

# **ASPECTS OF DEVELOPING STUDENTS' PROFESSIONAL COMPETENCE THROUGH PROBLEM-BASED EDUCATIONAL TECHNOLOGIES**

Ugiloy Bozorova

Chirchik State Pedagogical University

## **Abstract**

The article clarifies the main aspects of professional competence and its development in the educational process. Special attention is paid to how the emotional, social relations and leadership components of professional competence in mathematics education are developed through problem-based educational technologies.

**Keywords:** Competence, competence, professional competence, problem-based educational technologies, special competence, management competence, leadership competence, social (communicative) competence, emotional competence.

## **Introduction**

### **MUOMMOLI TA'LIM TEXNOLOGIYALARI VOSITASIDA TALABALARNING KASBIY KOMPETENTLIGINI RIVOJLANTIRISH ASPEKTLARI**

Bozorova O'g'iloy Hikmat qizi

Chirchiq davlat pedagogika universiteti

## **Annotatsiya**

Maqolada kasbiy kompetentlik va uni ta'lim jarayonida rivojlantirishning asosiy jihatlari aniqlashtirilgan. Matematika ta'limida kasbiy kompetentlikni emotsional, ijtimoiy munosabatlari va liderlik komponentlari muommoli ta'lim texnologiyalari vositasida qanday rivojlantirilishiga alohida to'xtalgan.

**Kalit so'zlar:** kompetentsiya, kompetentlik, kasbiy kompetentlik, muommoli ta'lim texnologiyalari, maxsus kompetentlik, boshqaruv kompetentligi, liderlik kompetentligi, ijtimoiy (kommunikativ) kompetentlik, emotsional kompetentlik.

## **Introduction**

Professional competence is a set of knowledge, skills and abilities necessary for the performance of professional tasks. It includes all the resources necessary for the successful implementation of professional activities. Current studies and changes in the socio-economic policy of society also require changes in the national education system. Modern policy considers education as one of the most important sources of social development. Education and knowledge ensure the growth of the national income of a developed state. Therefore, in modern conditions, the issues of increasing the efficiency and competitiveness of education are a priority.

## **Analysis and results:**

“Those interested in the development of competence should help to think about how organizations should operate and how they actually operate, as well as about their own roles and the roles of others in society. One of the directions is the formation of professional competencies in the training of highly qualified teachers. Professional competence is the ability to successfully act in solving professional tasks based on practice, skills and knowledge.

In modern practice, the term "professional competence" often refers to the ability of an employee to perform tasks in accordance with established standards. In approaches to the concept of professional competencies, two main areas can be distinguished:

The ability to act in accordance with standards: This expresses a person's ability to work in accordance with established standards and helps to effectively perform professional tasks.

Characteristics of a person that ensure the achievement of results at work: This area covers the individual characteristics and skills necessary for a person to work successfully.

In this study, we will focus on the professional competencies of future teachers. Students of higher education institutions should be familiar with the following professional competencies:

### **General professional competencies:**

Understanding the social significance of their future profession and having motivation for professional activity

The ability to apply systematized theoretical and practical knowledge from the humanitarian, social and economic sciences in solving social and professional tasks;

Ability to assume responsibility for the results of professional activities;

Knowledge of one foreign language at a professional level;

Ability to prepare and edit texts of professional and social importance;

In the field of pedagogical activity:

Ability to conduct basic and elective courses in various educational institutions;

Readiness to use modern methodologies and technologies, including information technologies, to guarantee the quality of the educational and upbringing process.

Ability to diagnose the educational results of students and provide pedagogical assistance in the processes of their socialization and professional self-determination, and prepare for professional choice;

Use the capabilities of the information and information environment to guarantee the quality of the educational and upbringing process;

Readiness to cooperate with parents, colleagues and social partners interested in the quality of the educational and upbringing process;

Ability to organize cooperation with students and pupils; Readiness to protect the life and health of pupils in the educational and upbringing process and in extracurricular activities.

In the field of cultural and educational activities:

Development and implementation of cultural and educational programs for vulnerable population categories, use of modern information and communication technologies;

Ability to conduct professional interaction with participants in cultural and educational activities;

Use of Uzbek and foreign experience in organizing cultural and educational activities;

Ability to identify and use the potential of the regional cultural and educational environment for organizing cultural and educational activities.

Formation of professional competencies of teachers is a process that is carried out by combining various teaching methods with the same situation, values, abilities and knowledge.

Professional competence is described by philosophers as a system that includes psychology, sociology, cultural and personal aspects. In his opinion, the professional competence of people working in the "subject-subject" system (teachers, doctors, lawyers, service workers) is determined not only by basic (scientific) knowledge and skills, but also by the motivations of the specialist's activity, understanding of himself in the world and the world around him, style of relationships with people, general culture and the ability to develop creative potential.

He considers professional competence to be "a system of knowledge, skills and abilities that allow performing professional tasks at a certain level" and "readiness for professional activity."

The definition of professional competence as a level of knowledge has been studied by a number of researchers, for example, B.S. Gershunsky, A.D. Shekatunova, N.V. Shestak and others. They define it as "the category of "professional competence" is determined primarily by the level of professional education, experience and personal abilities, as well as the desire for constant self-learning and self-improvement, as well as a creative attitude." N.V. Shestak views professional competence as "the level of knowledge and general culture, familiarity with theoretical tools and possession of practical skills."

Professional competence can be divided into the following types:

Specific Competence - a set of skills necessary to perform certain job duties at a high level;

Management Competence - qualities necessary for holding leadership positions (such as the ability to delegate authority or set priorities, goal-setting, stress resistance, and prudence);

Leadership Competence - a set of qualities necessary for effective group management (this can be self-confidence, persuasiveness, creativity);

Individual Competence - the ability to effectively solve problems, manage time properly, and develop in a chosen direction;

Social (Communicative) Competence - the ability to build relationships with colleagues and work in a team;

Emotional Competence - the ability to correctly identify one's own and others' emotions and manage them (these abilities are called emotional intelligence (EQ)).

As a result of the analysis, during our research, we want to dwell more broadly on emotional competence, social competence, individual competence and leadership competence, because our goal is to develop professional competence using problem-based learning technologies in the process of mathematics education. It is known that in problem-based learning technologies, the emotional characteristics of a person, social relations, and leadership skills are in the first place, and in order to substantiate these ideas, we will define problem-based learning technologies in the process of mathematics education.

Effective use of problem-based learning technologies in the process of mathematics education is an important factor in the development of professional competence.

Problem-based learning technologies include a set of methods that help students find solutions to real-life problems. In this process, the emotional characteristics of a person, social relations, and leadership skills are of primary importance. Emotional competence allows students to correctly understand and manage their emotions, and to show empathy in their relationships with others. This is a key factor not only in individual success, but also in teamwork.

Social competence, in turn, helps students work effectively in groups, actively participate in the exchange of ideas and constructive discussions. In problem-based learning technologies, students develop relationships by solving problems together and increase their ability to generate new ideas.

Leadership competence, on the other hand, allows students to implement their ideas and create motivation within the team. These skills are important in developing the strategic thinking necessary in the educational process. As leaders, students have the opportunity to inspire others, play an active role in solving problems, and provide innovative solutions.

By using problem-based learning technologies, we create opportunities for students to further master mathematical knowledge and develop their professional competencies. These approaches serve to increase the level of preparation of students in accordance with the changing conditions of the educational process, ensuring their success in professional activities.

Conclusion: Thus, emotional, social, individual and leadership competencies play an important role in ensuring the effective participation of students in problem solving in the process of mathematics education. Through them, students are helped to solve complex problems, develop innovative solutions and improve interpersonal relationships.

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