

The Role of Simulation Virtual Educational Tools in Preparing Technology Teachers for Innovative Activities

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Abstract. The article describes the process of preparing future technology teachers for innovative activities.

Key words: Technology, teacher, innovation, activity, training.

The Decision of the President of the Republic of Uzbekistan Sh. M. Mirziyoyev on April 20, 2017 - on measures to further develop the higher education system is a logical continuation of the work on reforming the education system in our country, as well as taking it to a new stage. It is important because it aims to raise. One of the most important aspects of the decision is that special attention is paid to the observance of international standards in the training of highly qualified specialists, the creation of necessary conditions, and the training of personnel with modern knowledge and skills in accordance with the spirit and demand.

The technology of preparing future technology teachers for innovative activities is one of the important issues today. Innovations mean the use of achievements (discoveries, inventions, scientific and construction projects, etc.) achieved by the human mind to increase efficiency in one or another field of activity, respectively, innovations are technological, economic, environmental, management, military, political, socio-cultural, legal and divided into other types. The world of innovation is as colorful and diverse as the spheres of human activity. The power of innovations provides great opportunities in protecting society's lifestyle, health, and increasing its scientific potential.

Innovation (eng. innovationas — introduced innovation, invention) — 1) funds spent on the economy to ensure the replacement of technology and technology generations, innovations in such areas as technology, management and labor organization based on scientific and technical achievements and best practices, as well as their various application in fields and spheres of activity.

Educational technology- is used to define the scientific aspect of innovative technology. This is a systematic way of creating, applying and determining all processes of teaching and knowledge acquisition, taking into account technical and human resources and their cooperation, which sets the task of optimizing educational forms. Today, in the scientific and popular literature, we can find different classifications when defining the concept of "Innovative technology". According to Uzbek scientist N. Sayidakhmedov: "Innovative technology is the influence of the teacher (educator) on students with the help of teaching

(educational) tools and the formation of predetermined personal qualities in them as a product of this activity. process".

"Innovative technology - on the basis of systematic, technological approaches, facilitating the forms of education, guaranteeing the result and objective evaluation, taking into account the interaction of human potential and technical means, clarifying the goals of education, teaching and learning is a set of methods and methods used in the development process". He considers innovative technology as a method of education, in a certain sense, a set of educational processes, tools, forms and methods. "Innovative technology is a system of developing and improving educational processes, content, methods and tools of education based on objective laws of education and diagnostic goals." At each stage of teaching the tasks of innovative technology as a science, defining the content of education, preparing the forms and tools of education, preparing situational texts and tests to be included in the content of the subject, developing professional qualities and moral qualities in a person. development of a system of tasks aimed at mastering, determination of the result of education and level of mastering, preparation of test tasks for their objective assessment.

Innovation is the result of scientific and creative activity aimed at creating new techniques and technologies, developing improved methods and forms of work activity management, and introducing them in order to increase efficiency in one or another field of activity. Since innovation means using the achievements of the human mind (discovery, invention, scientific and construction projects, etc.) to increase efficiency in one or another field of activity, respectively, innovations are technological, economic, environmental, management, military, political, socio-cultural, legal and divided into other species. The world of innovation is as colorful and diverse as the fields of human activity. The power of innovations provides great opportunities in protecting society's lifestyle, health, and increasing its scientific potential. In this regard, great attention is paid to the wide and effective use of innovations.

Advantages of innovative technologies:

- leads to good learning of the teaching material;
- provision of timely communications;
- creation of conditions for putting concepts into practice;
- offering various forms of teaching methods;
- high level of motivation;
- to remember the material well;
- improvement of communication skills;
- growth of self-esteem;
- students' positive attitude towards the content of the subject and the learning process;
- development of critical and logical thoughts, not only helping to master the content;
- formation of problem solving skills.

Disadvantages of innovative technologies:

- it takes a lot of time;
- lack of ability to always control students as needed;
- the teacher's role is low even when learning very complex material;
- "strong" students get low marks because they are "weak" students.

The use of simulation virtual educational tools is of great importance in preparing technology teachers for innovative activities.

Nowadays, new, advanced types of educational tools are widely used in the educational process. Imitation virtual learning tools are one of such effective tools, which help students engage in practical technology activities, including enriching their minds, strengthening theoretical knowledge, and building practical skills and competencies.

The term "virtual" is derived from the Latin word "virtual" and refers to something that has the essence of reality but does not actually exist. Vertuality allows certain social situations to be "animated" on a computer and the computer user is directly involved in this process. "Virtual life" is understood as the technology of three-dimensional (seeing, hearing and feeling) interaction between a person and a computer, which is carried out with the help of integrated multimedia-operational tools.

Imitation virtual learning tools develop students' visual, auditory and tactile (three-dimensional) abilities, while ensuring the improvement of students' (technological) readiness in a short period of time and in real conditions.

Imitative virtual educational tools are an imitation model created on the basis of the theory of mechanical similarity of learning objects as the main educational information, which allows solving certain specified educational tasks in order to improve the quality and efficiency of education. is a complex of technical tools.

The scope of application of simulated virtual educational tools is very wide and includes:

- directing students to the profession;
- initial diagnosis;
- to study the general principles of the studied process or equipment;
- formation of mental, motor and sensory skills;
- formation of alternative skills of equipment diagnosis;
- mastering the experience of managing an experimental facility;
- observation and study of work activities of experienced workers, etc. k.;

Imitation is the possibility of speeding up or slowing down a certain process created in the computer and with its help during the use of virtual educational tools. Imitative virtual educational tools have a special didactic value according to the same aspect, with the help of which students have the opportunity to fully master the essence of the processes necessary for the formation of knowledge, skills and competences.

The advantages of imitative virtual educational tools are described as follows:

- opens up new communication opportunities;
- the possibility of using new methods of remote control will be created;
- from a psychological point of view, the student quickly adapts to virtual life;
- students develop "virtual production" skills and competencies;
- will have the opportunity to self-control through the training process;
- acquires the ability to distribute his physical and psychological strength during the production process:
- achieves full freedom in the process of acquiring new knowledge, skills and abilities;
- recognizing his mistakes, he can eliminate them by repeating the imitative virtual situation;

The complexity of simulated virtual educational tools depends on the accuracy and precision of images and animations. However, as an educational tool, it is necessary that virtual simulation tools meet the following psychological and pedagogical requirements:

- that the skills formed in them correspond to the skills of labor activity according to its structure;
- that educational tools do not have a negative effect during the transition to real conditions;
- to envisage a change in the conditions for its use;
- it must be directed to the methodical goal and provided with the necessary number of exercises.

In general, it is necessary to create the necessary conditions for preparing a student of modern technology for innovative activities, to develop designing, forecasting, construction, modeling skills and competencies, to use new advanced teaching technologies and simulation virtual educational tools. 'training creates an opportunity to achieve high-quality results in a short period of time, spending less effort and less money.

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