THE ROLE OF PEDAGOGICAL COMPETENCIES IN INCREASING TECHNICAL KNOWLEDGE OF HIGHER EDUCATION STUDENTS

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Abstract
This article describes the role, place and status of pedagogical competencies in improving the technical knowledge of students in the higher education system. Emphasis is given on pedagogical competencies in practical and laboratory classes.

Keywords: higher education, e-learning, pedagogy, competence, didactics, physics, technology, practical training, laboratory training.

Introduction

Today, the rapid development of science and technology in the education system in our country creates skills and competencies in teachers through the reception of information, their analysis, conclusions, which requires the formation of technical competence, as well as improving the pedagogical competence of teachers. Taking into account the dynamics of development in the modernization of practical and laboratory classes in the teaching of physics in technical higher education institutions, the pedagogical approach is important.

The practical and laboratory classes currently conducted in higher education institutions, if focused on the problems of a comprehensive scientific nature, will give specific results and will play an important role in the training of personnel with scientific potential in the future. Improving the technical and pedagogical competence of physics teachers is one of the urgent tasks. This will be one of the key issues not only the deep knowledge, skills and abilities of physics teachers, but also the improvement of pedagogical and technical competence of young people in the future education process while maintaining national values, focusing on the development of gifted and talented youth. Requires the ability to fully use and apply in practice the relevant scientific achievements in the educational process to ensure the well-being of the people. Given the requirements of the times, there is no doubt that in the conduct of practical and laboratory classes in physics will serve to move away from traditional methods, to switch to new methods, to improve the quality and effectiveness of teaching. At the same time, the main factor of practical and laboratory training is the improvement of sufficient technical and pedagogical competence of teachers.

Research Methods

Practical and laboratory classes have a great impact on the level and characteristics of preparation of teachers for future pedagogical activities. The process of carrying out the work of the "Physical Workshop" is important for the future practical work of professors and teachers, forming their

pedagogical competence. In particular, one of the urgent tasks in teaching methods is to improve the content of practical and laboratory classes in physics and methods of its organization. The role of physics practicums is also important in the acquisition of a high level of knowledge and skills by physics teachers. During the workshop, teachers increase their knowledge, strengthen their theoretical knowledge, gain a deeper understanding of the basic concepts and laws of physics, acquire skills and abilities to solve experimental problems, learn to work with physical instruments, devices and measuring instruments, independently perform physical experiments and demonstrations. and it is important that they master the methods of mathematical processing of experimental results. At the same time, the use of new pedagogical and information technologies leads to positive results. Accordingly, the improvement of teaching methods is based on the psychological, pedagogical, didactic, methodological bases of cognitive theory, science methodology and teaching. In this regard, it is important for students to pay attention to the physical aspects of the operation of laboratory equipment in the study of science, modern education, the formation of skills and competencies to study the principles of operation, as well as technical and pedagogical competence.

Results

Improving the theoretical basis for the organization and conduct of practical and laboratory classes in higher education – is focused on the methodology of science, taking into account the factors of improving the pedagogical and technical competence of teachers. Below shows a sequence of factors to improve the pedagogical and technical competence of physics teachers:

- ✓ Changes the structure of practical and laboratory training guidelines;
- ✓ Increases the effectiveness of teaching practical and laboratory classes;
- ✓ Improves the quality of practical and laboratory training, ensuring educational consistency;
- ✓ Improves pedagogical and technical competence of physics teachers.

The application of advanced ideas and technologies in the education system requires a special approach to the methodology of teaching physics due to the improvement of the scope of general theoretical questions that make up the content of didactics, the application of statistical ideas and concepts. Teaching and learning in education is one side, while the rest is active learning and mastering, evaluating, creative activity of the acquired knowledge is the other side.

Our research shows that the improvement of pedagogical and technical competence begins with the teaching of physics in secondary schools. Although less time is devoted to physics and laboratory work in secondary schools, the basis of practical and laboratory training in higher education is the physical practicum, which is based on the formation, generalization, deepening and repetition of skills and competencies. The technical and pedagogical competence of a physics teacher is achieved by expanding the scope of the specified norms for the implementation of practical and laboratory classes specified in the state educational standards in the formation of his worldview. At the same time, in order to increase the level of technical training of physics teachers, to improve their pedagogical competence, in addition to in-depth knowledge of the theoretical and practical aspects of the subject, it is necessary to have pedagogical competence. The current state of the problem of a competent approach to the learning process is an important factor in the training of physics teachers, which includes the following factors:

- ✓ creating a national model of a competency-based approach while preserving national values in Uzbekistan, developing a clear and forward-looking plan for teacher training and its implementation in the educational process;

✓ identification of the main categories of technical and pedagogical competence approach, its strengthening through normative and legal documents;

✓ improving the basics of educational management in the training of physics teachers, ensuring the effectiveness of its activities in the education system;

✓ formation of technical competence, in addition to the level of study of the compatibility of theory and practice in the professional training of physics teachers, providing priority in the education system;

✓ to develop their interests in the training of spiritually mature, competitive physics teachers in the future, the ability to work on technical equipment and devices in the course of laboratory classes;

✓ complex of pedagogical competence improvement by describing the pedagogical and technical competence of teachers in pedagogical higher education institutions, independently expressing their attitude to changes in nature and society, based on the knowledge, skills and abilities of teachers in psychological, pedagogical processes in society.

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