp. 148-169.