

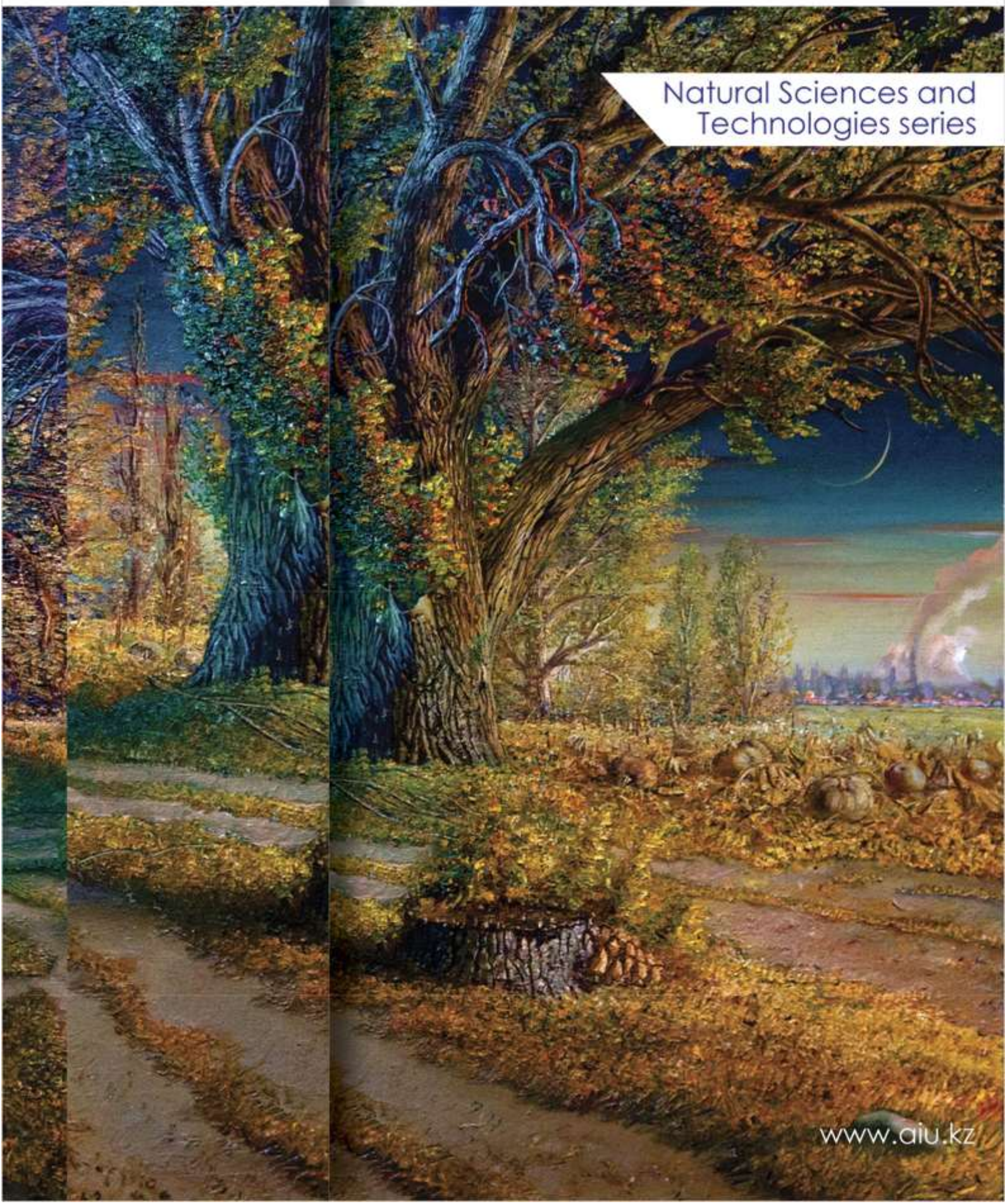


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CONTENT

Gimranova G.K., Nikanorova A.D.EVALUATION OF THE ENVIRONMENTAL POLICY EFFECTIVENESS OF THE OIL AND GAS SECTOR OF ATYRAU REGION.....	5
Qing Yang, Ayan Nurkesh CARBON NANOPARTICLES RESEARCH PROGRESS IN KAZAKHSTAN.....	11
Qing Yang EFFICIENCY OF USING ALAMARBLUE CELL VIABILITY REAGENT TO STUDY EFFECTS OF CARBON NANOPARTICLES ON CANCER CELLS.....	18
Medet Abdirakhman USE OF ELECTRONIC TRAINING MANUAL AS INFORMATION TECHNOLOGY DURING DISTANCE LEARNING.	24
Zhukabayeva T.K., Abdildayeva A.A., Mardenov E.M ELLO FLOOD ATTACK AND WAYS OF PROTECTION IN WIRELESS SENSOR NETWORKS.....	34
Zhukabayeva T.K., Abdildayeva A.A., Mardenov E.M. ABOUT VIRTUAL AND AUGMENTED REALITY (VR/AR) AND GAMIFICATION OF TRAINING IN THE POWER INDUSTRY.....	42

USE OF ELECTRONIC TRAINING MANUAL AS INFORMATION TECHNOLOGY DURING DISTANCE LEARNING

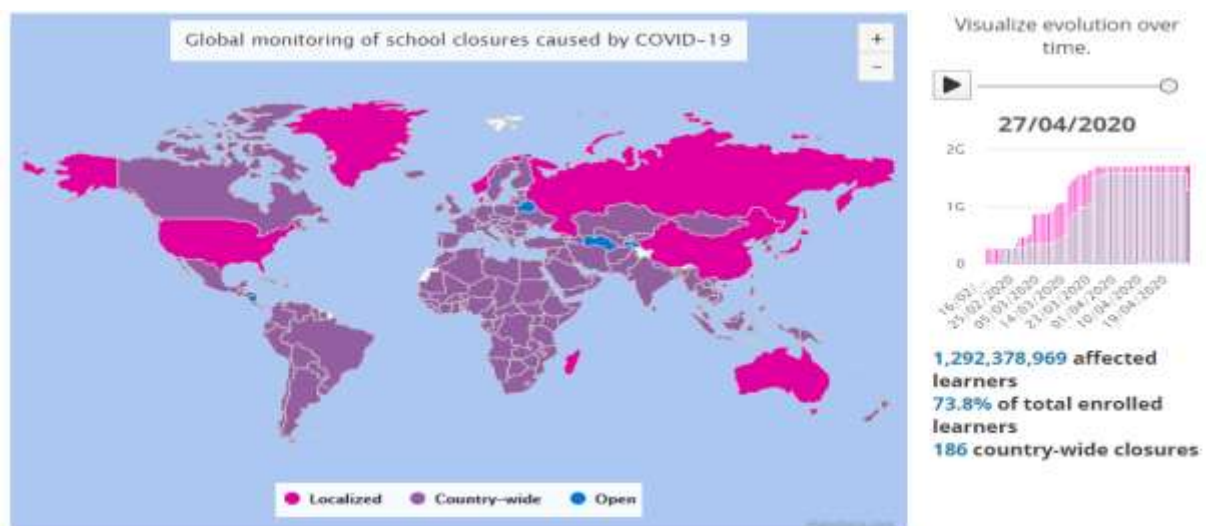
Medet Abdirakhman

Abstract. In this article, examined the effectiveness and advantages of an electronic training manual. The spread of the Covid-19 virus in the world in 2020 caused many difficulties in the field of education around the world, that's why education has switched to distance learning. At the same time, needed to create the right information and educational space in teaching students. It is very important to use effective technology. As a computer science teacher at school, a survey was taken from students to know which technologies are more convenient and better for them to receive learning. The use of electronic training manuals in the classroom can be considered as a new type of teaching technology in the quality education of the younger generation in line with modern requirements.

Key words: distance education, e-learning tool, Teaching and Learning, electronic training manual, computer science.

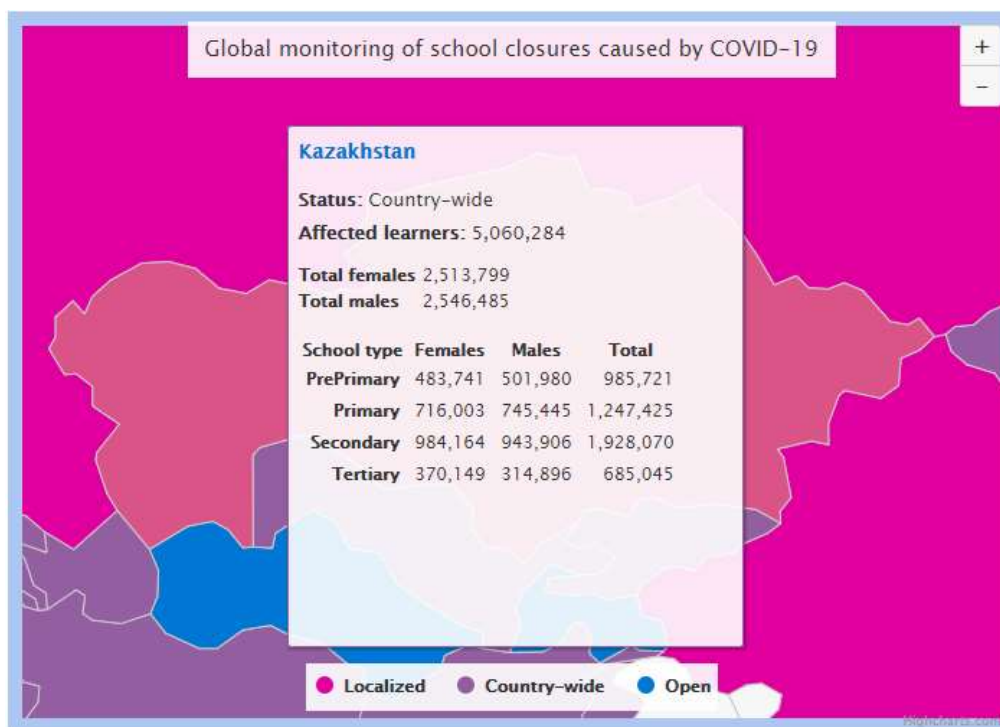
INTRODUCTION

Governments around the world have decided to close educational institutions in an attempt to contain the global COVID-19 pandemic. According to UNESCO, more than 100 countries have closed schools nationwide, affecting more than half of students worldwide. Some other countries have closed schools locally, and if these countries also order schools and universities to be closed nationwide, this will disrupt the learning process for millions of other students. The statistics for April 27 (<http://data.uis.unesco.org/>, 2020).



Note: Figures correspond to number of learners enrolled at pre-primary, primary, lower-secondary, and upper-secondary levels of education [ISCED levels 0 to 3], as well as at tertiary education levels [ISCED levels 5 to 8]. Enrolment figures based on latest [UNESCO Institute for Statistics data](https://data.uis.unesco.org/).

In accordance with the legislation of the Republic of Kazakhstan, a state of emergency has been declared in the territory of the Republic of Kazakhstan since March 16, 2020 in order to protect the lives and health of citizens in connection with the World Health Organization's declaration of a new COVID-19 coronavirus pandemic. That is why education has shifted to distance learning. Statistics of students in Kazakhstan on April 27, 2020.



Enrolment figures based on latest [UNESCO Institute for Statistics data](http://data.uis.unesco.org/) (<http://data.uis.unesco.org/>, 2020).

Distance learning is a learning carried out with the use of information and communication technologies or telecommunications in the indirect (remote) or incomplete indirect interaction of the student and the teacher.

Minister of Education and Science Askhat Aimagambetov opened the gap between distance learning and online education.

According to him, students can receive distance learning in four different ways. First of all, video lessons will be shown on "Balapan" and "Elarna" TV channels.

3,360 video lessons have been shot, all of which will be uploaded to the Internet. In addition, classes are held on the radio. Kazakh Radio will have appropriate audio lessons. Students who do not have a TV at home can use the radio as an additional tool.

The third way of training is to use the postal service. Pupils in settlements where there are no schools study by mail.

An agreement was signed with Kazpost JSC. There are 1,200 settlements without schools in the country. There are 5-7 children there. Earlier, they moved to another village to study. Those children are educated by mail.

Other students can also use the postal service for feedback.

On April 1, pilot classes were held in the country. Educational technologies in schools include systems such as "Google Classroom", "Kundelik.kz", "BilimLand", "Daryn.online", "Microsoft Teams", "Zoom", "Opiq.kz"; offered to use messengers: "Whatsapp", "Telegram".

In particular, the use of the streaming system "Zoom" proved ineffective. At the same time, when people living in their homes use these technologies for education, the quality of the Internet has deteriorated and the systems have not been able to cope with the workload. This, in turn, has had a negative impact on teachers' ability to teach effectively, students' learning difficulties, their inability to obtain information correctly, and their ability to test their knowledge.

According to the Minister of Education and Science, at that time only 1 million 250 children were taught online. In total, 2.5 million children across the country took part in this pilot lesson on various platforms. During the test sessions, different issues were observed. The online mode does not support such a connection, so there was a lot of inconvenience. There are enough technical problems. The Internet could not support this system. Instead of online learning, it is necessary to conduct distance learning through the platforms mentioned by the Minister.

To cope with such challenges in the future, we need to develop the right technologies. The purpose of e-learning in the State Program for the Development of Education in the Republic of Kazakhstan for 2011-2020 is: to ensure equal access to the best educational resources and technologies for all participants in the educational process; equalization of education levels in rural and urban schools; training of students with high thinking ability and technological literacy.

At present, computer resources are available in all spheres of society. In other words, the world of the XXI century has begun to move to the information society. It is possible to achieve the sign of informatization in all spheres of education, science, economics and management in society.

Currently, it is mainly engaged in the development of electronic training manuals for all levels of the education system. An electronic training manual is a source of information for the student, as well as work with electronic training manuals is an individual study of each student, taking into account their capabilities.

The use of electronic training manuals in the classroom can be considered as a new type of learning technology in the quality education of the younger generation in line with modern requirements.

THE ROLE OF ELECTRONIC TRAINING MANUALS IN EDUCATION

This section addresses questions that might be posed by a teacher who is considering which education technology to use in teaching a student.

2.1 Electronic training manual definition

Currently, many versions of computer training tools (CTT) are being developed and presented. However, it is not enough to systematically analyze them, identify their advantages and disadvantages, set requirements for their quality, and make recommendations for future CTT. Research in this area is being conducted abroad, the

prepared CTTs are being analyzed and their shortcomings are being identified. The analysis revealed that the main shortcoming in the design of the CCS is that it is created only as an electronic copy of a traditional textbook.

An electronic training manual is a training course in which all information on the lesson is provided in the form of text, pictures, videos, audio recordings, animations and other graphic tools.

The advanced communication and search system allows you to move from one section of the tool to another or from one fragment to another in one breath. The level of mastery of materials can be determined immediately after the completion of interactive tasks. There are online and offline versions of the electronic training manual. It can be placed on a CD or other media, or on the Internet.

Until now, in the field of education, the use of only what the teacher says or the textbook does not meet modern requirements. Therefore, in today's information society, it is impossible to move forward without the use of these textbooks. As a result, students became more interested in the subject and had ample opportunities to work creatively.

The main purpose of electronic training manual and training: "Continuous and complete monitoring of the learning process, as well as the development of information retrieval skills." It facilitates the formation of a system of thinking, creative work in any field of education.

The work schedule of electronic training manuals can be highlighted:

- uncontrolled learning;
- controlled learning is accompanied by special control questions for each studied chapter (paragraph);
- The final control ends with a test.

No country in the world has yet completely abandoned the book. However, there are countries that have successfully introduced electronic training manuals in schools. These include Spain, Hungary, Brazil, Singapore, Finland and Estonia.

Mass introduction of electronic training manual was in South Korea, Russia and other countries. For example, in 2011, JSC "Rosnano" presented to Russian schools a promising e-textbook Plastic Logic 100.

2.2. Difference between electronic training manual and regular book

The first textbooks in electronic format were really duplicates of books. There are several textbooks on the Internet in PDF, DOC, EPUB, FB2 formats. Among them are textbooks in Power Point format. All this can be called an electronic version of the textbook.

Electronic training manual - a computer-based teaching, control, modeling, testing, etc., containing the main scientific content of the subject set of programs. To create an electronic training manual, it is not enough to convert the contents of the book into an electronic version. It should be supplemented with videos, illustrations, games.

Consider effective tools for the preparation of electronic training manuals. They are:

- traditional algorithmic languages;

- general purpose tools;
- multimedia tools;
- hypertext and hypermedia tools.

An electronic training manual provides an effective addition to ordinary textbooks. In particular, the provision of feedback in practice as soon as possible; since the search for information in a simple textbook takes some time, the electronic training manual allows you to quickly find the textbook you need; save time when switching to hypertext explanations; person-centered, checking his knowledge on a particular section and codes in short text to show it, narrate, model, etc. features are implemented quickly.

The publishers of electronic training manual in Kazakhstan

According to Sayat Omarov, Deputy Director of the Republican Scientific and Practical Center "Oqulyq", over the past two years, the following publishers have sent their e-textbooks for examination:

- "Keleshek-2030";
- "Almatykitap Publishing House";
- "Bilim Media Group" educational portal;
- National Scientific and Practical Education Center "Bobek";
- "Center of pedagogical technologies of informatization of education";
- JSC "National Center for Informatization";
- "New educational technologies" LLP;
- "Arman-PV" Publishing House.

There are other developers whose products have not yet been officially tested.

To use e-textbooks of "Bilim Media Group" LLP it is enough to register on bilimland.kz, itest.kz, twig-bilim.kz and imektep.kz.

"Keleshek-2030" publishes electronic training manuals for grades 7-11 in the form of a disk in accordance with the list approved by the Ministry of Education and Science.

The library of electronic training manuals "Almatykitap Publishing House" is available on the platform opiq.kz. It can be accessed from any device: laptop, tablet, smartphone. The site will automatically start working in that format.

2.4. The requirements for a good electronic training manual

Like the book, they undergo a Level 8 examination by the "Oqulyq" Center. The package of publications and documents arrives here through the state corporation "Government for Citizens". The examination is conducted for 60 days. As a result, experts write one of the following conclusions:

- "Recommended for use in educational institutions";
- "Amendments required";
- "Not recommended for use in educational institutions."

Authors are given 30 days to make corrections after receiving the conclusion. Then they have to re-examine the textbook and wait for new results. Corrections will not be resubmitted for a second time.

3. Advantages and disadvantages of electronic training manual

In the near future, electronic training manual will become an integral part of education due to their advantages. They can be used as different channels for transmitting information while reading.

If the child perceives information well by hearing, he can listen to it, and if he needs to see it, he can watch video clips and animations.

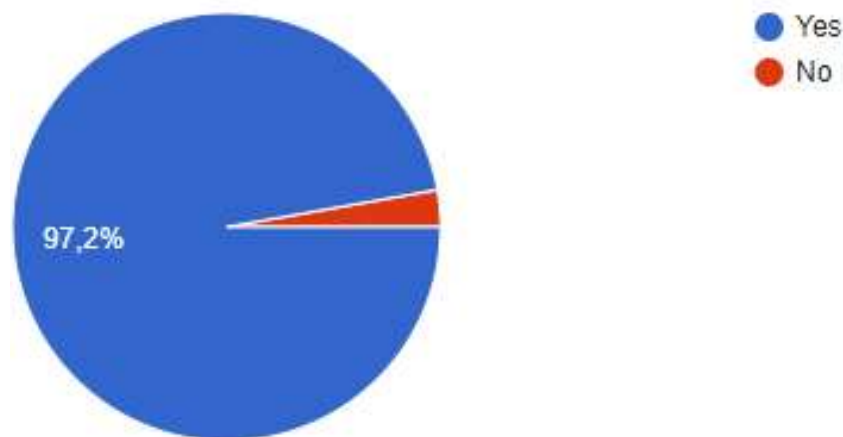
An electronic training manual for teachers is an open methodological system that is constantly evolving, which can be further improved by each teacher, supplementing it with materials from their pedagogical practice.

Advantages	Disadvantages
<ul style="list-style-type: none"> • Electronic training manual saves students' time; • does not look for educational material; • the student can learn any basics of computer science without the need for a textbook; • uses additional video, clips, audio recordings to cover large, difficult parts of the topic; • practical work is quickly explained; • Test questions for mastering the program are provided; • reduces the need for visual aids; • Allows the teacher to work with each student individually; • promotes the expansion of the student's field of thought, worldview, the process of cognition, • High efficiency in preparation for the Unified National Testing • You can access it from anywhere, from any device; • Ability to search for information; • Interactivity; • Objectivity in scoring; • Different levels of complexity of tasks; • Conditions for advanced study; • Ability to repeat past materials. 	<ul style="list-style-type: none"> • Lack of psychological and pedagogical requirements; • lack of interdisciplinary communication; • uniform selection of visual aids; • disregard for the direction of study in the specialty; • Full coverage or full translation of textbooks; • Taking into account the individual characteristics of the student, the state of health; • variety of computer graphics capabilities; • Decreased language skills of students, inability to communicate "alive"

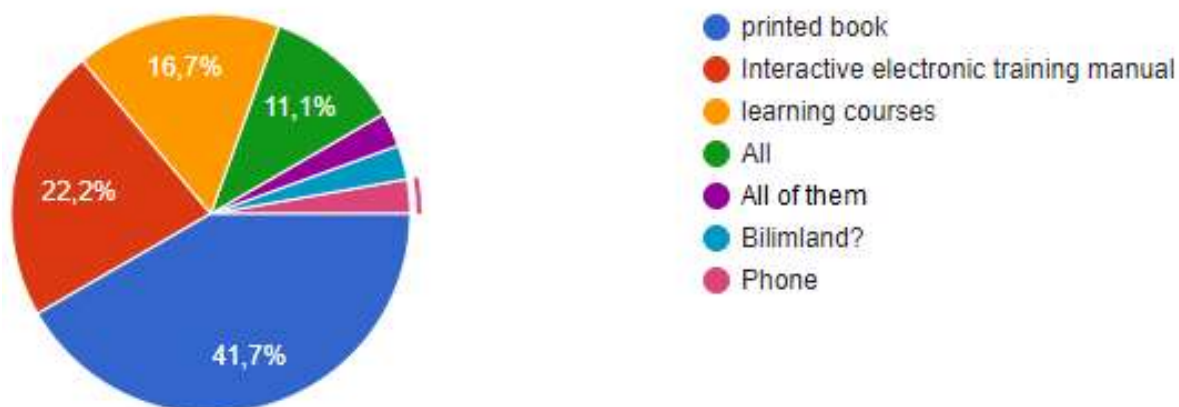
RESULTS

As a computer science teacher at school, a survey was taken from students to know which technologies are more convenient and better for them to receive learning. There was used Google Forms. 36 students were participated in survey.

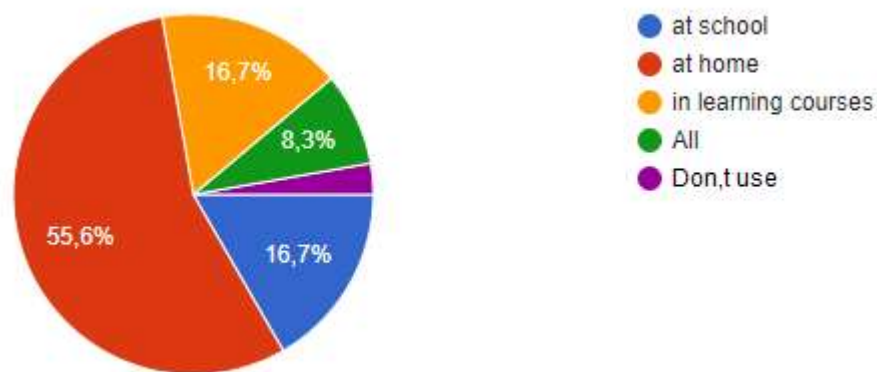
As a result, to the question "Do you know what is the Interactive Electronic Training Manual?" 97,2% of students answered "Yes".



To the question "Which educational resources do you use in distance learning?" we see that 41,7% of them use printed books, 14,9% use all of the resources.



From the next pie chart we see that 55,6% of students use Training manuals at home.



CONCLUSION

The use of modern new technologies, including electronic training manuals, builds students' ability to work with information.

An electronic training manual for students is a source of information that allows them to supplement their knowledge and prepare for targeted final exams during their school years. And for teachers it is an open methodological system that can be supplemented and developed through their pedagogical experience.

As a result of the survey, we saw that most students know the electronic training manual, but half of them use printed book in distance learning. And because of the distance learning students who know training manual use it at home.

In addition to improving the quality of e-learning systems, there are a number of benefits.

First, each student works at his or her own pace. Develops the necessary endurance to achieve the goal.

Second, the student sees the results of his work and evaluates himself. Independent work does not affect the student's knowledge, but has a significant impact on behavior.

It educates students to perseverance, to finish what they started; awakens responsibility. This, in turn, develops the student's curiosity and creativity.

The use of electronic training manuals is very effective in the professional training of future teachers. Students supplement their knowledge on their own, prepare for exam materials and develop their cognitive thinking skills through informational knowledge. And an open methodical system for students allows them to accumulate experience, supplement, develop and improve the textbook on the basis of creative pursuits. Expands the electronic active worldview and the scope of independent work, helps to analyze the learning process, comprehensive information, humanization of educational content.

Informatization of teaching in Kazakhstan improves the quality of education, ensures the level of methodological growth of students. We will have the opportunity

to improve the quality of professional training of future teachers in secondary special education institutions and to revitalize the educational process through informatization.

As a result, the use of electronic training manual significantly increases the interest of students in the lessons. Teachers can also get a lot of necessary methodological and didactic aids. The use of electronic training manuals in the classroom can be considered as a new type of teaching technology in the quality education of the younger generation in line with modern requirements. Our work will be productive and clear if we share experiences and share our strengths and weaknesses in order to carry out the common task of educating the young generation, which is well-developed and not lagging behind the foreign education system and proven to be fit for work.

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ИСПОЛЬЗОВАНИЕ РУКОВОДСТВА ПО ЭЛЕКТРОННОМУ ОБУЧЕНИЮ В КАЧЕСТВЕ ИНФОРМАЦИОННЫХ ТЕХНОЛОГИЙ ПРИ ДИСТАНЦИОННОМ ОБУЧЕНИИ

Медет Абдирахман

Аннотация. В этой статье рассматриваются эффективность и преимущества электронного учебного пособия. Распространение вируса Covid-19 в мире в 2020 году вызвало много трудностей в области образования по всему миру, поэтому образование переключилось на дистанционное обучение. В то же время необходимо создать правильное информационное и образовательное пространство в обучении студентов. Очень важно использовать эффективные технологии. Как учитель информатики в школе, был проведен опрос среди студентов, чтобы узнать, какие технологии более удобны и лучше для них, чтобы получить обучение. Использование электронных учебных пособий в классе можно рассматривать как новый тип технологии обучения в качественном образовании молодого поколения в соответствии с современными требованиями.

Ключевые слова: дистанционное обучение, инструмент электронного обучения, преподавание и обучение, электронное учебное пособие, информатика.

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