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Effectiveness of Working on Projects in Improving the Professional Activity of Teachers

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Annotation: In modern society, university graduates, especially pedagogical ones, are required to have various abilities: creative, communicative, project-based, and the ability to self-learn throughout their lives. Project activities serve as a means of developing relevant professional competencies. ¬This article examines the ideology of the competency-based approach, implemented in the educational space of a pedagogical university with the help of project-based pedagogical technology, and describes the essence of the professional competencies of pedagogical students.

Keywords: professional competence, future teachers of physics and astronomy, methods, professionalism, competency-based approach.

In modern society, during the transition to a competency-based approach in education, the formation of professional competencies among future graduates of pedagogical fields is relevant . In this regard, the content of the educational process in a modern university is being updated, as well as approaches to its organization. And above all, this concerns the updating and implementation of basic educational programs aimed at students receiving primarily not theoretical knowledge, but practical skills and abilities, at developing in them a set of "professional competencies" that will allow the graduate to become a good specialist in his future teaching activity and be competitive in the educational services market.

The concepts of "project", "project activity" are revealed, the possibilities of project activity in the formation of professional competencies of future teachers of various profiles are determined. Examples of the implementation of this pedagogical technology in classes in various disciplines and profiles are given. It has been established that the use of project activities when students master various educational modules and disciplines helps to increase their motivation to study the subject, improve academic performance and develop the professional competencies of future teachers.

The ideology of the competency-based approach presupposes the formation of competencies in students as a result of education actually aimed at practice, reflected in the ability of the subject of educational activity to successfully cope with a certain range of professional tasks.

Therefore, professional training should become a complex of quasi-professional actions and activities carried out by students in order to bring educational and professional activities as close as possible. In this case, the educational process appears as a process of immersing the subject in professionally oriented situations during the implementation of purposeful educational-professional and quasi-professional activities, as a result of which the social and professional - experience of the individual is qualitatively and quantitatively transformed, allowing him to assess the current working conditions, predict situations and choose specific practical actions leading to the successful completion of professional tasks, i.e. demonstrate special competencies [1].

In accordance with the educational program, when mastering the bachelor's program, students develop universal, general professional and professional competencies . The process of forming

the first two of these is regulated by the educational standard, and the university determines and forms professional competencies independently on the basis of the professional standard of the teacher in accordance with the student's learning profile. Taken together, all competencies provide the graduate with the ability to carry out professional activities.

The most important component of the professionalism of a future teacher, like any specialist, will be his professional competence in his chosen specialty. As such, A.K. Markova calls the ability to independently acquire new knowledge and skills and use them in practical activities [2].

Having studied various approaches to the definitions of the concepts of "competence", "competence", "professionalism", "professional competence", by the professional competence of a future teacher we mean his possession of theoretical knowledge, practical skills and abilities necessary for further professional activities in the direction and profile preparation, the ability to apply them in future teaching activities and the constant desire for self-education, personal and professional growth [3].

In education at any level, one of the important tasks is to develop in students skills that provide them with free navigation in the information space, an effective search for the necessary data, their analysis, planning their own activities in collaboration with peers and elders. The same skills are prescribed in the professional competencies of the future teacher based on the professional standard in the educational program: the ability to organize cooperation among students, support their activity, initiative and independence, and develop creative abilities.

We believe that one of the effective methods for developing students' professional competencies will be the introduction of project activities into the educational process. Having studied this pedagogical technology, which has been known for a long time and has been studied by many teachers and scientists in terms of application for solving various didactic problems, we came to the conclusion that it is an effective teaching method. Despite the many interpretations of the content and structure of project activities, they do not contradict each other [4]. In this regard, it seems possible to reduce them to one definition. Thus, project activity is a way to achieve the goal of developing knowledge, skills and abilities in students through solving a given problem in conditions limited in time and resources, the result of which is a practical result, designed in accordance with the requirements. The use of project activities in the educational process contributes to the improvement of theoretical knowledge, practical skills, research skills, logical thinking, creativity and, as a result, the formation of professional competencies of the graduate. Since future teachers of any profile in their future professional activities need to develop this knowledge, skills and abilities in their students, the introduction of project activities into the educational process of a pedagogical university is fundamentally important for the preparation of students of any direction.

When completing projects in the classroom, we try to present problems of a pedagogical, professional, and practice-oriented nature. Educational projects include a complex of claims, research, calculations, graphic, creative and other types of work performed by students independently for the purpose of practical or theoretical solution to a given problem.

Project activity is a fairly effective didactic tool for teaching students the ability to find solutions to various problems: pedagogical, psychological, methodological , creative, research that may arise in their future professional activities. The use of project activities when students work on individual and group projects allows them to develop independence and responsibility, develops creativity, mental abilities and the necessary personal qualities of a future teacher.

When completing the project, students follow the "6 P" scheme:

1. solve a given Problem;
2. carry out Design (planning);
3. perform a search for information;
4. produce the Product;

5. create and defend the Presentation.
6. prepare a Portfolio, i.e. a folder containing all the working materials of the project, sketches, ideas for a plan to solve the problem, sketches, intermediate and final products of activity, etc.

An important rule: each stage of work on a project must have its own specific product.

"Pedagogical education (with two profiles of training)" is associated primarily with the implementation of Federal State Educational Standard 3++, where the following professional competencies are defined as the planned results of mastering the graduate's educational program:

1. Systematic and critical thinking.
2. Development and implementation of projects.
3. Teamwork and leadership.
4. Communication.
5. Intercultural interaction.
6. Self-organization and self-development.
7. Life safety.

For example, when training students 44.03.01 "Pedagogical Education" in the profiles "Technology", "Primary Education", the areas of training 44.03.05 for a two-profile bachelor's degree "Preschool education and music education", "Technological education and computer science", project activities are included in the work programs of many disciplines. For example, in classes in the discipline "Technical and Computer Graphics" when preparing future technology teachers, the following methods of organizing project activities are quite applicable:

- the use of educational and life situations that arise when students perform practical tasks;
- setting educational problem-based practice-oriented tasks;
- encouraging students to analyze and solve a problem situation based on the application of interdisciplinary knowledge;
- orientation of students towards preliminary generalization of new facts [5].

In technical and computer graphics classes, mini-projects are used at all stages of training. Their implementation takes from one to several lessons.

The task of project activities related to technical and computer graphics is to stimulate students' interest in this discipline, to identify and develop their inclination and ability to study specialized disciplines in technology. Its essence comes down to performing specific independent and creative work.

Students create interesting projects when studying the topic "Conjugation", where they themselves must produce drawings of assignments on certain topics. When studying the topics "Axonometry" and "Construction Drawing", students complete projects for their future home or someone else's building. At this stage, a visual image of the architectural object is created on the format. Design work can be carried out using computer-aided design systems, such as AutoCAD, Compass 3D, which allows them to practically master the skills of working with graphics packages necessary for their future professional activities when teaching the subject area "Technology". When studying the Computer Graphics section, students complete their projects in AutoCad. At the initial stage, students get acquainted with construction drawing, study the features of construction drawings, symbols, learn the order of reading construction drawings, carry out a plan, a section on a format. After studying the AutoCad program, students complete independent plans for an apartment, cottage, or industrial building, allowing them to consolidate the acquired knowledge, skills and abilities in construction drawing and working in the program.

The following tasks were implemented as part of the project:

1. organizing a creative video competition for Teacher's Day for the best congratulations among students, parents and everyone;
2. holding a scientific and practical conference of young teachers to discuss ways to solve the problem of declining social status and prestige of the profession;
3. collection and systematization of materials for the creation of a series of programs on local television about the best (legendary) teachers of Buryatia "Don't step on the shadow of the Teacher".

Thus, the use of project activities when students master various modules and disciplines helps to increase motivation to study the subject, improve their academic performance and develop the professional competencies of future teachers.

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