

# DISTANT EDUCATIONAL ENVIRONMENT IN TEACHING THE DISCIPLINE OF ICT

Zhanyl Kaliyeva, Zhanat Abdikadyr, Asemgul Kaipova, Aigul Altayeva,  
Galiya Ospanova, Asel Mukhamedzhanova

*NJSC "Astana Medical University", Department of Biostatistics, Bioinformatics and Information Technologies,  
Nur-Sultan, Kazakhstan  
E-mail: kaliyeva\_63@mail.ru*

This article presents materials of distance educational technologies in teaching the discipline of information and communication technologies (ICT) at the Department of Biostatistics, Bioinformatics and Information Technology, where DOT has a huge impact on the students' worldview, forms their responsible attitude to the educational process.

The quality of training specialists in the system of higher educational medical education is largely determined by the state of informatization in all areas of modern society. The existing means of informatization used in the university are in the development stage.

**Introduction.** In the modern century, information and communication technologies (ICT) in society are taking an ever stronger position, penetrating not only the everyday life of the population, but also practically all spheres of the economic and social sectors. The role of information, knowledge and technology, which are key components of the information society, is growing rapidly. At present, all technologies that use special technical information means (computers, audio, video, cinema) are called information technologies of teaching [4,5].

Computer (new information) teaching technologies are the process of preparing and transmitting information to the student, the means of which is a computer.

The purpose of this discipline is to train highly qualified specialists who have the skills to use modern ICT in the professional field and everyday life, which contributes to the socio-economic development of the Republic of Kazakhstan. The leadership of our state is working towards the development of the ICT sector and informatization of society, since the development of the "economy of the future" is one of the important tasks in the implementation of the strategy "Kazakhstan - 2050". In addition, ICTs play a critical role in achieving the Millennium Development Goals, including in achieving sustainable and long-term economic growth, as well as the transition of society to digitalization [1,2,3].

It is known that ICT is a technology for information exchange and communication, which implies the use of:

- information in electronic form (for example, text, video, audio, animation, image);
- information carriers (for example, DVD, CD, flash memory);
- multimedia (game computer programs, presentations, etc.);
- audiovisual equipment (computer, laptop, LCD TV, projector, interactive whiteboard), etc. [4,5].

The use of ICT in the study of the discipline in medical universities was considered by many authors, including T.A.Sokolova, Yu.V.Sosnovsky, N.V.Stuchinskaya, Yu.P.Tkachenko, T.Yu.Cheskaya [6].

The goal of the discipline is to acquire students' information and communication competencies, which will make it possible to use modern ICT in various fields of professional activity, scientific and practical work, for self-education and other purposes.

The following information and communication technologies were used as electronic material: electronic educational and methodological complex of the discipline (UMKD), test tasks, a set of practical tasks in all sections of the ICT discipline, electronic textbooks, multimedia educational and demonstration computer programs, educational information videos, website departments of information and communication technologies and biostatistics, educational information, cloud conferences Zoom, Microsoft Teams, SDO Moodle.



**Common part.** During the quarantine period, as well as throughout the world, students and teachers of the Department of Biostatistics, Bioinformatics and IT switched to distance learning. The educational portal of the university LMS Moodle is used as a DOT with the use of cloud conferences such as Zoom, Microsoft Teams, etc.

When organizing the educational process, DOT becomes an effective assistant. Electronic textbooks with 3D illustrations contribute to the development of spatial thinking. The use of computer models promotes imaginative thinking and better assimilation of the material. In the classroom, you can use computer technologies when studying new material, when initially consolidating the knowledge and skills gained in class, when practicing skills and abilities (educational testing), during a workshop, as well as during knowledge control.

Completing and checking homework includes independent study of the content of the electronic textbook and the electronic version of laboratory work, which are carried out through the Moodle LMS. The consolidation of the material is carried out with the help of control questions and test tasks. Among other types of individual independent work related to the use of information and communication technologies, there may be the creation of multimedia presentations on a specific topic. The use of ICT for SRO allows to reduce the time for completing assignments, to perform work qualitatively, and to increase the number of factors studied.

The most capable and active students carry out research work at the department, the purpose of which is to maximize the involvement of students in scientific work for a serious mastery of the subject of study, the formation of interest in scientific work, and the expansion of contacts with the department via the Internet. Interest in scientific work allows students to make, even if still small, their discoveries, since scientific work is a continuation of the educational process in residency, master's and doctoral studies.

In the process of studying the discipline of ICT, the most common today is the use of computer testing to control students' knowledge. For this, the department has created all the necessary conditions. Computer testing allows you to objectively assess the student's knowledge, excludes subjective factors. Search, analysis, processing of video information by students, its presentation to the audience is assessed by additional points for individual independent work.

When studying the discipline of ICT, a productive pedagogical factor for effective training and development of a future doctor could be the creation of an electronic knowledge base on the discipline based on the collected material. The initial basis of this base was created by teachers of the Department of Biostatistics, Bioinformatics and IT in the form of an electronic textbook, test assignment, links to literature for each topic. Further, the information in this database is replenished, and both teachers and students can provide additional information. The electronic knowledge base is accessed via the Internet. To improve information services for students and teachers at the Astana Medical University, a complex "SIRIUS" has been created to automate and control the educational process.

**Results and discussions.** According to the results of our study, distance learning environment Moodle, cloud conferences Zoom, Microsoft Teams and other educational process played an important role during the pandemic to save life and health. Taking into account the work online, the teachers have developed the entire educational and methodological complex for a complete understanding and assimilation of the educational material by the students. Adequate technical support of the department and the teacher's activity in the field of using information technologies make it possible to increase the quantity and quality of educational information.

### **Conclusions**

1. Thus, in order to obtain the effectiveness of teaching in the process of studying the discipline of ICT, it is necessary to use information and communication technologies for both teachers and students.
2. The use of ICT has a positive effect on the formation of professional knowledge, skills and abilities of future specialists.

## References

1. Message from the President of the Republic of Kazakhstan - Leader of the Nation N.A. Nazarbayev to the people of Kazakhstan Strategy "Kazakhstan - 2050", December 2012.
2. State program "Informational Kazakhstan - 2020" Decree of the President of the Republic of Kazakhstan dated January 8, 2013 No. 464.
3. United Nations Millennium Declaration of September 8, 2000 by the UN General Assembly (Resolution No. A / RES / 52/2).
4. Meretskov O.V. DIY *e*-course creation. Ed. Liters 2019.
5. Michael Allen. *e*-learning: How to make e-learning clear, quality and affordable. Alpina Publisher, 2016
6. Stuchinskaya N.V., Sokolova T.O. Research of communicative activity of students of a medical university in social networks // Information technologies and study means. - 2011. - No. 3 (23).