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The Need And Pedagogical Conditions For Teaching Information And Communication Technologies In Logistics Systems

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Abstract: In the new society, the ability of a person to receive, process, transmit and store information comes to the fore. Therefore, the education system is faced with the task of forming a general information culture among students. Computer literacy in any field of knowledge has become an indispensable indicator of the qualifications of a modern specialist. The information society is characterized by the increasing role of intangible resources: knowledge and information. Therefore, the article examines the need and pedagogical conditions for teaching information and communication technologies in logistics systems.

Keywords: Multimedia, e-learning, Information technology, communication, technology, tools, computer, transportation, digital technology, conditions.

Introduction: The level of development of modern society is currently determined by the level of development of information technologies. According to O.E. Tigay, the informatization of society is an organized socio-economic and scientific-technical process of creating optimal conditions for satisfying the need for information based on the formation and use of information resources [1].

According to L.I. Gorbunova and E.A. Subbotina, the concept of Information Technologies in education includes both computer and telecommunication technologies. They consider information technologies as a set of modern technical means that provide for the collection, storage, processing and transmission of

information based on modern computer technologies [2].

According to M.I. Zhaldak, Information Technologies are a set of methods and tools that allow people to expand their knowledge and provide broad opportunities for managing technical and social processes [3].

According to V.A. Izvozchikova, Information Technologies are new electronic educational tools and, first of all, technologies and methods of the educational process using computers [4].

Researcher E.N. Mashbits considered Information Technologies to be a set of various educational programs; here it includes knowledge control, artificial intelligence-based learning systems [5]. According to V. Prikhodko, Information Technologies are a set of methods, production processes and software and hardware tools integrated into a technological chain that provide for the collection, processing, storage, transmission and display of information, aimed at achieving educational results on a systematic basis, and allowing for the organization of optimal interaction between the teacher and the student [6].

In a broad modern sense, technology is defined as a method of implementing a certain complex process by people by dividing it into a system of sequential, interrelated procedures and operations aimed at achieving a more or less clearly defined and planned, guaranteed goal. Educational technologies are considered one of the types of humanistic technologies and are based on the theories of philosophy, psychology, didactics and management. Foreign researchers of educational technologies: B. Bloom, D. Bruner, D. Gamblin and others O.S. Anisimov, V.P. I. Bogolyubova and others include the following important features of educational technologies: determining educational goals on the basis of diagnostics, selecting and systematizing educational content and organizing the entire course of education in accordance with the set goals, the possibility of implementing prompt feedback on their basis. assessment of current and final results [8].

Developed countries have largely increased their attention to acquiring knowledge about information and communication technologies and their application in their place, because information and information processes form the basis of modern logistics systems. The formation of the skills to find, understand, process and use information as a resource for production can be carried out by educated specialists. For this, the following set of pedagogical, organizational, technological and psychological conditions are required for effective teaching of information and communication technologies in logistics systems. They are necessary factors that ensure the quality of the teaching process:

1. Didactic (pedagogical) conditions

Developing competency-based educational content

– Identifying ICT competencies appropriate for the logistics sector

– Bringing practical tasks closer to real processes

Application of modern pedagogical technologies

– Problem-based learning

– Innovative approaches (Cooperative – Collaborative approach)

– Competency-oriented interactive methods

Modularization of the training process.

Each module is based on a specific logistical process:

– Warehouse Management

– Transport Logistics

– Supply Chain Management

– Electronic Information Exchange

Conditions that encourage students to learn independently

– Online platforms

– Independent projects

2. Technological conditions.

The creation of ICT infrastructure.

– Computer classes, high-speed internet

– Local area networks

– Use of cloud technologies

Availability of multimedia and e-learning tools.

– Electronic textbook

– Digital learning course

– Interactive tests

3. Organizational conditions.

Organization of the educational process on a scientific basis.

– Planning topics in a practice-oriented manner

– Adapting educational plans to labor market requirements

Collaborative work between teachers and

students.

Learning process monitoring and evaluation system.

– Competency rating criteria
– Diagnostics, monitoring, portfolio

4. Psychological and pedagogical conditions.

Creating motivation in students.

– Cooperation with specialized departments
– Practical trainings, master classes

Psychological preparation for working with ICT.

– Support students in using ICT
– Improve teachers' skills in ICT

Developing innovative thinking.

– Problematic tasks
– Developing creative solutions
– Developing systematic analysis skills

5. Practical conditions.

Enterprise-integrated education.

– Cooperation with logistics companies
– Practical training
– Real project-based learning process

Using dual education elements.

– Direct participation in the production process
– Work on real ICT systems during the internship

Artificially creating a practical environment.

– Simulators
– Virtual logistics systems
– Case scenarios

In the conditions of the modern information-driven world, the effective functioning of the logistics system is unthinkable without the use of extensive databases, close communication and relationships between agents of different companies, and a well-established order processing system. Thanks to specially developed software packages, analysis and planning of various processes, automation of typical operations, and rapid processing of incoming and outgoing information flows are successfully implemented.

Today, the ICT trend in the logistics sector is, first of all, the desire to solve production problems and business processes qualitatively, quickly and without errors. The task of new logistics centers is to ensure communication between carriers and provide them with the necessary information, conditions for training in the science of information and communication technologies in logistics systems.

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