IMPROVEMENT OF THE METHODOLOGY FOR ORGANIZING PRACTICAL CLASSES IN GENERAL LAND SCIENCE

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ANNOTATION: This article describes the problems of methodological training of students in the training of future geography teachers in pedagogical universities, along with theoretical knowledge, pedagogical technologies, and the formation of practical skills of future teachers through the organization of the educational process using them in each lesson. Also, the methodology of using game exercises in the technology of didactic games is revealed on the example of one topic.

KEY WORDS: Geography, education, professional training, pedagogical technology, practical training, General Earth Science, game exercises, geography teacher.

INTRODUCTION

The introduction of modern educational technologies into geography education, ensuring the interaction of teachers and students in the educational process, the development of students' skills for independent acquisition of knowledge, independent and creative thinking are considered important tasks facing education. Educational institutions, including pedagogical universities, play an important role in their implementation.

To implement the above-mentioned tasks, first of all, teachers teaching in educational institutions, including geography teachers, along with theoretical knowledge, must have methodological training and the ability to use them. Therefore, in higher educational institutions that train pedagogical personnel, along with teaching the scientific and theoretical foundations of pedagogical technology as a separate subject, it is advisable to form the practical skills of future teachers by organizing the educational process using them in each lesson.

A number of tasks of pedagogical technologies used in the preparation of future geography teachers for pedagogical activity are:

• Development of critical thinking: the ability to analyze information, evaluate evidence, put forward hypotheses, and draw conclusions.

• Development of creative thinking: the ability to generate new ideas, find innovative solutions, and demonstrate creativity.

Development of problem-solving skills: development of goal setting, situation analysis, action plan development, and decision-making skills.

• Teaching independent learning: Developing the ability to independently search for information, learn from mistakes, adapt to new conditions, and apply acquired knowledge in practice.

• Development of teamwork and communication skills: the ability to effectively communicate with others, exchange information, listen to and understand the point of view of others.

• Increased interest in the subject: The use of new technologies, such as multimedia textbooks, interactive programs, online courses, etc., will help make education more attractive and interesting for students.

As can be seen from the above, pedagogical technology is based on principles that develop education and educates a perfect person. In this case, the center of the pedagogical process is the educator (teacher) and the student (student), and the interaction and communication between them must meet modern requirements [3,7].

Through a lesson organized on the basis of pedagogical technologies of the educational process, students quickly and easily assimilate the theoretical information provided, understand the laws, causes, consequences, and essence of the evidence related to the topic. With the help of various technologies, the knowledge acquired by students through independent thinking and reflection is retained in memory for a long time, and they also master the features of modern pedagogical technologies, become aware of ways to use them, and develop knowledge, skills, and abilities related to their application in future activities [10].

For this, the teacher must first of all be equipped with the requirements for organizing the educational process, forms of organizing education and principles of management, applying methods that serve the mental and physical development of the student, correctly organizing the activities of the student's personality, directing it towards reading and learning, entering into communication with them, eliminating problems and conflicts arising in the process of organizing pedagogical activity, organizing a business and creative environment in the classroom, methods and techniques that allow for accurate and correct assessment of educational activities [2,8].

Therefore, a pressing issue in today's education is the creation of conditions that allow the younger generation to master the fundamentals of science so that they do not lag behind scientific and technological progress. This necessitates the selection of educational content and information volume, taking into account individual and age characteristics, and its harmonization with the capabilities of students for the purpose of educating and educating students, developing their consciousness, and career guidance.

As a result of the conducted experimental work, it was established that there are great opportunities for the use of pedagogical and information technologies in organizing practical classes that contribute to the free and independent work of students in general Earth science classes.

In the course of our research, the expediency of using pedagogical technology at a local (modular) level at a certain stage of the lesson was determined for organizing the cognitive activity of students in General Earth Knowledge, improving the methodology of professionally-oriented teaching. In this case, a new topic is first studied, then control tests, various game exercises, competitions, and trainings are conducted to monitor and evaluate the knowledge, skills, and abilities acquired by students. After students begin this activity and acquire certain skills and abilities, it is advisable to conduct lessons based on pedagogical technologies, i.e., apply them at the private methodological level.

In technologies at the private methodological level, all stages of the lesson are organized based on the requirements of pedagogical technology, that is, the process of studying a new topic is entirely based on a certain type of pedagogical technology (modular learning, collaborative learning, problem-based learning, didactic games, etc.). For example, "The Solar System. The shape and movements of the Earth. Their geographical consequences." Based on the educational, upbringing, and developmental goals of this topic, the teacher should determine which technology to use in the learning process, the specific aspects of organizing students' cognitive activity based on it, the learning tasks that students must complete in class, and the methods of monitoring and evaluating acquired knowledge.

In order to improve the methodology of professionally-oriented teaching of students in practical classes on General Knowledge of the Earth, we organized practical classes on certain types of pedagogical technologies: didactic games, modular learning, collaborative learning technologies, and interactive methods. Below, we will dwell on the importance of didactic games technology in increasing the effectiveness of lessons and professionally-oriented learning.

In the system of pedagogical technologies, the technology of didactic games occupies a special place. In the educational process, they are used in the form of didactic game lessons. In lessons organized on the basis of didactic game technology, the students' learning process is combined with game activity. Therefore, lessons combined with students' learning activities and game activities are called didactic game lessons [5];

Many scientists have conducted research on the use of games in geography lessons, who have noted the role and importance of didactic games: L.M.Pancheshnikova, S.N.Praslova, G.A.Ponurova, L.V.Belyayeva, G.Ya.Lisenkova, V.V.Pyatunin - as a form of problem-based learning, a part of the lesson, a form of thought development, V.P.Korneev, E.G.Kolovsky, V.M.Lyantsevich, L.P.Simenova,

A.V.Prokofyev - as a form of learning aimed at a whole lesson, a form of interest in knowledge, V.I.Sereda, M.G.Zakharov, K.S.Momentova - as a form of extracurricular work or a condition for expanding the level of knowledge of the lesson, P.Musaev, R.Kurbanniyazov, V.V.Nikolina, G.S.Kulinch, U.Safarov, A.Khayitov, O.M. They developed a methodology for organizing and conducting didactic games in geography lessons and in extracurricular time. Agreeing with the opinions of the above-mentioned scientists, in our opinion, didactic games are a form of increasing the effectiveness of education and developing practical skills.

We have defined the main features of geographical games used to improve the methodology of professionally-oriented teaching of students in practical classes on general Earth knowledge as follows:

1. When organizing lessons using geographical games, students develop developmental activity. Students participating in this lesson freely choose their roles and responsibilities. For example, in expedition games, the navigator, observer, cartographers, sailors, etc.

2. In the process of geographical game lessons, a creative environment and discussion situations arise. During geographical games, students engage in creative work in the process of performing a specific role and task, and when a problematic situation arises, they solve it jointly.

In the course of our research, it was revealed that through didactic game lessons, it is possible to implement such functions as education and upbringing, personality development, directing students towards creative activity, control and analysis of knowledge, introduction to professions and career guidance, as well as the development of communication and speech culture.

These functions are implemented comprehensively in the educational process, however, there are several types of didactic games in which a certain function is dominant. For example, in conference classes, personality development, in game exercises, control and analysis of knowledge prevail, the remaining functions complement them.

Didactic game lessons are divided into such types as role-playing games, creative games, business games, conferences, game-exercises, etc., depending on the combination of students' learning and game activity. Each type of game has its own characteristics and plays a special role in orienting students towards professional activity. For example, plot-role games are aimed at studying the relationship between natural and socio-economic reality, events, and phenomena, while creative games are designed to solve a specific problematic geographical problem based on the knowledge previously acquired by students.

Game exercises of didactic games are of particular importance in the vocational training of students. The high effectiveness of this method was determined during the experiment conducted during our research.

The method of game exercises of the didactic game technology also has special significance in the professionally-oriented training of students. We can also conduct individual didactic games based on general Earth knowledge, creating game exercises in the form of problems and exercises. This method of didactic games not only increases students' knowledge and interest in their profession, but also teaches the methodology of using these methods in their future activities [9]. Game exercises on the topic "General Information about the Earth" can be used as follows.

1. The angular velocity of the Earth's rotation, i.e., the angle of rotation of a point on the Earth's surface for any given time, is the same for all latitudes. The point travels 150 kilometers in an hour ($360^0 \div 24\,soat = 15^0$). However, the speed in meters per second varies with latitude and is calculated using the following formula:

$$\vartheta_э = \frac{2\,\pi R}{T}$$

Here, $\vartheta_э$ is the rotational frequency, at the equator (seconds), and π is the Pythagorean number, equal to 3.14 radians. 3.14 radians are equal to 1800. Knowing that the area of the circle is 3600, when we convert it to the Pythagorean number, that is, to radians, it becomes equal to $2\,\pi$ (6.28). R - radius, T - time (second).

To solve this problem in the form of a game, students should use the knowledge they have acquired on

this topic in the following lecture. To solve this problem, the student must use the knowledge gained about the Earth's motions, that is, know the angular velocity of the Earth, the length of the arc at the equator. The angular velocity of the Earth is equal to 150, i.e., the Earth travels 150 kilometers per hour. The length of 10 arcs along the equator is 111.3 km. Using the formula above, we can calculate the Earth's rotation speed at the equator in 1 second as follows:

$$\vartheta_э = \frac{2\,\pi R}{T} = \frac{2 \times 3{,}14 \times R}{86400} = \frac{6.28 \times 6378{,}245}{86400} = \frac{40\ 055378{,}6}{86400} = 463{,}6 = 464\ m/sek$$

The value of 86,400 days in seconds, substituted for T in the formula. Consequently, the speed at the equator is equal to 464 meters per second.

2. The width of the Atlantic Ocean at the equator is 600, and how long will it take for a spacecraft traveling at the speed of Earth's motion to reach one of its shores? To solve this problem in the form of a game, the student uses the knowledge acquired in the lecture on this topic. If a spaceship is traveling at Earth's speed, we divide the width of the Atlantic Ocean by Earth's angular velocity,

600:15=4. Then we calculate the distance:

60 x 111,3 km2 = 6678 km.

Thus, a ship travels from one shore to the other in 4 hours. The width of the Atlantic Ocean along the equator is 6678 km [6].

By organizing such game exercises in accordance with the topics of General Earth Science, we will achieve the transformation of the knowledge acquired by students in the lecture into practical skills and the training of geography teachers with high competence. Because during game exercises: communication arises between students at all stages of the learning process; students are given equal opportunities to demonstrate their strength, knowledge, and talents in the learning process; a socio-psychologically favorable environment is created for students (individually or in small groups) to work in cooperation, preparing the ground for their gradual and effective participation in communication; students understand that for active participation in communication, it is necessary not only to listen, but also to analyze what they hear, think, and achieve reasoned and understandable thoughts; working in cooperation with students and mastering educational materials, they can achieve the fulfillment of tasks at the required level, analyze the obtained results, verify their accuracy, present them, and be recognized by others [4].

The use of pedagogical technologies in the lesson allows students to form such pedagogical characteristics as a creative approach, logical thinking, the ability to independently and freely express their thoughts, self-assessment, working individually and in small groups, respecting the opinions of others, selecting the necessary one from many opinions, and effectively using the acquired knowledge in the necessary conditions.

On the basis of the reforms carried out in the field of education in the Republic of Uzbekistan, the education of young people as professionally qualified personnel, who are the present and future of our country, is being put forward as an urgent issue. The results of the reforms being carried out in the education system of our country are emphasized in the “Concept for the Development of Higher Education until 2030” of the Republic of Uzbekistan, which serve as “a new system of universal knowledge, skills, qualifications, as well as the experience of independent activity and personal responsibility of students, that is, modern basic competencies” in directing the national education system to achieve new results.

As a pedagogical concept, we will analyze the pedagogical and psychological aspects of the development of the educational and cognitive competence of pre-service military education teachers, first of all, within the framework of considering our approach, referring to the scientific possibilities in the work of domestic and foreign researchers.

The essence of problem-based learning is the teacher's management of students' cognitive activity in the formation of problem situations in their educational work and the acquisition of new knowledge by solving educational tasks, problems and questions. This creates a scientific-research method of acquiring knowledge.

Problem-based learning is a method of teaching educational material in such a way that it creates tasks and problems of knowledge in the student's mind on the basis of scientific research.

Problem situations arise in the student's thinking activity and they encourage the child to objectively search and draw logically correct scientific conclusions.

A problem is a subjective form of expression of the need to develop scientific knowledge.

It is a conflict that objectively arises in a problem situation, that is, in the process of social development between knowledge and ignorance.

A problem situation is a certain psychological state of the student. This situation arises due to the awareness of contradictions in the process of performing certain tasks (solving a problem, finding an answer to a question).

Awareness of this contradiction awakens in students the need to search for new knowledge about the method or conditions of performing work.

In order to use the problem-based learning method in the lesson process, each teacher working in the education system must first clearly understand the following sequence.

The problem-based learning method is implemented as follows:

posing a problem;

studying the conditions characterizing the problem;

solving the problem;

substantiating the correctness of the solution found;

understanding new knowledge that arose in the process of searching for and solving a solution to the problem;

systematizing, motivating and generalizing the problem;

studying the solution to the problem, searching for more concise and convenient ways to solve it.

All work on educational technology has a specific practical basis. The preparation of an educational project predetermines the future joint activities of the teacher and student.

When implementing an educational project, the teacher should first of all consider creating problem situations that stimulate the student's thinking to draw logically correct, scientific conclusions and master them.

One of the main rules of the competency-based approach to education is the understanding of competence as a subjective quality of a person. This is reflected in such pedagogical conditions as the collective nature of educational activity and the assimilation of knowledge through strictly social factors, the development of skills and competencies in students that depend on their subjective motivations for learning, attitude to the subject of study, and taking into account the abilities and experience of the student. Therefore, in recent years, the development of the educational and cognitive competence of pre-service military education teachers in the education system through the pedagogical conditions for the development of the educational and cognitive competence of pre-service military education teachers is a pressing issue, which has been studied in scientific research.

Turning to the content and essence of the pedagogical and psychological aspects of the concept of the development of the educational and cognitive competence of pre-service military education teachers, it is necessary to dwell on the etymological analysis of the concepts of "competence" and "competence". Scientists have interpreted the concepts of "competence" and "competence" in different ways. When it comes to the competency-based approach, first of all, the word "Competence" comes from the word "to compete" and means "knowledge in this or that field".

In the development of pedagogical science, the analysis of these concepts has begun to be studied not only by scientists in the world, but also by our country, and research has been conducted on competencies and competencies for various types of activities.

In conclusion, in today's modern conditions, the use of problem-based educational technologies ensures the effective conduct of the educational process and at the same time develops the student's ability to think independently, critically and creatively. As a result of the active independent activity of students, it allows

for the creative mastery of knowledge, skills and competencies and the development of mental activity. Also, if the educational process of students is organized by the teacher, understanding the essence of problem-based education, that is, problem-based learning, it organizes the management of their cognitive activity by mastering new knowledge by solving their problems, obstacles and situations. This creates a scientific and research method of mastering knowledge.

The purposeful, effective use of problem-based educational technologies by the teacher in the teaching process is the basis for improving the quality and efficiency of education.

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