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THE PROCESS OF DISTANCE LEARNING OF STUDENTS IN A TECHNICAL UNIVERSITY

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Abstract:

The article deals with the issues of distance learning of students in special disciplines of technical specialties, which have their own characteristics associated with the complexity of the presentation of learning objects, as well as a control system for distance learning, which is based on operational feedback in the structure of educational material.

Keyword

distance learning, automatic control system (ACS), education, computer technology, technical discipline, information technology, automation, technical university, automated method, audience, electronic computers (computers).

Introduction

The socio-economic situation in the world has had a great impact on the learning process, including training in technical universities.

The situation caused by the spread of coronavirus infection has created the need for distance learning for students. Teachers of technical universities for the first time faced with the need for distance teaching and distance learning technologies. Zoom , Skype , Discord and MOODLE were offered as a learning platform , where a stable connection with students is required, the possibility of simultaneous video communication, the presence of a list of students present at a distance lesson, the possibility of demonstrating a computer screen to show video materials, etc.

The learning environment of a modern technical university is characterized by the intensive introduction of information educational resources, due to which the academic success of students directly depends on their readiness to use innovative forms of education [1].

The improvement and development of distance learning is carried out mainly by the progress of telecommunication means and channels, which enhance the effect of the presence of a student at a distance in a real audience. Means that expand the ability of students to participate in a remote lecture or seminar through the development of feedback systems and involvement in the educational process - interactivity.

The goal of higher technical vocational education is not so much the assimilation by students of certain knowledge, skills, skills, but rather the achievement by them of a level of education that would form a set of competencies that would allow the individual to be mobile in the achievements of scientific and technological progress and changing socio-economic conditions and provide the need for continuing education and education [2].

Professional socialization of a student occurs simultaneously at two levels: institutional and personal . At the institutional level, professional socialization describes the student's activity, directed at the expense of the efforts of society (family, school administration, university, enterprise, religious organizations, the state, and others) in order to ensure sustainability, the preservation and transfer of professional experience, as well as its change based on innovative enrichment. . At the personal level, professional socialization describes the student's possession of a set of professionally significant qualities (personal characteristics and traits) and strategies for effective interaction with the professional environment, the use of which ensures his integration into the existing system of professional relations and connections [3] .

An important point in distance learning is that the student's knowledge is not lower than in classroom learning. However , we must remember that technical education implies not only the acquisition of theoretical knowledge, but also the ability to work on special equipment. That is why a number of difficulties often arise with distance learning in technical disciplines.

But also, in addition to the advantages, there are also disadvantages of distance learning (see Fig. 1.) [4].

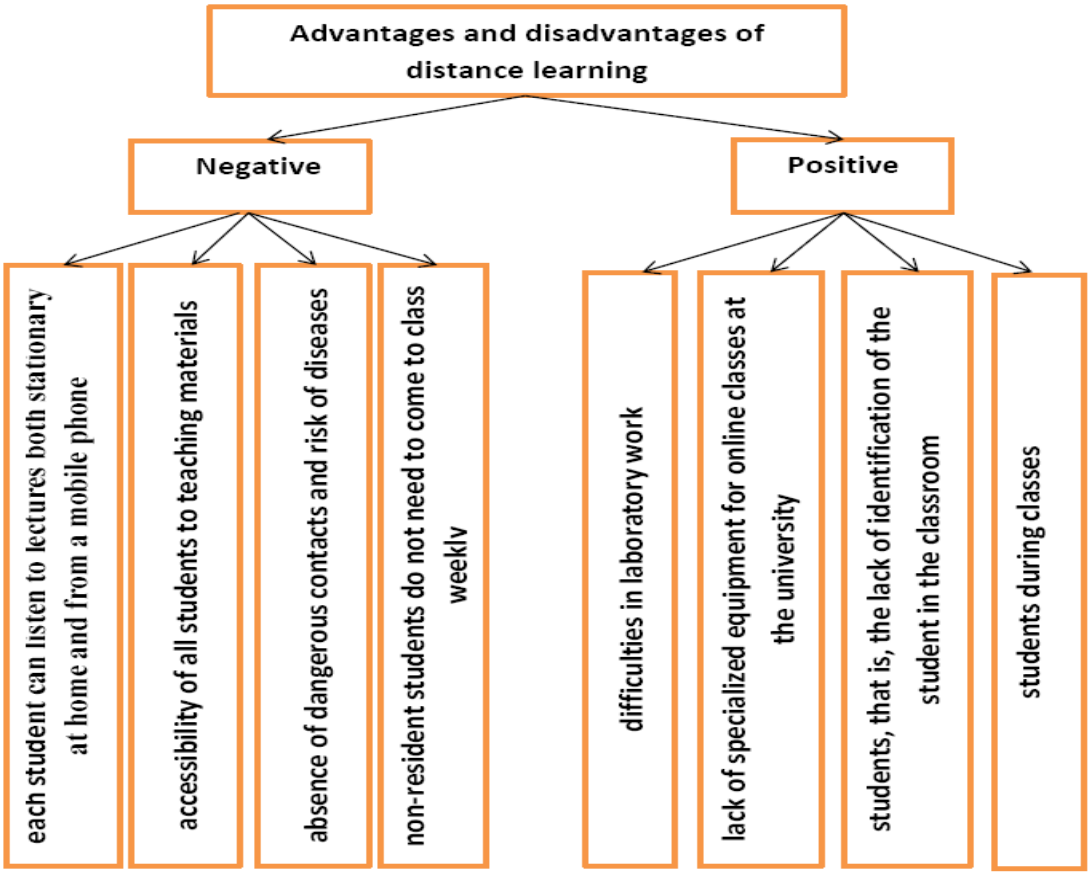

Fig.1. Advantages and disadvantages of distance learning.

Based on the use of the achievements of science and technology, it is necessary to accelerate the introduction of automatic control systems using modern microprocessors and microcomputers, the introduction of automated methods and means of quality control and product testing as an integral part of technological processes [5], as well as the growing requirements for an automatic control system (ACS) technological processes, as well as devices and mechanisms, gave a strong impetus to the development of means of primary transformation and information processing [6].

The following main forms of distance learning can be distinguished:

- video lectures (Skype , Zoom technologies);
- videoconferencing (off-line , on-line);
- chat - classes (consultations, current assessment, final assessment);
- webinars (on-line seminars, trainings, laboratory and practical classes).

Currently, the Jizzakh Polytechnic Institute also uses the possibility of distance learning for some students who, for one reason or another, cannot attend classes in the classroom: provides students with methodological materials in electronic form, conducts tests in various disciplines; provides e-mail, through which the student can contact the teacher, etc.

At present, it is customary to single out the following main directions for the introduction of computer technology in education. The use of computer technology as a means of teaching, improving the teaching process, increasing its quality and efficiency; the use of computer technology as a tool for learning, self-knowledge and reality; consideration of the computer and other modern means of information technology as objects of study; the use of new information technologies as a means of creative development of the student; the use of computer technology as a means of automating the processes of control, testing and diagnostics; organization of communications based on the use of information technology tools in order to transfer and acquire pedagogical experience, methodological and educational literature; use of modern information technologies for the organization of intellectual leisure; improving the management of an educational institution and the educational process based on the use of a system of modern information technologies. The listed capabilities of a computer can contribute not only to the development of abilities, the formation of skills and desire to learn, and the creation of conditions for the full assimilation of knowledge and skills [7].

In accordance with the method of parametric block diagrams, elementary transformations of the considered physical process are represented as a sequence of the simplest links [8].

The current trend in the development of modern education is the formation of transnational models that provide not only the maximum unification of the content and forms of education, but also a single socio-cultural space. One of the basic components is e-learning technologies, which act as an integrative tool for solving professional problems through software, methodological, informational and didactic support [9].

With distance learning, the quality of education is reduced. Because it becomes much more difficult to control misunderstanding or lack of desire to understand the material by some

students than with face-to-face contact in the classroom. Without seeing the audience with students, it is difficult to judge the interest of the majority of students in the issues discussed in the classroom.

Based on the use of the achievements of science and technology, it is necessary to accelerate the introduction of automatic control systems using modern microprocessors and microcomputers, the introduction of automated methods and means of quality control and product testing as an integral part of technological processes [10] .

To attract students, when presenting the material, it is possible to give interesting examples from real life, but this will not give the same result as when communicating in one audience.

A large amount of information often makes it difficult to choose the optimal scheme for constructing a converter. Therefore, at present, methods for designing converters at the level of block diagrams using a computer are becoming more widespread [11].

Therefore, distance learning can be considered mainly as an additional way of teaching students. But the skillful organization of distance learning, of course, can help to obtain the necessary knowledge to master certain parts of the technical educational program.

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