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Research Article

DIDACTIC POSSIBILITIES OF TEACHING ENGINEERING PHYSICS

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ABSTRACT

Forming the distance education system in our country based on new information technology tools, and the creation of modern educational information resources and portals is an urgent issue of further informatization of education.

KEYWORDS

Teaching, distance education system, mobile application.

INTRODUCTION

Forming the distance education system in our country based on new information technology tools, and the creation of modern educational information resources and portals is an urgent issue of further informatization of education.

A mobile application is a mobile device, (a component installed in a telephone, communicator, smartphone, etc.) mobile platform is a mobile server and control user interface and business logic device for communication [2].

The analysis of scientific and methodical literature and our own pedagogical practice allow us to distinguish the usual difficulties in the development of technological competence of students.

Current challenges faced by professors and teachers:

• carrying out extremely large-scale work to create appropriate forms and methods of developing students' technological competence based on their individual approach to successfully solving didactic problems;

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• choosing the pace, forms and methods of teaching based on the content, meaning, goals, tasks of the educational system, monitoring and evaluation of personal results

• based on a systematic approach, in order to determine the stages of development of technological competence in students, educational goals and results, based on the interests and educational requirements of the student, all his abilities and provide conditions for revealing and developing talents in order to further realize them;

• creation of a psychological and pedagogical environment for the development of the whole group and each individual student, taking into account the personal qualities of the students;

• factors that arouse interest and motivation in the development of students' technological competence, as well as approaches aimed at the independent organization of educational activities, problems such as management and control of students' professional activities [3].

In turn, based on a systematic approach, students face the following difficulties in the process of developing their technological competence:

• lack of professional activity skills in the educational process, i.e. working with literature, recording lectures, , analyze what has been read, summarize the information read, make short notes and rational conclusions;

• lack of skills in the rational use of didactic materials, information technologies, Internet resources;

• insufficient manifestation of consciousness, independence and activity in the process of solving assigned tasks;

• the most important feature of professional activity is the presence and development of motivations for it, that is, the conditions consisting of the need for knowledge that has found its essence in the subject being studied.

It mandates the development of special didactic conditions to eliminate the problems and difficulties faced by the teachers and students mentioned above in organizing the professional activities of students.

Clarification of the didactic conditions for the development of technological competence in students shows the extent of the problem in the psychological-pedagogical literature, Based on the content of our research, considering the inclusion of the social order of the society, the state education standard, the levels and criteria of the activation of students' independent education, we determined the following didactic conditions for the improvement of the methodology for the development of technological competence of students:

Software prerequisites are structural elements of the program for the development of technological competence of students, selected knowledge, taking into account the connection between educational subjects and materials and teaching tools and methods specified in the qualification requirements of the selected educational field, it is necessary to have the perspective of practical application of skills and qualifications. This condition increases the effectiveness of teaching, , reflects the dependence on the correct choice of training content and the creation

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of educational material in accordance with the purpose of the educational process. It requires the establishment of a relationship between educational materials for all subjects and the organization of an educational process in which the educational material of one subject is required to be supplemented with the educational material of another subject.

Methodological condition - application of acquired knowledge, skills and qualifications in professional activity, the content and organization of training, existing knowledge, constant application of skills and competences in new situations and interactions and takomillashtirishni ta'minlaydi. Bu shart o'qitish samaradorligining talaba rivojlanish darajasi va it reflects the fact that it depends on the formation of professional skills. When introducing this condition, it is required to organize the educational process in such a way that the student acquires knowledge in the process of independent professional activity.

The resulting condition is the choice of such an organizational form of teaching and a means of managing the student's educational activity that "Professional development scale based on a special program" to provide the ability to plan, organize, control and analyze the student's professional activity. This is to organize the control of the quality of learning material, the level of formation of skills and qualifications in such a way that in this case, it is carried out not only at the end of the training, but also during the student's learning process [6].

This is a condition for increasing the effectiveness of teaching and developing students' technological competence, managing their professional activities and reflects the dependence on the correct choice of control tools. It covers a number of issues related to the development of students and management of pedagogical processes in training. In this condition, the level of independence and individuality of the student continuously increases and for this, it is necessary to guide the student's professional activity and organize the training content.

The level of knowledge of students in mastering the educational content of developing technological competence in students, depending on the mastery level, source of education, didactic tasks, requires the proper organization of the teaching process. This implies the need to follow the following didactic conditions:

Organizational conditions - use of methods and forms of professional activity organization, formation of students' individual, small group and teamwork skills, expansion of their capabilities, ready to solve problems, encourage the adoption of non-standard solutions along with standard solutions, practical re-development of cognitive knowledge, which is the basis for the development of technological competence, and selection and implementation of interactive training forms and methods that allow improvement.

Motivational conditions - justifying the place and role of professional activity in the personal development of students, determining students' inclinations to take up professional activities, formation of knowledge needs and provision of an environment for the manifestation of independence in the educational process.

Communicative conditions - determining the scientific and pedagogical foundations of the development of students' technological competence, identifying didactic tools that serve to form the need for individual

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activity in students during the educational process, such as creating a pedagogical system aimed at forming the need for the development of individual activity in students.

Constructive conditions - spiritual mobilization of students for individual self-development, which is an important component of the development of students' technological competence, development of effective methods of training, formation and development of professional activity.

Technological conditions- creating a convenient opportunity for students to develop technological competence, tolerant acceptance of various opinions and ideas expressed by students and ensuring their activeness in the educational process, to determine the confidence of each student in his ability to perform professional activities, regular promotion of their professional activities; characteristics of the student, the educational process, improvement based on needs and intellectual potential.

Educational and methodological conditions: - development of students' technological competence and effective use of the possibilities of modern information technologies to accelerate the professional activity of students, to independently search for information, to eliminate the practical problems of working on it, to develop educational and methodological support for individual professional activities of students.

We believe that it is important to use modern information technologies in our research as a generalized solution to the above-mentioned didactic conditions.

In the course of our research, effective use of modern information technologies to develop students' technological competence, independently search for information, The main means of students' professional activities to eliminate the practical problems of processing on them, an electronic study guide was developed for the subject "Engineering Physics". This electronic study guide has the following didactic possibilities:

- the electronic study guide incorporates all the didactic materials (lecture texts, electronic study guides) created from the science of "Engineering Physics" and develops didactic conditions aimed at developing the technological competence of the students listed above. developed [5];

- it is possible to use it offline through any type of Internet browser by copying the electronic study guide to the computer memory;

- the results of the tests placed in the electronic study guide are sent to the e-mail address of the professor-teacher, both online and offline;

- professional assignments aimed at developing students' technological compe;

- the program for the development of technological competence of students is placed, and the student independently organizes his professional activity based on this program,tence are placed, gives an opportunity to analyze the results.

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