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7. O‘zbekiston Respublikasining “Transport to‘g‘risida”gi qonuni 2021-yil 9-avgust, O‘RQ-706-son.

8. Транспортный маркетинг: Учебник [Текст] / В.Г. Галабурда, Г.В. Бубнова Г.В., Е.А. Иванова и др. // Под редакцией В.Г. Галабурды. – М.: ФГОУ «Учебно-методический центр по образованию на железнодорожном транспорте», 2011. – 452 с.

Соколов, Ю.И. Экономика качества транспортного обслуживания грузовладельцев: монография [Текст] / Ю.И. Соколов. - М.: ФГОУ «Учебно-методический центр по образованию на железнодорожном транспорте», 2011. – 184 с.

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USE OF INTEGRATED TECHNOLOGIES IN VOCATIONAL EDUCATION

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Abstract: There is discussed in the article importance of ICT and pedagogical technologies implementation in «Food sekuritu and safety eguipment» teaching in higher education institutions. The article clarifies informational communication and pedagogical technologies, integration, integrated education and these meanings.

Keywords: IT - informational technology, pedagogic technology, communication, integration, integration education, communications, animations.

Introduction. The socio-economic reforms that have been carried out and are increasing in the country have led to fundamental changes in all aspects of society, including the education sector, its development, compared to other social institutions, is aimed at securing the future, which is worthy of every nation, every family, every citizen of Uzbekistan. , aimed at developing the formation of a safe life. It is important to develop this in professional educational institutions. In this regard, the demands placed on the quality of the professional activity of professors and teachers, including teachers of "Labor protection and safety technology" are increasing.

The analysis of the development dynamics of accidents, injuries and injuries caused by technical, sanitary-hygienic, psychophysiological, organizational reasons shows that in the coming years, the urgency of combating the causes and consequences of accidents, occupational diseases, and injuries occurring at workplaces will increase.

The relevance of the problem of improving the use of integrated technologies in imparting knowledge on "Labor protection" to the students of professional education is related to the need to solve the problems between the need to protect the health and safety of workers in society and the actual situation of workers today. Until now, the methodology of organizing practical and laboratory trainings related to labor protection for teaching the science of "Labor protection" in professional educational institutions with the help of

information communication and pedagogical technologies has not been developed, but scientific research works on creating new software are being carried out.

According to the results of the pedagogical experiment, students can master 80% of the practical training they have conducted, as a result of the analysis and synthesis of other information they have written about them.

Decree No. 5812 of the President of the Republic of Uzbekistan dated 06.09.2019 "On additional measures to further improve the system of professional education", Decree of the Cabinet of Ministers of the Republic of Uzbekistan dated 07.08.2020 "Regulating the system of continuous primary, secondary and secondary special professional education in the Republic of Uzbekistan -Decision No. 466 "On approval of legal documents", Decision No. 4623 of the President of the Republic of Uzbekistan dated 27.02.2020 "On measures to further develop the field of pedagogical education", Decision No. 4623 of the President of the Republic of Uzbekistan dated 06.11.2020 "On further improvement of the educational system" Decision No. 4884 of the President of the Republic of Uzbekistan dated 31.12.2020 No. 4939 of the Cabinet of Ministers of the Republic of Uzbekistan dated 15.05. The use of integrated technologies in vocational education effectively serves the implementation of the tasks defined in the Resolution No. 287 of 2020 "On measures to organize the activities of the national system of development of professional qualifications, knowledge and skills in the Republic of Uzbekistan" and other regulatory legal documents on the subject.

With the help of information technology, when there is an opportunity to demonstrate the mechanisms "live", creating an animation related to the topic with the help of a computer and introducing it in the lesson can have a great effect on increasing the effectiveness of the lesson. Therefore, it is not possible to explain the subjects of the "Labor protection and safety techniques" training program for professional learners in traditional ways and increase the level of mastery of the subjects. In order to solve this problem, it is necessary to create a method of covering selected subject materials based on information and pedagogical technologies. In the integration of information communication and pedagogical technologies, the improvement of the teaching methodology of the subject "Labor protection and safety techniques" consists in the development of integrated technologies and the basis of their use, content and methodical system.

Level of study of the problem. In the world, many scientists have conducted scientific research on improving the teaching of labor protection on the basis of nanotechnology, information and pedagogical technologies. Examples of them include L.A. Savchenko, Michael Seery, Stephanie O'Brien, K.B. Oralbaeva, L.A. Chernisheva and others. Scientific research works based on information and pedagogical technologies in improving the quality of education in Russia E. O. Emelyanova, E. Yu. Zashivalova, A. A. Syromatnikov, V. N. Likhachev, A. A. Podgornova, A. S. Artemeva, O. E. Gobunova, N. S. Mikhaylova, A.P. Conducted by Ershov. M.M.Aripov, A.A.Abdugadirov, A.Kh.Abdullaev, N.V.Apatova, U.Sh.Begimkulov, T.Boboev, M.Lutfullaev, J.O.Tolipova on the implementation of information and pedagogical technologies in the educational process in Uzbekistan , D. Yusupova, it can be noted that E. U. Eshchanov, F. A. Alimova, L. T. Zaylobov, N. A. Anvarova carried out research in teaching the science of labor protection by introducing information and pedagogical technologies.

The scientific novelty of the research is as follows:

- use of pedagogical technologies in teaching "Labor protection and safety techniques" in professional educational institutions and explaining the meaning of these technologies to students;

- to explain the methods of teaching "Labor protection and safety techniques" using information technologies;

- to explain the methodology of teaching labor protection and safety techniques with the help of integration of information-communication and pedagogical technologies;

- explaining the meaning of integration and integrated technologies to learners.

The object of the study was the educational process of "Labor protection" in professional educational institutions, where the science of labor protection is deepened.

The subject of research. It consists of methods and tools to improve the content and form of the methodology of teaching labor protection in the integration of information and communication and pedagogical technologies in professional educational institutions where the science of labor protection and safety technology is taught.

Research methods. Studying and summarizing the advanced work experiences of teachers of professional educational institutions; modeling, sociometric (questionnaire, test), survey; direct and indirect pedagogical observation; to compare pedagogical experiment-test; methods of mathematical statistics. In the study, the issues of integrated technologies and their use in the educational system, their essence and development of the methodical system are described, observation, scientific-methodical analysis and generalization methods are used.

A number of practical research works are being carried out in our country in order to develop the education system and increase its effectiveness. The main content of such research works is as follows:

- bring the content of education to a new content based on foreign experiences and create new generation educational literature based on them;

- improvement of teaching process of educational subjects using computer technologies;

- introduction of new generation information and communication technologies into the educational process;

- introduction of modern pedagogical, innovative and integrative technologies into the educational process, etc.

Methods and tools of education are of particular importance in providing quality and guaranteed education in the educational process. It is important to use integrated, that is, integrated technologies in the organization of the educational process at the level of modern requirements.

The word integration corresponds to the Latin word "integratio" and in Uzbek language it means to restore, start again, fill. The relationship between individual parts and elements is a concept that represents their integration.

The word integration is also used to describe the process of convergence and interconnection of disciplines. The concept of integration is one of the important scientific terms, it is a methodological tool for generalization and drawing conclusions. In science and technology, with the help of this methodological tool, general models and algorithms of harmony between the contents of a process or events are created.

The essence of integration is also of particular importance in solving the problems of ensuring harmony in the content of education provided in the continuous education system. The main concepts of subjects taught through integration are summarized. The concept of integration is also used to establish a

relationship between information about a research object and methodology.

Integrated technology refers to technologies resulting from combining, summarizing, and establishing relationships between two or more technologies.

The use of integrated technology in the educational process means the state of conducting activities by combining, summarizing and establishing connections between pedagogical and information communication technologies.

The level of students' mastery of educational subjects is one of the main factors determining the quality and effectiveness of the lesson. In improving the quality of education, it is important to properly plan the lesson and define the goal correctly and clearly. When setting the goal, it is important to determine the time it takes to achieve the result, the needs and capabilities of the learner, the methods directed at the learner to try to achieve the goal, and the types of control that determine the result. In order to achieve this goal, it is necessary to introduce modern pedagogical technologies into the educational process.

Pedagogical technology is a product of the integration of pedagogical and technological approaches used in the educational process. Different pedagogues approached the concept of pedagogical technology in different ways and defined it differently.

Pedagogical technology is a set of educational methods, methods and educational tools, it is a set of organizational and methodological tools of the pedagogical process. Pedagogical technology is a systematic method of creation, application and determination of the entire process of teaching and knowledge acquisition, taking into account technical resources and human interaction, which sets itself the task of optimizing educational forms. Pedagogical technology consists of the process of transferring and acquiring information in a form and method convenient for learning. Pedagogical technology is a process that guarantees the education of the learner to study independently, acquire knowledge, and think.

In the process of pedagogical technology, under the guidance of the teacher, the learner independently acquires knowledge, learns, assimilates. Therefore, pedagogical technology consists of the activity of influencing a person according to a predetermined goal.

Information technology is the total methods, devices, methods and processes used to collect, store, search, process and disseminate information. Information technologies - ways, methods and methods of using a computer in the process of collecting, processing, storing, transmitting and using data. Information technology is a process related to the use of modern computers in order to reduce the laboriousness of the processes that use this information for processing information and increase their reliability and speed. Therefore, information technology means a set of methods and tools for collecting, storing, transmitting, changing, and processing information.

Modern information technology is a technology that can enable to raise education to a new level of quality by organizing the educational process related to the formation of knowledge, skills and abilities for young people studying in educational institutions based on new approaches.

Communication is derived from the English word "communication" and is used in Uzbek in the sense of communication, message, means of communication, means of information, connection, communication, connection, methods and means of information transmission. A communication system is a system that performs auxiliary tasks related to information transmission among other systems. Communication technologies are

technologies that perform the function of routing (characterizing) and switching connections for the transmission of information between computers in a network. Information and communication technologies of the educational system perform the following basic functions and requirements:

●recording of students and their activities of using the information environment;

● taking into account the support of the activities of educators and learners through counseling;

●recommendation to learners for independent learning of the necessary educational materials;

●organization of control of knowledge, skills and abilities acquired by students during the educational process with the help of tests, as well as oral and written control;

● to enable remote use of the information resources of the educational institution to use the educational materials, additional literature and other tools recommended for students in the information base;

●organizing advice and other assistance of the employees of the educational institution remotely in performing virtual laboratory exercises and practical assignments, etc. The main content of educational subjects in the educational process organized on the basis of integrated technologies will consist of the following methodological materials1 : 1 Borovskikh. T.A. Individualization of education, chemistry, and sovremennyx obrazovatelnyx technology. - M., MPGU. Virtual Gallery, 2011. - p. 217.

● electronic teaching-methodical complexes;

● a set of test programs and questions for self-control;

● virtual laboratory works and their description;

● independent work and control work;

● computer programs, electronic references, electronic applications;

● additional software.

As a result of the use of integrated technologies, training sessions are organized remotely using the capabilities of network technologies. This is the basis of distance learning.

The main task of network technologies in distance education is to ensure communication between the teacher and the student during the educational process. The educational process organized without constant communication between the teacher and students will not give the intended effect. In the daytime form of the educational system, communication between the teacher and the student is carried out at the same time, in the same place, in the classroom. In distance education, this process is carried out through computer network technologies based on telecommunication tools.

The integrated state of the three technologies discussed above can be considered as the most optimal technology for teaching and learning. Creating an information-educational environment for students using the possibilities of pedagogical and information technologies, integrated technologies of delivery processes to students on the basis of communication technology tools is the main task of the main technologies.

The education system of our country is currently undergoing major changes, as this trend of education development is common to all developing countries. At such a stage, the national economy needs free-thinking, entrepreneurial, mature specialists who are knowledgeable in their chosen profession, who can independently find solutions to problems. To train such specialists, it is required to apply the acquired theoretical knowledge in practice and to have the ability to independently master new scientific problems in science. Because the large-scale reforms carried

out in the field of education today, the adopted state decisions regarding the improvement of the content of education require connecting education with life, increasing the effectiveness of teaching, raising a well-rounded generation for the rapidly developing society.

The use of Internet information in the subject of "Labor Protection and Safety Techniques" teaches students to express their opinions in a group, to think and work independently, to be resourceful, and to be present. It increases their interest in the science of "Labor protection and safety technology", encourages students to be active. Therefore, it is aimed to analyze and illuminate the issue of introducing innovative technologies into the teaching process of "Labor Protection and Safety Techniques" and improving it from all aspects.

The changes taking place in the field of education, the influx of a large flow of information, the emergence of the need for rapid acquisition of knowledge require the introduction of integration in the fields of education. Also, the use of modern information technologies in teaching is gaining special relevance.

When we studied the current situation regarding the introduction of the use of information and communication and Internet information in the lessons of "Labor protection and safety techniques", most teachers noted that the lesson processes were interesting and effective. There are not enough scientifically based templates and guidelines for the introduction of information technologies into the educational process in continuing education.

The use of information and communication technologies (ICT) in the classroom opens up new perspectives and effective teaching opportunities for teaching "Labor protection and safety techniques". At the same time, the development of independent reading skills leads to certain literacy in working with information technologies, which is a necessary condition for the intellectual development of students. Using information and communication technologies in the classes of "Labor Protection and Safety Techniques", homework can be assigned remotely by the teacher and the tasks completed by students can be checked by using Internet resources. ICT is the most convenient way to control learning materials.

In short, integrated technologies are of particular importance in organizing the educational process, summarizing and supplementing the educational content at the level of modern demand, and help to guarantee the achievement of the intended goal.

The results of the research and the conducted experiments were the basis for drawing the following conclusions:

1. The skills and competencies formed by students during the teaching of "Labor Protection and Safety Techniques" in the direction of professional education general vocational sciences were determined, and it was explained that it is necessary to use information and pedagogical technology tools depending on the knowledge in the teaching process.

2. The didactic functions of the information technology tools used in teaching the science of "Labor protection and safety techniques" were determined and the determination of the ways of their implementation created a basis for increasing the educational efficiency, and the scientific-methodical aspects of the educational process were determined.

3. The scientific-methodical basis of using information communication and pedagogical technology integration in theoretical and practical lessons in the teaching of "Labor Protection and Safety Techniques" was developed and applied to the educational process.

Based on the above considerations, the following recommendations were developed in connection with the research

work:

1. The tools of information and pedagogical technologies are considered a necessary component of the educational process organized in the subject of "Labor protection and safety techniques". Therefore, the use of information and pedagogical technologies in the teaching of all subjects included in the curriculum in accordance with the educational content guarantees the effectiveness of education.

2. It is necessary to include information and pedagogical technologies in the educational process organized in the training and retraining courses of teachers of labor protection and safety techniques, who are engaged in pedagogical activities in the field of professional education.

3. Using animations, models, slides, and computer-aided tests of knowledge, skills, and abilities of students in the field of "Occupational Protection and Safety Techniques" that are products of information technology created during the research, successful teaching of "Occupational Protection and Safety Techniques" in general secondary schools recommended to use.

4. Since the use of information technology products in the teaching of labor protection and safety techniques requires specific training from the labor protection teacher, the results of the research are used in the system of pedagogical personnel training, as well as retraining and qualification of teachers of labor protection and safety techniques in secondary special, vocational, professional education. It is recommended to use it in the refresher course.

5.

References

1. Ўзбекистон Республикаси Президентининг 06.09.2019 йилдаги “Профессионал таълим тизимини янада такомиллаштиришга доир қўшимча чора-тадбирлар тўғрисида” ги 5812-сонли Фармони.

2. Ўзбекистон Республикаси Президентининг 27.02.2020 йилдаги “ Педагогик таълим соҳасини янада ривожлантириш чора-тадбирлари тўғрисида” ги 4623-сонли қарори.

3. Ўзбекистон Республикаси Вазирлар Маҳкамасининг 07.08.2020 йилдаги “Ўзбекистон Республикасида узлуксиз бошланғич, ўрта ва ўрта махсус профессионал таълим тизимини тартибга солувчи норматив-ҳуқуқий хужжатларни тасдиқлаш тўғрисида” ги 466-сонли қарори.

4. Ўзбекистон Республикаси Вазирлар Маҳкамасининг 15.05.2020 йилдаги “Ўзбекистон Республикасида касбий малакалар, билим ва кўникмаларни ривожлантириш миллий тизими фаолиятини ташкил этиш чоралари тўғрисида” ги 287-сонли қарори

5. Толипов Ў.Қ., Усмонбоева М. Педагогик технологияларнинг татбиқий асослари. - Т.: «Фан», 2006. –264-б. 6. Амиров Д.М. ва бошқалар. Ахборот-коммуникация технологиялари изоҳли луғати. - Т., 2010. –576-б.

7. Абдуқодиров А., Пардаев А. Таълим ва тарбияда замонавий педагогик технологиялардан фойдаланиш услубиёти. – Т.: «Истеъдод», 2014.

8. Бегимқулов У.Ш. Педагогик таълимда замонавий ахборот технологияларини жорий этишнинг илмий-назарий асослари. – Т.: «Фан», 2007. – 164-б. 9. Боровских Т.А. Индивидуализация обучения химии на основе современных образовательных технологий. - М.: МПГУ. Виртуальная галерея, 2011. –С. 217. 10. Зашивалова Е. Ю. Методика компьютерного обучения химии в основной школе: Диссертация канд. пед. наук. – Санкт-Петербург: 2000. –С. 167

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