VIRTUAL EDUCATION IN TEACHING GENERAL PROFESSIONAL SCIENCES TECHNOLOGIES PLACE

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Abstract

Advanced technology and programmatic education by means of wide to use big trust that it is being watched to account let's say, of education modern methods information and communication technologies with integration demand enough. This about developed in countries of students professional competence, including, information technology competence development effective models working exit, interactiveeducation environment organization to grow and to practice of increase didactic guarantee improvement is important importance profession enough.

This in the article above thoughts attention received without technique directionalThe issue of improving the quality of teaching general professional subjects in higher education institutions technical in systems information Technology science in the example of considered.

Keywords: virtual education, training process, virtual didactic tools, diligenceenvironment, information technology competence, virtual education.

Annotatsıya

Dunyo miqyosida rivojlangan oliy ta'lim muassasalarida ilg'or texnologiya va dasturiy ta'lim vositalaridan keng foydalanishga katta e'tibor qaratilayotganliginihisobga olsak, o'qitishning zamonaviy usullarini axborot-kommunikatsiya texnologiyalari bilan integratsiyalashni taqozo etadi. Bu borada rivojlangan mamlakatlarda talabalarning kasbiy kompetentligi, jumladan, axborot-texnologik kompetensiyasini rivojlantirishning samarali modellarini ishlab chiqish, interaktiv ta'lim muhitini tashkil etish va amalga oshirishning didaktik ta'minotini takomillashtirish muhum ahamiyat kasb etadi.

Ushbu maqolada yuqoridagi fikrlarni e'tiborga olgan holda texnika yo'nalishli oliy ta'lim muassasalarida umumkasbiy fanlarni o'qitish sifatini oshirish masalasi "Texnik tizimlarda axborot texnologiyalari" fani misolida qaralgan.

Kalit so'zlar: virtual ta'lim, o'quv jarayoni, virtual didaktik vositalar, ishchanlik muhiti, axborot-texnologik kompetensiya, virtual ta'lim.

Аннотация

Учитывая, что в развитых высших учебных заведениях мира большое внимание уделяется широкому использованию передовых технологий и программных средств обучения, необходимо интегрировать современные методы обучения с информационно-коммуникационными технологиями. В связи с этим в развитых странах важна разработка эффективных моделей развития профессиональной компетентности студентов, в том числе информационно-технологической, а также совершенствование дидактического обеспечения организации и реализации интерактивной среды обучения. В данной статье, с учетом вышеизложенного, вопрос повышения качества преподавания общепрофессиональных предметов в технических вузах рассматривается на примере предмета “Информационные технологии в технических системах”.

Ключевые слова: виртуальное образование, образовательный процесс, виртуальные дидактические средства, рабочая среда, информационно-технологическая компетентность, виртуальное образование.

Today, a comprehensive reform is underway in our country’s education system. reforms advanced foreign education experience study, analysis to grow and education institutions to the conditions adaptation socio-pedagogical and didactic features working exit requirement will reach. Current society progressive to hold in the phase “knowledgeable” education from the approach to competence directed to the education system transition and in graduates possession in sight to the profession being pursued circle The formation of personal characteristics as one of the current pedagogical problems under consideration [1].

Information technology in the higher education system based on the generalization of foreign educational experiences education portals to form, modeling methods inside cover received virtualcreating educational technologies and tools, in the technical processes available to students effective in developing the ability to apply creative technological ideas scientific research take is going. In our country technique supreme educationin institutions future in engineers information technology competencies Special attention is paid to improving the teaching process of general professional subjects in the formation attention is being paid to this. In this regard, the President of the Republic of Uzbekistan issued a decree “On Information further improving the education system in the field of information technologies, scientific research develop and them IT industry with integration to do measures “about” in the decision information technologies in the field training programs and improving teaching methods, promoting interaction between educational institutions and IT companies cooperation reinforcement according to clear tasks done increase by designating In this regard, general vocational subjects in the IT field are taught in educational institutions.improving

teaching efficiency, in technical higher education institutions "Technical in systems information technologies" science in teaching digital from technologies use and teachers and students from them use competence develop and new methodologies working exitcurrent is considered. Our society various in the fields activity indicator of experts professionalism level their computer technologies possession with also is determined. Obviously, education in the process new information from technologies targeted use on the road to put is necessary. So virtual learning tools are promising for informing the educational processfrom directions one is considered [2].

Technique supreme education in institutions technical in systems information technologies"The use of virtual learning tools in the teaching process and in lessons The use of virtual technologies increases students' motivation to study, It helps to increase curiosity about science and educational effectiveness. That's why for also today's on the day education in the system contemporary digital technologies virtual software from the means effective to use separately attention is being given. This and education in the process to students various from sciences knowledge giverpedagogue personnel modern software from the means uses for, the most first of all, to form information and technological competence in this area, to improve the education system technical and software support, full access to the Internet to create only through effective to the result can be achieved.

"Technical in systems information technologies" science teaching to the problems aimed at scientific research from transferring goal teaching and to teach, Developing and implementing methods that improve efficiency application, application of educational and information and communication technologies in teaching solving problems It consists of learning.

"Technical in systems information technologies" science teaching methodology own enriching and updating the essence of the content, taking into account existing events and processes purpose and to the tasks appropriate methods of coming with learns.

Every how pedagogical technology, including universal worldview technology aimed at shaping also involves cooperation, communication, their The interaction between them meets the most modern requirements, and the teacher's education upbringing organizing the process and management principles, roads, universal Methods and techniques that serve to form a worldview, the personality of students activity right organization to, they with cooperation to do, to communicate introduction, pedagogical activity organization to grow in the process to the surface incoming problem and viewsto create an atmosphere of collaborative problem-solving, creative collaboration, and teamwork in the audience circle shape and methods with armed It should be.

The scientific research methods of this discipline are aimed at educating the younger generation, spreading knowledge internal connections and relationships inherent in the real processes of teaching and learning It is understood as a set of ways, methods and tools for

verification, knowledge and reporting. This science scientific research methods how much if it develops and if improved, education-upbringing content update and improvement this at the level rises.

Objective the world to know in theory what study and to teach need, whomand how upbringing necessary said issues there is is, they mutual integral The teacher must not only know the laws of teaching, but also apply them. done increase for comfortable conditions creating give to receive also important. This someDeep understanding of the leading elementary laws and their application in the learning process Such laws are known in didactics as educational principles or didactic principles that name received.

Material means of education are otherwise called didactic tools. Didactic tools often emotional to modality according to classified (which intuition Depending on their bodies and the methods of presenting information, they can affect the educational process. On this basis, based on the existing classification of didactic tools, their main types we emphasize:

general targeted software to supply service show tools;

electronic simulators;

measuring and monitoring the level of students' qualifications, skills, and knowledgeintended for software supply;

necessary for carrying out simulation and mathematical modeling was software supply;

reference information search systems;

laboratory programs (virtual and remote entrance);

electronic textbooks;

automated teaching systems;

expert teaching systems;

industrial systems, as well as tools for automating professional activities of them analogues and others.

“Technical in systems information technologies” from science to be created didactic to the tools to be placed requirements:

Didactic tools are conceptual, figurative and visual means of presenting educational material. mobile components built on interdependence.

Didactic tools training material high orderly structure in appearance provide. Interdisciplinary logical mutual of dependence to be taken into account.

Didactic tools provide the learner with step-by-step instructional material that he/she has mastered various similar controls done increase based on determination of possibilities creation[3].

Didactic tools working exit and to use placed general requirementsIn addition to accounting, it also affects the success and quality of its creation. doer one row psychological demands also is placed.

Below to didactic tools to be placed psychological requirements quoted:

The presentation of educational material in didactic tools is not only verbal, but also It must also correspond to the sensory and demonstrative states of the cognitive process. Pedagogical software tools are used in perception, attention, thinking, imagination, memory storage such as psychological processes features into account received without working exitnecessary;

The educational material in didactic tools should take into account the age of the learners, the level of knowledge in consideration take structure necessary;

didactic tools aimed at developing figurative and logical thinking to be necessary.

Virtual education technologies based education significant at the level technician and software to the infrastructure relies on. That's why for virtual educational technologies in creation into account to be taken necessary was from principles one training material The principle of distribution is taken into account when developing virtual didactic tools. The second important principle that should be taken into account is the interactivity of the educational material. Virtual education from technologies use, information technologies about to acquire knowledge to oneself typical characteristics to the maximum extent into account This allows the teacher to teach the learner via computer. training information delivery in giving very also important. This in a way, virtual didacticdevelopments in creation The third principle to consider is learning information multimedia presentation to do.

Education methods - of teaching own in front of put to their goals achieve It means methods and ways of theoretical and practical orientation of educational material. Teaching methods are the interaction of the teacher and the learner in the educational process. how to enrich, how to organize and conduct the educational process and this in process education recipients how actions to do necessaryby designating gives. Also, education method teacher and students reading It is a path of theoretical and practical cognitive activity aimed at fulfilling the tasks of education. Another requirement for these methods is that knowledge must be well-founded and thorough. to be.

“Information in technical systems” using virtual educational technologies technologies science to the profession directing teaching and student by being mastered knowledge future professional in the activity caught instead understanding to reach, theory with of practice per unit to achieve, his/her promising motivation to the body to bring through person’s perfection provision is based.

Virtual didactics in teaching the subject "Information Technologies in Technical Systems tools application to the following opportunity creates:

of education humanization to provide;

training process efficiency increase;

development of the learner's personal qualities (assimilation, access to knowledge)thirst for independent learning, self-education, self-improvement aimed at ability, creative abilities, received knowledge to practice hand to receive, to study was interest, attitude towards work);
education recipient's communicative and social abilities development;
with the help of computer tools and information electronic educational resources, each open and distance learning at the expense of individual education individualization and differentiation opportunities noticeable at the level expands;
education to the recipient active knowledge recipient subject as look, his/her dignity body to take;
education recipient's personal experience and individual features into account to take;
conducting independent learning activities, in which the learner independently studies and develops;
education in recipients, their own professional tasks successful to performto help them adapt to the current rapidly changing social conditionsmodern education use of technologies skills harvest does [4].

The main goal of designing virtual educational technologies is to enable students to to focus on the learning process, educational didactic tools and objects virtual education models with together obvious manifestation to do, this during remembering to stayfurther relief, active to understand, training to the process simple book instead of It involves using computer tools that enhance people's emotional memory. Therefore, when designing virtual education, scientifically based requirements and to the stages rely on is necessary [5].

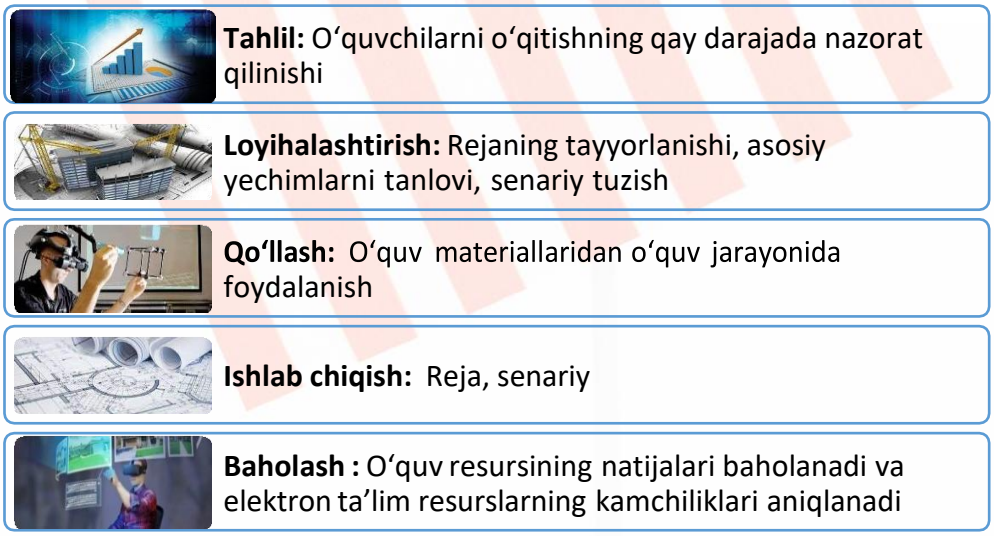

Figure 1. Virtual education technologies to create, to make education to the system current stages of development.

Virtual learning in the process of teaching the subject "Information Technologies in Technical Systems" didactic tools using education technologies current to grow methodology improvement for, initially electronic education current to reach related one how many analyzing the scientific and methodological literature of researchers and showing them pedagogical and psychological problems were studied. As a result of the research conducted The following problems were identified: pedagogical problems in the software tools being created and psychological approach; professors of higher education institutions in their teachers computer literacy enough at the level not; professor teachers lack experience in using pedagogical software tools; current time on demand customized didactic tools and electronic educational and methodological insufficient development of complexes; use of distance learningfor modern software tools and them to apply related scientific developments lack; only methodological teaching requirements and system there is not; methodology for applying computer pedagogical software tools to the educational process in full scientific unfounded.

In conclusion, it can be said that the development of technology has a significant impact on education. brought innovations to the learning process and paved the way for the development of virtual learning environments created. Nowadays every one someone's work in the activity permanent accordingly digital There is a need to use technologies. Learning from virtual didactic tools in the process use education quality and education recipients mastery efficiency to increase service does. In this students science related study Visual learning of materials and practical training tasks in virtual laboratories the opportunity to conduct experiments several times using it and students can learn about science event and processes virtual in the form to see, to observe will have [6].

This about take to go affairs education in the system modern information the application possibilities of information technologies, the students' use of information technologies targeted use and information technology competence to increase take is coming. ThisIn the process, virtual didactic tools are applied to each subject studied by students. increases the scope of mastery of these subjects through. As a result, the ratio of this subject to interest and motivation will increase. At the same time, students will be able to spend their free time productive to spend, thinking circle further to expand and imagination to develop help gives [7].

This, in turn, will help future engineers in technical higher education institutions. preparation to the system new to look requirement will reach.

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