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**PROJECT METHOD - AN EFFECTIVE INSTRUMENT FOR
DEVELOPING COMPETENCIES OF FUTURE PROFESSIONALS**

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Abstract

The article focuses on the use of the project method of teaching as an important component of a practice-oriented approach during the training of graduate students for senior positions in leading construction companies. Recently, employers have shown particular interest in specialists, who do not possess knowledge alone, but also have professional competencies, as recommended by new educational standards. The paper presents the algorithm for creating a practice-oriented course by the example of the discipline "Taxation in Construction" for graduate students determines the essence of this approach and shows the possibilities of the educational process for its implementation. The article addresses the possibilities of using interactive teaching methods for the implementation of a training project to optimize the choice of a tax system at a construction enterprise, which are to be expediently performed to acquire professional skills that allow achieving significant results in professional activities. The development of the stages of project work showed the possibility of visualizing future professional activities. This visualization gives an opportunity to develop the ability to make independent grounded decisions, as well as to develop cognitive, creative skills and abilities, independently construct your knowledge, navigate the information area, develop critical thinking and apply design methods for solving tasks in hand in the production sphere.

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1. Introduction

People have always been and now remain the main immaterial resource of the socio-historical process, the key to socio-economic progress of the new society lies in activating the intellectual potential at all levels of social life. There are all prerequisites for the formation of a new personality:

1.1. New educational system

With the formation of a new educational system in Russia that can respond selectively and effectively to the needs of society, it became possible to create approaches to enhance intellectual potential and the development of professional competencies.

1.2. Globalization of the information society

Today, the globalization of the entire information society is taking place around the world. This gives a big impetus to the development of information technologies, as well as to the “digital leap”. Russia, in its turn, tries to direct more efforts to the development of digital infrastructure, which makes it possible to use new digital technologies in the educational process.

1.3. Interactive Learning

To implement the outcome-based approach and the development of professional skills, along with traditional teaching methods, it is necessary to use interactive forms of conducting classes to provide the opportunity to acquire new knowledge and learn new experiences (discussions, games, etc.), which are advisable to conduct using new ways of acquiring of knowledge.

2. Problem Statement

Higher educational institutes, in accordance with the tasks set by the state, should develop a set of competencies in their students that will allow them to become competitive graduates, able to navigate the socio-cultural space and able to understand and determine their place in the world. Professional competence is a personality trait of a specialist, which characterizes his deep knowledge of the professional field; a specialist who has certain professional skills, is aimed at prospect, open to dynamic enrichment, self-confident and able to achieve significant results in professional activities and solving professional tasks. The development of competencies is implemented through a practice-oriented component of the educational program. The outcome-based approach allows graduates to demonstrate to the employer the skills for achieving and implementing productive results, as well as the ability to integrate into socially useful activities. Currently, the educational system is undergoing a focused process of developing courses using practice-oriented methods. When building competence, it is important to match the traditional way of transferring knowledge with a practice-oriented component. It is preferable to form the majority of competencies associated with practical activities in a real enterprise, since only immersion in the work process provides the opportunity to achieve the desired level of competencies and motivates students to gain new knowledge. It is also possible to recreate the working process in the virtual space, using the project-based learning method and electronic educational resources. The process of forming employers' requirements for young specialists due to a lack of understanding of the differences

between the qualification level of bachelors and masters is particularly problematic. It is possible to structure the scope of competences necessary for the labor market in the process of interaction between teachers and business representatives, if the training is taught as a project. The declared competencies must be evaluated; therefore, assessment methods of the quality of learning results occupy an important place in the recent studies. It is necessary to move away from the traditional approach of assessing the volume of theoretical knowledge to methods for assessing the level of development of competencies that meet the requirements of federal educational standards. It is necessary to move away from the traditional approach of assessing the volume of theoretical knowledge to assessment methods of the level of competency development that meet the requirements of Educational Standards. The turnabout of teachers' perception in modeling programs of academic disciplines for the formation of a person who owns professional competencies and knows how to demonstrate his skills in professional activity remains a topical subject for research today.

3. Research Questions

Based on the foregoing, it is possible to define three main questions of this study.

- 3.1. Question 1: What methods should be used to create a practice-oriented course?**
- 3.2. Question 2: How electronic educational resources can be used in the learning process?**
- 3.3. Question 3: What assessment tools can be used to measure the effectiveness of applied methods in a practice-oriented course?**

4. Purpose of the Study

The aim of the study is to develop a practice-oriented course "Taxation in Construction" for undergraduates in the field of study "Management". In order to increase students' motivation to acquire new knowledge and general professional competencies, training under the program should be conducted as a project-based learning. In addition, the learning process should be aimed at implementing the principles of consciousness and activity in the educational process, associated with practice and the activity approach should be implemented. It is necessary to use an electronic educational resource developed on the platform "Hypermethod", for visualization of the workspace.

5. Research Methods

The authors of this work used general scientific methods of analysis and synthesis to summarize information on the results of training in the discipline "Taxation in Construction", as well as on the methods for achieving these results as part of a practice-oriented course. The variety of methods used in the practice-oriented training does not make it possible to study all of them; therefore, the authors have studied the most commonly used methods that are considered as possible for use in the course "Taxation in Construction". During the discussing of opportunities, the authors defined the following methods: discussion, gaming technologies, case technology and project-based learning.

A discussion, that is, a free debate of ideas, helps a participant learn how to analyze real situations, forms the skills of separating important facts from secondary ones, provides the opportunity to simulate situations, and defend one's opinion (Gushchin, 2012). This method is applicable to all training models except passive listening.

Gaming technologies, which are gaining popularity nowadays, can be successfully used in completely different fields of study. The behavior of a candidate for a position in the process of a serious game can become a selection criterion (Bylieva et al., 2018), the use of business games in the learning process helps to simulate real-life scenarios requiring students to demonstrate their decision-making skills under stress and uncertainty (Korneychuk & Bylieva, 2018). Learning by playing can be successfully used in minors (Stepanova et al., 2017), for the organization of collaborative work of bachelors and masters (Stepanova, Davy et al., 2018), in blended learning, combined with e-education (Stepanova, Larionova et al., 2018). Gaming technologies are a universal learning tool that can be adapted to any discipline or task.

The use of case technologies in the educational process develops critical thinking skills and increases students' interest in the discipline under study (Afsouran et al., 2018). This technology is based on the consideration and study of events where there is no unequivocal answer to the question posed; therefore, it is necessary to use the comparative analysis method to select the optimal solution.

Project-based learning as an approach that teaches a variety of strategies and provides students with the opportunity to gain collaboration experience and new knowledge through research, which has been used for a long time in educational technologies, is now found to have extensive application (Bell, 2010). Project-based learning is a kind of technology that implies that a teacher is put outside the educational process, not inside, while his position transfers to the role of a mentor (Solomon, 2003). By means of this method, students independently acquire the necessary professional competencies, demonstrating the received knowledge and skills. More and more universities in the Russian Federation use this teaching method. A good example is Peter the Great St. Petersburg Polytechnic University (Zakharova & Krasnoschokov, 2016), Ural Federal University (Daineko et al., 2019), Tomsk Polytechnic University (Safyannikov et al., 2010), Ural State University of Economics (Stozhko et al., 2015), Kazan National Research Technological University (Sanger et al., 2017) and many other universities. The project-based learning method is one of the new mechanisms for improving the quality of higher education (Zakharova & Krasnoschokov, 2016). One of the key features of project activities is the distribution of roles between the participants (project team, curator, tutor, teacher, laboratory assistant, expert, customer, user, and investor) and their passage through successive stages. Specialists of the Academy of Mentors (Evstratova et al., 2018) define the following stages of project activity:

- highlighting the problem, work with the order;
- setting goals, hypotheses, tasks, planning;
- product implementation;
- presentation of results;
- reflection of educational results.

Having studied the technology of investigated method, the authors concluded that all the considered interactive methods (discussion, gaming technologies, case technologies) can be used in project-based learning, at different stages of project work, allowing each student to be involved in the project.

6. Findings

6.1. Course «Taxation in construction» as a project

The use of project-based method in the discipline “Taxation in Construction” for first-year master’s students in the field of study master program “Territorial Development and Realty Management” makes it possible to implement a practice-oriented approach to obtaining professional skills on a new level in accordance with the employers’ requests. It should be noted that the course “Taxation in construction” is taught as a part of this master's program, which has been implemented at the university since 2015 also with the use of the project-based method. Course work is structured in the form of a training project, which is one of the stages where students prepare a master's thesis on the development of an investment project for the construction and operation of a property (commercial). The topic of the project is “Selecting the optimal tax system for a newly created company implementing a project for the construction and operation of commercial real estate”. The result of the project is the student’s solution about the application of a tax system that is optimal for a particular company, a specific object and specific conditions for the implementation of the project. The basic principle of the implementation of this project is the activation of students’ independent cognitive activity and the development of their professional competencies that increase the effectiveness of professional activity after passing through all stages of work on an investment project.

6.2. Main competencies acquired in the course of study «Taxation in construction»

The main purpose of studying the discipline "Taxation in construction" is to form a solid theoretical basis for the taxation mechanism among students, as well as instilling practical skills in calculating and paying taxes in the Russian Federation. During the course, students study the legal and regulatory framework of tax calculation in the Russian Federation, as well as the peculiarities of the taxation of construction enterprises.

After mastering the discipline, students must know:

- main regulatory legal documents;
- structure and content of the main financial and tax reports of organizations;
- basic standards and principles of financial and tax accounting and preparation of financial and tax reporting.

Having studied the discipline at the appropriate level, students will acquire the following practical skills:

- the ability to navigate the system of legislation and regulatory acts governing the scope of professional activity;

- the ability to use legal norms in their professional and social activities;
- the ability to analyze financial and tax reporting and make a financial forecast for the further development of organizations;
- the ability to process and organize initial information;
- the ability to analyze external and internal environment of organizations, identify their key elements and evaluate their impact on organizations;
- profound knowledge of financial and economic calculation methods of production, management and financial activities of construction enterprises.

The result of subject mastery is the formation of the following competencies:

- PC-3 - the ability to use modern methods of corporate finance management to solve strategic tasks;
- The ability to use regulatory legal documents in their activities.

6.3. Working stages on the learning project for the course "Taxation in Construction"

To complete the educational project, students need to go through the whole chain of successive stages typical of a project activity (analysis of the situation, problem statement, design arrangement, development, and analysis of results).

The training project, offered to students, will help to solve the problem of optimizing the legal form and tax system for a newly created enterprise that will be implement an investment project for the construction and operation of a commercial real estate object in order to reduce target costs. The idea of the proposed training project is based on the possibility of a choice for business in terms of minimizing the tax burden and optimizing the investment process in order to reduce costs and maximize profits.

Since this micro-project is part of a macro-project - a master's thesis, there is a delay in using its calculations in the final work "Calculation of the Efficiency of an Investment Project for the Construction and Management of a Commercial Real Estate Facility", which will be defended one year after this training project. This micro-project solves the problem of choosing the optimal tax system for a newly created company that will implement this project, and its results will be used on the next stage.

The stages of the project are presented in table 1.

Table 01. Description of the stages of a training project for the course "Taxation in Construction"

Stage	Activities
Defining the problem	Immersion in the subject, namely, acquaintance with the tax system of the Russian Federation, discussion on the effectiveness of investment projects with an external expert-employer, discussion with a teacher (certified chief accounting consultant). In order for students to be able to understand the topic of the project, it is necessary to gain profound comprehension of the fundamental issues of the Russian tax system. For this, students can use several ways: 1. To conduct an independent study of the regulatory information using open sources: <ul style="list-style-type: none"> ▪ Civil Code of the Russian Federation; ▪ Tax Code of the Russian Federation. 2. To listen to a course of lectures.

	<p>3. To use the materials of the electronic educational resource in the Hypermethod system “Taxation in Construction” (access for UrFU students). Every student, depending on one’s knowledge and capabilities, can choose the most convenient option. It is necessary to provide this choice because of the fact that there are students who have just completed their undergraduate studies and students who are already specialists in the field of development, government employees, etc.</p> <p>The University provides students with the opportunity to choose the most suitable option for obtaining knowledge, depending on their time and competencies.</p>
Setting goals, hypotheses, tasks, planning	<p>During the discussion, a hypothesis is being developed in order to consider all possible taxation options (for legal entities and individuals) to choose the most optimal version of the legal form and tax system for a newly created company that will implement an investment project for the construction and operation of a commercial real estate facility. This project, in turn, will reduce the cost of the newly created enterprise, reduce the payback period of the investment project, and increase net present value and project profitability index.</p> <p>After studying the basics of the tax system, students understand that there are different possibilities for the optimization of the taxation for their development project.</p> <p>The ideal result of the second stage is a description of the financial component of the development project.</p> <p>There should be a cost budget, a schedule for the implementation of costs, a plan for generating revenue, and forecast of a payback period that allow to optimize taxation, which will provide the opportunity to reach the payback period earlier.</p> <p>If students are not ready to describe thoroughly their own project, a virtual project is described together with the group and the teacher in order to develop tax optimization skills so that students do not have problems with calculations in further work on their project.</p>
Project implementation	<p>When calculating various solutions to the problem, students use case technologies, acquiring new knowledge in the field of tax rules of the Russian Federation. Gaining skills in working with regulatory information, skills in finding the necessary information, skills in processing and systematizing a large amount of regulatory information, and the ability to highlight main ideas in large volumes of text is the ability to make independent grounded decisions and take responsibility for them.</p>
Presentation of results	<p>Preparation and verification of the solution about the optimal legal form and tax system for a newly created company that will implement an investment project for the construction and operation of a commercial real estate is carried out by means of gaming technologies. The use of this method will allow to calculate potential savings on tax payments and indicators of possible effectiveness of the investment project. This stage allows not only to minimize the amount of taxes payable, but also to reduce the work of the created enterprise in terms of working with primary tax and accounting documents and the number of employees needed to ensure this activity at the enterprise.</p>
Reflection	<p>The final stage of the project is reflection that is carried out as a group discussion of the calculations made, the options considered and the solutions for choosing one of the ways to optimize taxation. At this stage, external experts such as specialists from financial services of development and construction companies, as well as other teachers who are well aware of the topic being studied, can be involved in the discussion of the results. Students receive feedback from their fellow students and experts during the discussion and collaborative work on the errors, if any.</p>

From the point of view of project typology (research, engineering, creative), this project is a research one. The actual result of the project will be new professional knowledge of a future master in the field of studies “Management”, as well as professional skills in choosing the best tax system, the ability to work in a team, the ability to make decisions, quick orientation in the information space, the ability to perform tasks and present their results that will be further applied in practical work.

These results can be submitted in the form of a report that should be defended publicly, as part of a master's thesis.

According to the academic schedule of the master's program, the study of the discipline "Taxation in Construction" is carried out for eight weeks, therefore, work on the project is limited by this period. The schedule for the implementation of the project is presented in table 2.

Table 02. The schedule of the training project for the course "Taxation in Construction"

Stage	Week 2	Week 3	Week 4	Week 5	Week 6	Week 7	Week 8
Defining the problem	X						
Setting goals, hypotheses, tasks, planning	X						
Project implementation		X	X	X	X	X	
Presentation of results						X	X
Reflection							X

The team of this project consists of two outlines:

- External outline , which includes a mentor who acts as a tutor and curator, an expert employer who can also act as a customer stakeholder, considering investment projects proposed by students, an expert tax specialist (if such a need arises), in our case, this expert can be a teacher, who at the same time is a practicing certified chief accounting consultant;
- Internal outline, which includes first year master's students, implementing a macro project in the course of two-year project training - writing a master's thesis on the topic “Calculation of the effectiveness of an investment project for the construction and management of a commercial property”. Macro-project consists of a number of micro-projects, one of which is this project to optimize the taxation of a newly created company for the construction and operation of a commercial real estate project.

For the successful implementation of the proposed training project, it is necessary to use a multimedia classroom equipped with the necessary furniture (tables, chairs, and a rostrum), a multimedia board, a projector, and personal computers with Internet access.

7. Conclusion

Approbation of the course “Taxation in construction” with the project-based learning shows its viability in terms of the formation of professional competencies. As a result, it becomes possible to organize training activities while maintaining a reasonable balance between theory and practice.

7.1. Advantages of project-based learning

Project-based learning provides an opportunity to achieve goals, and to transfer the emphasis from the process of passive accumulation of knowledge by students to mastering them in various ways having access to information resources. By means of studying subjects in practice-oriented courses, the fundamental basis of education changes, and a synthesis of “fundamental” and “practice-oriented” approaches takes place. Scientific knowledge is no longer the basis for the fundamental training of specialists, but it becomes an accompanying conductor of a broad set of meta-subject general professional skills which students receive not only within the framework of one discipline, but also during the entire training. In addition to professional skills, students develop their general cultural competencies because project work involves teamwork, where communication skills and responsibility for joint activities are important. The skills acquired by masters in project work, in contrast to the "accumulative-knowledge" training, form a meaningful execution of vital mental and practical actions. In other words, the components of cognitive, informational, social, communicative and other competencies are formed. Students also acquire such qualities as the ability to understand the task, the essence of the training task, the nature of interaction with fellow students and teachers, the requirements for the presentation of the work performed or its parts. Another important characteristic of investigated method is its compatibility with other teaching methods, which are can be applied at different stages of project activity.

7.2. Use of electronic educational resources

As it has been already noted by the authors, project-based method is compatible with a variety of educational tools. In the context of global digitalization, the use of electronic educational resources is necessary, since online learning technologies are widely used throughout the world. The expansion of the educational choice of students and the development of virtual academic mobility increases the availability of education. The quality of electronic educational resources, their completeness and logical presentation of information, the participation of specialists in the preparation of content ensures the competitiveness of the training program.

7.3. Effectiveness of project-based learning

The effectiveness of the acquired skills was evaluated by experts invited from existing enterprises. Students were asked to calculate taxes on the proposed documents of the existing company and to define the optimal taxation regime. Students demonstrated knowledge of reference systems, the ability to find information for calculating taxes, the ability to select the necessary articles for construction enterprises from the total amount of regulatory documents, and the skills of calculating and reporting them. Experts evaluated the ability of students to find possible ways to reduce taxes, as well as the ability to plan results of work and present them. In addition, students were able to demonstrate the sequence of actions in calculations, the ability to perform a generalized project algorithm, the ability to adjust previously made decisions, the ability to discuss constructively the results and problems of each project stage and formulate grounded questions and requests for help (advice, additional information, equipment and etc.), the ability to present and defend the project. Further the authors consider the opportunity to develop criteria for measuring learning outcomes and conduct a survey among graduates of the program in order to assess the effectiveness of acquired skills in their professional activities. Based on the results of the

study, an analysis of the applied methods in the educational process will be carried out. The results of the study can be used by teachers of higher educational institutions to develop practice-oriented courses.

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