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## PROFESSIONAL ACTIVITY OF TECHNOLOGY TEACHER IN INFORMATION EDUCATIONAL ENVIRONMENT

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### ABSTRACT

*The article illustrates the issues on the integration of technology with other disciplines in the information learning environment, finding out general didactic tasks to be solved by the teacher in the organization of the learning process in the information learning environment and the concept of technological education.*

**KEYWORDS:** *Information Educational Environment, Technological Education, Concept, Didactic Tasks, E-Learning Resources.*

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### INTRODUCTION

A new, modern type of information learning environment (ITC), and the information learning environment is the result of dynamic formation and interaction of participants in the learning process.

ITC (Information Technology Center) is a software-communication environment, which consists of an integrated set of technological tools for conducting information-based learning process in any number of educational institutions, regardless of their level of education and professional specialization, their information support and the Internet environment.

The main purpose of creating ITC (IT)s in the education system is to meet the needs of educational institutions in the acquisition of a wide range of specialties using the latest information and telecommunication technologies, regardless of the level of education, information resources, where students live, as well as the necessary educational services [ 1].

### LITERATURE REVIEW

An information education environment is a systematically organized set of data transmission tools, information sources, interaction protocols, software, and organizational and methodological tools designed to meet the needs of users for information services and educational resources. It is also appropriate to understand the information educational environment as a single information educational space that combines information about traditional and electronic media, computer and telecommunication technologies of interaction, including virtual libraries, electronic databases, teaching materials and extended didactic devices [ 2].

In defining the concepts of “environment”, “education environment” and “information learning environment”, we have defined the basic rules of education, considering the existing features of informatization of educational activities. The formation and development of the information learning environment can be applied to any other field of general education:

1. The information educational environment should create conditions for solving the problem of incompatibility between the current state of the information society and the education system,

contribute to the formation of new qualities of the citizen of the information society, provide all subjects of the educational process with a system of opportunities.

2. In the modern conditions of development of the education system, the information educational environment should be focused on the active activities of the subjects of the educational process and contribute to the formation of cognitive activity. Students interact with the components of the information learning environment, changing that environment to suit their capabilities and needs. The more opportunities created for students, the more successful their development will be.

3. The information educational environment is not only a source of personality development, but also a specific catalyst in the process of self-awareness of the individual, which is able to accelerate or slow down the process. It is necessary to create an information educational environment to promote the full development of the individual. In addition, the organized environment should be tailored to the needs of the individual and be personally relevant to the student.

4. The information educational environment is of social importance to education and includes communication and interaction between all participants in the educational process. The established ITC should be based on the commonality between the participants of the educational process, which includes different forms of cooperation and communication.

The student must actively respond to the ITC and interact with the components of the environment. ITCs should attract students to new types of learning activities. Students should be able to independently search and analyze data, read, research, and participate in projects.

The established ITC should include content and tools to ensure the effective functioning of students internally (in the form of increasing knowledge, skills, abilities, methods of activity, goals and values) and externally to create a learning product.

We believe that the information educational environment will expand the opportunities for the introduction of new generation educational standards, significantly increase the motivation of students and create conditions for independent learning activities through the effective organization of individual and team work, classroom and extracurricular integration.

For effectively working process of ITCs, the components of this environment must have a flexible structure and perform functions that are relevant to the content and teaching characteristics of the subject of "Technology".

At the same time, the role of the teacher in the implementation of the subject of "technology" in the analysis of scientific work is to organize the process of creating and developing ITCs through joint activities with students, which means changes in his professional career.

Technological education in the information learning environment is considered by us as a type of information subject environment and the educational institution as a subsystem of ITCs and all subsequent levels of it.

Levels of the information learning environment (integrated ITC, regional, city, school) create certain conditions for the formation of ITCs (Figure 1). The process of formation of this environment is more influenced by the level of development of the educational institution (school, lyceum, college) ITC.

Forms and types of pedagogical interaction between the participants of the educational process depend on what conditions are created in the ITC of the educational institution. In determining the nature and structure of technological education in the information educational environment, we consider the learning process and the level of pedagogical interaction of students (s) and teachers in the study of the subject "Technology", while the level of the educational institution

does not affect the management of the educational process.

In the didactic aspect, science is considered as a key structural unit of the educational process and one of the means of implementing the content of education.

### **RESEARCH METHODOLOGY**

I.V. Robert calls the subject area “a system of some local closed elements, the relationship between them, connected with the foundations of a particular science, combined to study the properties of objects, their laws, or to solve pedagogically important goals of study” [3].

The author highlights the didactic model of science developed in the cultural concept, which demonstrates the specific integrity, including the content of science and the means of its acquisition, development and upbringing in an inseparable unity. The authors note that the subject model includes two blocks: a block of tools for mastering the knowledge and skills that cover the main content and ensuring the development of students.

Thus, we can say that all disciplines of basic general education are divided according to the leading content component and have general didactic and specific methodological components, which in turn are reflected in the information educational environment of a particular subject.

The invariant component is specific to all information subject environments, reflects the basic didactic principles, requirements of modern educational standards, and defines general approaches to the structure and functional properties of each environmental component. The variable component of the information subject environment reflects the specific characteristics of a particular subject area and is based on its specific characteristics.

In ITCs, we also distinguish between variable and fixed generators of this environment, as well as general didactic and specific methodological components that determine its structure and properties.

To identify the general didactic and specific methodological components of technological education in ITCs, we analyze scientific research that has identified the structure of the information learning environment in the implementation of various disciplines.

Considering the problems of e-learning in physics, A.V. Smirnov and S.A. Smirnov identifies two main components of the information learning environment in physics: infrastructure and e-learning resources [4].

The authors consider hardware and software systems to be the components of infrastructure. A set of technical tools for e-learning in physics:

- Server;
- Telecommunication equipment;
- Client computers;
- Software management and data entry;
- Means of providing educational information;
- Means of computerization of educational physical experiment.

### **ANALYSIS AND RESULTS**

It follows from the list provided that only the means of computerizing a learning physical experiment are specific tools used in the information environment to teach physics. A.V. Smirnov and S.A. Smirnov noted that the computerization of educational physical experiment not only "opens up the possibility of automating the process of measuring and processing

results, but also allows to achieve qualitatively new results in the study of fast processes and time dependencies."

Thus, we can say that the specific features of the information learning environment in the study of different disciplines are determined not only by the content of this subject, but also by the types of learning activities performed by students and the learning tasks they solve.

Research and analysis of normative documents allow to identify the following general didactic tasks that the teacher solves in the organization of the educational process in the modern information educational environment:

- Visualization of educational material using modern technical devices, electronic educational resources, network services;
- Organization of educational data processing methods (graphics, text, digital, video, multimedia);
- Organization and implementation of control, assessment and accounting of student achievement using modern electronic means;
- Organization of interaction between the subjects of education using the state information system, the school's educational website, the teacher's educational website;
- Organization of interactive cognitive game, network project, interactive educational trip, distance Olympiad, distance ten-day educational process;
- Ensuring the safety of students interacting at ITCs;
- Use of different ICT tools, hardware and software complex to solve each general didactic task, etc.

The subjects of technological education in the information educational environment are technology teachers and students. The main objects of the ITC:

- 1) Information infrastructure (modern technical equipment, communication and mass media, automated teacher's place, student's automated place, software, etc.);
- 2) Modern ICT-based teaching aids (electronic textbooks, network educational services and others);
- 3) Tools for managing the educational process and organizing the interaction of educational subjects (school's educational website, teacher's website / blog, state information system, security system).

## **CONCLUSION**

Each of the selected components performs its own function. Information infrastructure helps to create technical conditions for the organization of the educational process, modern textbooks.

Creates a learning environment based on ICT, tools for managing the learning process and organizing the interaction of learning entities help to create an organizational environment.

Thus, it is possible to conclude that the role of the teacher in the implementation of the discipline "Technology" is to organize the process of creating and developing an information educational environment through interaction with students.

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