### ҚАЗАҚСТАН РЕСПУБЛИКАСЫ БІЛІМ ЖӘНЕ ҒЫЛЫМ МИНИСТРЛІГІ Л.Н. ГУМИЛЕВ АТЫНДАҒЫ ЕУРАЗИЯ ҰЛТТЫҚ УНИВЕРСИТЕТІ

### ҚАШЫҚТЫҚТАН БІЛІМ БЕРУ: ЖАҺАНДЫҚ АУҚЫМДАҒЫ ЖАҢА СЫН-ҚАТЕРЛЕР ІІІ Бөлім

## **ДИСТАНЦИОННОЕ ОБРАЗОВАНИЕ: НОВЫЕ ВЫЗОВЫ ГЛОБАЛЬНОГО МАСШТАБА**

Часть III

# DISTANCE LEARNING: NEW CHALLENGES ON A GLOBAL SCALE Part III

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В данном сборнике, подготовленном Евразийским национальным университетом имени  $\Lambda$ .Н. Гумилёва, представлены материалы международной конференции на казахском, русском и английском языках по вопросам дистанционного образования.

Выступления участников конференции посвящены актуальным проблемам и перспективам актуальных задач в области применения дистанционных технологий и распространение эффективного инновационного опыта на международном уровне.

Сборник рекомендован всем участникам образовательного процесса для обмена педагогическим опытом и дальнейшего повышения квалификации.

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### DISTANCE EDUCATION AS AN INNOVATIVE PEDAGOGICAL TECHNOLOGY

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Innovations are characteristic of any professional activity of a person and therefore naturally become the subject of study, analysis and implementation. Innovations per se do not arise; they are the result of scientific research, the advanced pedagogical experience of individual teachers and entire collectives. This process cannot be spontaneous; it needs to be controlled.

In the context of the innovative strategy of a holistic pedagogical process in vocational education, the role of the university rector, deans and teachers as direct carriers of innovative processes significantly increases. With all the variety of teaching technologies: didactic, computer, problematic, modular and others, the implementation of leading pedagogical processes remains with the teachers. With the introduction of modern technologies in the educational process, the teacher

is increasingly mastering the functions of a consultant, adviser. This requires special psychological and pedagogical training from them, because in the professional activity of a teacher, not only special, subject knowledge in the field of pedagogy and psychology, teaching technology is implemented [1]. On this basis, a readiness is formed for the perception, evaluation and implementation of pedagogical innovations.

The concept of "innovation" means novelty, change; innovation as a means and process involves the introduction of something new. With regard to the pedagogical process in vocational education, innovation means the introduction of a new goal, content, methods and forms of training, the organization of joint activities of teachers and students. The results of social progress, previously concentrated in the field of technology, today are concentrated in the information sphere. It is believed that the twenty-first century will be the century of computer science, and the current stage is characterized as telecommunication. Based on the fact that professional knowledge is aging very quickly, it is necessary to constantly improve it.

In recent decades, distance learning technologies in Kazakhstan have been intensively developed. The Ministry of Science and Education of the Republic of Kazakhstan has developed a special area, a scientific and methodological program, funds have been allocated for the development and establishment of distance education. It originates in Europe at the end of the 18th century with the advent of regular and affordable postal service, when "correspondent training" arose. Students in the mail received training materials, corresponded with teachers and passed exams to an authorized person or in the form of scientific work. In Kazakhstan, this method appeared at the end of the XIX century. The advent of the telegraph, telephone, and then radio and television at the beginning of the 20th century made changes in distance learning methods; the audience of instruction increased hundreds of times. Many still remember the educational TV shows on Soviet television that went on since the 50s. However, television and radio had a significant drawback - the student did not have feedback [1].

In the 21st century, the availability of personal computers and the Internet made it possible to communicate and receive feedback from any student, wherever he is. The spread of the "fast Internet" made it possible to use audio and video broadcasts, audio and video conferencing, Internet conferences, Internet broadcasts, as well as online simulators and game managers that simulate training processes that provide basic management skills for both a small company and large.

What is distance learning? Distance learning (DL) is a combination of information and communication technologies (ICT) that provide students with the delivery of the studied material, interactive interaction between students and teachers in the learning process, as well as control over the assimilation of the material in the form of passing tests, logic circuits, test trainings, tests and exams [2].

The main components of DL are:

interactive feedback between the learner and the learning tool;

computer visualization of educational information;

archival storage of large volumes of information, their transfer and processing;

automation of the processes of information retrieval activity and methodological support, as well as monitoring the results of the assimilation of educational material.

Means of DL are all types of information technologies, the means of which are computers, computer networks, multimedia systems, etc. Upon admission to the institute, a curator is immediately attached to the student, with whom he will communicate through E-mail throughout

the training. The curator's task is to help the student organize the training process, in case of difficulties, you can always get advice from him. Each student is provided with an individual login and password for access to the training portal and the curator forms an individual training schedule. Online access to shared information resources allows you to get interactive access to remote databases, information and reference systems, libraries in the study of a particular discipline [3]. The entire educational process in DL is represented by a set of disciplines. Each discipline consists of modules - logically completed blocks of information that are adequate in content to a specific subject area. This allows students to form a curriculum that meets individual or group needs from a set of independent training courses. Each module consists of several lectures. Lecture material is provided to students in digital format in the form of slide lectures, which are decorated using pedagogical design, which helps to increase the student's attention and increases the level of assimilation of the material studied. All the necessary and useful information in the educational process is integrated, systematized and presented in a simple and understandable language. After listening to each lecture, a test is taken. If provided by the program, a logical diagram or test training is given. After studying each module, a unit test is passed on it, without passing which further training is impossible. After passing all the modules, the final test of the test or exam in this discipline opens.

DL can be divided into the following sectors:

Corporate – companies create distance learning centers in their structures to standardize, reduce the cost and improve the quality of training of their staff, and employees undergo the necessary training, retraining within their organization, and often without even leaving their workers places, which significantly reduces the cost of corporate training. At the same time, they can be trained in anything - from safety techniques to sales techniques and from creativity training to the technical features of the new mixer.

Educational – in the system of higher and secondary education expands the possibilities of obtaining professional, additional and postgraduate education, advanced training;

Management – in state and local government bodies it allows for further training and retraining of personnel [4].

Considering the advantages of DL for students:

Accessibility – person can study anywhere where there is a computer with Internet access (at home, at work, with a laptop on the train) and does not depend on the location of the training center.

Sociality – relieves social tension, providing an equal opportunity to receive education regardless of place of residence, material conditions, age and state of health.

Quality – allows you to learn and consult with highly qualified teachers, constant monitoring of the assimilation of knowledge, to maintain constant contact with other students, which means that group work (for example, term papers) can be implemented, which gives students the team work skill so necessary now for everyone.

Individuality – allows you to implement an individual curriculum for the student, an individual curriculum, an individual lesson schedule and the sequence of studying subjects and the pace of the study, especially for working, as well as for young mothers and disabled people.

Objectivity – the knowledge assessment system is objective and independent of the teacher; it is impossible to give an assessment of "with partiality."

Innovation – the use of the most modern information technologies, allows students to master and apply them.

Profitability – significant savings in costs of premises and their rent, transportation costs and time, the student receives all the necessary educational materials immediately when enrolling in electronic media, you do not have to spend time rewriting notes, you can listen and watch video lectures as many times as necessary.

Continuity – having mastered one level, you can easily proceed to the development of the program of the next level.

Mobility – information is adjusted by the teacher every day, which means that the student is studying relevant material, becoming a professional who knows the modern market.

Thus, distance education gives students access to non-traditional sources of information, increases the efficiency of independent work, gives completely new opportunities for creativity, acquisition and consolidation of various professional skills, and allows teachers to implement fundamentally new forms and teaching methods using conceptual and mathematical modeling of phenomena and processes [5].

The most popular recently gaining a diploma through the Internet as a source of distance education. In order to find out the degree of trust in such distance learning technology and the reasons for the popularity growth, a pilot sociological survey was conducted, in which 147 people aged 17 to 30 years participated.

According to the results of the survey, it was found that 41% of respondents do not yet use Internet technologies as a source of education, 16% of respondents watch video tutorials and online lectures, 21% regularly use educational Internet portals, and the remaining 10% download educational computer programs.

When asked about the purpose of using a computer and the Internet for learning, the most popular answer was "for personal development and self-education" (59%); 25% of respondents used the Internet to obtain additional education, and 16% gave the answer "as an assistant in obtaining higher education."

The choice of the educational resource among the respondents depended to the greatest extent on the following criteria: the content of the material (26%), the reputation of a trainer or teacher (20%), the opportunity to receive a document on education, as well as getting education for free or for a small fee (29%) [6].

The scientist-sociologist F.W. Taylor proposed the classification of distance education in five stages of development:

Classical correspondence education;

application of various unilateral (without reverse communication) means of transferring educational materials: printed information materials, live broadcasts or recordings on information carriers;

two-way, synchronous distance learning using audio or video conferencing; asynchronous online learning combined with interactive multimedia

intelligent flexible learning that provides a high degree of automation and control of asynchronous online student learning and interactive multimedia [9].

P.L. Pekker believes that the demand for distance learning has not yet been formed, since this is a new format, the advantages and quality of which are still difficult to assess due to insufficient statistics. Also, a number of universities use the distance learning format as an auxiliary element in the process of part-time graduation [7].

The survey revealed that distance education is seen as an additional source of knowledge and skills. The choice in favor of obtaining this type of education is made due to its accessibility, ease of use. In a professional environment, this format is common.

It is important to note that all types of digital technologies do not conflict with traditional forms of education. They complement, change it qualitatively, give a new vector of development and the formation of innovative approaches, where mixed options for the use of educational technologies are also possible.

Modern educational institutions using distance technologies are currently in the conditions of the need to establish mutually beneficial social interaction, which will contribute to the achievement of strategic goals. Formation of constructive partnerships aimed at reorienting activities in accordance with the needs of subjects of cooperation in e-education will help to maintain and strengthen their competitive advantages [8].

In general, the use of distance learning technologies allows people to expand the learning opportunities by many criteria: it becomes possible to organize training simultaneously for students of different profiles, specializations and areas; increases the professionalism and competence of students through the use of information within the discipline in the "home" environment; a single information space is being formed; there is the possibility of learning on the job (for working students), the cost of material resources is reduced - renting a room, electricity, paying for a teacher's hours.

The choice of modern teaching aids must be approached very thoroughly, since this is an important moment in teaching. The pedagogical technology used in the work is aimed at solving didactic problems. Therefore, it is necessary to reasonably and creatively assess the capabilities of a particular learning technology, to know its strengths and weaknesses, and to know where it is best applied.

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