

PEDAGOGICAL MODEL OF E-LEARNING IN A DIGITAL ENVIRONMENT

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In the article the methods of organization of educational process with the use of electronic educational resources, offered two models, the role of the teacher and the pupil based on the proposed model and its influence on the educational process.

В статье освещена методика организации учебного процесса с использованием электронно-образовательных ресурсов, предложены две модели, роль преподавателя и ученика на основе предложенной модели, а также её влияние на учебный процесс.

Keywords

education process, information-education resource, information-communicational technologies, information technologies, model, competence, teachermoderator, tutor.

Ключевые слова

процесс образования, информационно-образовательные ресурсы, информационно-коммуникационные технологии, педагогические технологии, модель, компетентность, педагог-модератор, тьютор

The modern educational process, being implemented in the informal and communicative environment of all spheres of life, requires a substantial expansion of the teaching and learning tools, based on the widest use of information and communication technologies (ICT), including e-learning resources.

From the point of view of the trainees, it primarily makes education more attractive, because they use technology that helps to communicate and entertain during education, outside the classroom, which affects the difference between education in and out of school. Secondly, and most importantly, the ICT allows for active learning activities, taking into account the needs and interests of each student. Modern technical equipment of educational institutions, the use of ICT tools in the learning process create the necessary conditions for the wide use of

advanced teaching technologies that can not be used in public schools before. One of such modern media is electronic resources. The creation of e-learning resources is crucial with the effective impact of the educational process on the preparation of potential professionals. In the case of a modern teacher, the new generation of Electronic Educational Resources (EER) can also be used in traditional teaching as well as the use of innovative teaching technologies.

In the traditional teaching environment, the following can be used to build the models for the use of new generation of EER in the learning process:

- Character of the student's activity in applying the new generation of EER to the learning process;
- The nature of the teacher's and student's interoperability in applying the new generation of EER to the learning environment.
- Using EER, it is recommended to consider the following when planning the learning process:
 - The availability of a computer classroom consisting of computers with a level of technical equipment (such as computers, directors, libraries, etc.), availability of computers with laptops or presence of computers in each student, classroom projection equipment, interactive boards, etc.) ;
 - The condition and development of the educational environment of the educational institution (including the use of ICT in the administration of educational process);
 - availability or absence of quality Internet connection;
 - The level of competence of ICT staff (pedagogues and administrators);
 - Have of computers in pupils' homes.
 - Depending on the options mentioned above, using the EER, you can recommend the following educational models:

Model 1. Use of EER during the preparation This model is fairly universal because it can be used at the early stage of the school's development of the information environment (several at school: the administrative unit, the library, the teacher's room) and the educational environment of the school. It depends, too, on a teacher's level of ICT competency, because the teacher can choose a comfortable working schedule, the level of software products used, and EER. The minimum requirements for the technical equipment of this model are as follows: operating system, including multimedia messaging, mail client, browser, file manager; antivirus software, text editor, presentations and spreadsheet development software, sound editor, web editor. According to the wish, archive software can be graphic and vector graphic editors, database management system, geoinformation system, automated projects system, virtual computer laboratories, translator

software, optical recognition system, programming system, interactive communication software.

It is obvious that the teacher uses this model to interactively and independently contributes to the student's independent work with ICT depending on the technical equipment level of the school (the location of the course). Textbooks, diapazhits and slides, transparencies and posters, interactive rules, tables, illustrated cards, illustrated and illusive material, sound recorders, film, tele-, videofragments and all video tapes, exercises and tasks, simulators and practices, test systems – All of these tutorials are now available in open formats in electronic format, which can be successfully used in different learning situations at different stages of the lesson. If an automated information system is used in the school, the teacher will have the option of choosing EER to fit every subject of the curriculum, putting it in his or her virtual cabinet properly, which elements of the lesson (explanation of new material, independent work, theme strengthening, etc.) may think that they can be equipped with them.

When the model is used by students, its level of interconnection and independence is derived only: from the choice of illusive material on the subject to the task that can be changed before the project is completed.

From the possible list of EER, the choice of EER for specific textbooks, as well as collection of subject and collection collections of ETZ differs by the high demand. The collection of subject and collection collections of EER serves as a useful backup for classroom and homebased workbooks, in preparing various materials, creating personal tasks, selecting samples for explanation. They work in the role of curriculum, filling the traditional system of instructional techniques, extending the teaching framework and the teacher's capabilities, allowing for the diversity of learning processes to change classical models of lessons. For example, hypothetical definitions and rules, animations and illustrations, interactive charts, rules and study texts, electronic assignments and tracts, fragments of textbooks, data and textbooks, tables and schemes, examples, pictures that can be used to create classroom and home tasks, tasks and exercises can be used to produce printed materials.

If you are planning to spend the lesson on the tutor, the teacher's workplace is equipped with an interactive whiteboard or a projector, it is possible to say that it is about preparing for a multimedia-based learning lesson.

Electronic teaching dictionaries and reference books play a special role in the preparation of the teacher-linguist. They are materials of the workshop, a sample material for the lesson, individual tasks and exercises, a distinctive material for the preparation of various types of distribution materials and so on, and the ability of

learners to work independently in the classroom (selecting examples, grouping of unions recycling, fill in the dictionary, etc..) and in the search activity (collection, analysis and synthesis of essential language information, search for units in different educational dictionaries, etc.).

Model 2. Using EER in a class “One or five computers in the working class”

This model is specifically intended to be used individually in the work with students. The EER software is designed to help students with specific technical or literary skills, organize their own learning, or create multimedia with powerful learners, for example.

In addition, this model can be used to organize group work for specific research and project tasks, as well as play forms of the lesson (for example, the “analytics” group checks the truthfulness of the information provided, or provides information support for speeches in the debate, etc.), allowing for each participant in a computer group. The work can be organized in subgroups by the “one-to-one computer” model. At the same time, the teacher chooses EER, which is required for the course, depending on the assignment, and guides learners to conduct joint research, design teamwork, and teamwork in electronic assignments. [1]

In small groups students can work together on a single computer: • to observe, analyze and discuss subject matter, tables, interactive charts;

- Working with reference definitions and rules;
- observe changes in some circuits in dynamic schemes;
- Search for solutions that come with interactive texts;
- virtualization modeling;
- do electronic tasks and tests collective;
- Carry out various linguistic works, textual activities and information;
- Making materials for projects and presentations using text and various photo materials, etc.

These activities can be carried out either individually or through different combinations. Upon completion of the work, the results (in the form of texts, presentations, plans, abstracts or oral presentations, reports, messages) shall be brought to the discussion and team evaluation.

It is desirable for the technical and software model of this model to be a collection of test systems, training equipment, and information sources.

Building the learning process based on the use of the new generation of EER with the help of the above-mentioned models requires a change in the role of the teacher. You have to think about the role of a teacher, who is more likely to become a co-ordinator or tutor than a direct source of knowledge and information.

Based on the above, it is possible to design and organize the educational process on the basis of new generation of EER with emphasis on the organization of active learning activities and the formation of an open mind;

Teacher-manager and trainer, who is ready to offer not only educational information, but also the necessary teaching aids;

Curriculum information is used as a tool for organizing learning activities, not as a goal of reading; In addition to the teacher, as a subject of activity, and his personal development is one of the most important learning objectives. Here are the main theses reflecting the role of a teacher in a new approach to teaching organization:

1. The teacher is not the only source of information;
2. Together with the learners, the teacher performs the search and retrieval of the information in accordance with the criteria set out therein and thus becomes a mediator between the students and the source of the information;
3. The teacher determines the optimal electronic training modules (EMA) according to the diagnostic results for each student;
4. Determines the way in which the instructor picks up knowledge, skills and abilities, and controls the particular individual characteristics;
5. Leader (initiator) of a new form of student interaction with the teacher and his classmates during class and out-ofclass learning;
6. The teacher – the moderator of the debate on the topic of discussion, problematic and disputable issues in the classroom and out of class. In line with the above-mentioned rules, the process of preparing a teacher for the whole process of reading is radically altered by the process of preparing each of the lessons. The organization of pupils' independent work on the basis of the use of new generation of ETZs implies the following positions of the teacher, partner and supporter of student activities:

Teacher-consultant. The essence of the proposed model is that the teacher does not normally report the material, and the tutorial function is replaced by counseling that can be implemented in real-time or remote mode. The consultation will focus on a specific problem. [2]

The consultant knows the ready-made solution that should be handed over to the consultant, or he / she is deemed to have the methods of handling the problem. Teacher's main goal in this model is to teach how to read. Pedagogue-moderator. Moderation – is the teacher's ability to discover the capabilities and capabilities of the student. Moderating is based on the use of special technologies, which helps the reader to create free communication, ideas, and exchange of ideas that lead to the

use of inner resources. Moderirlash will help you to find the student's internal resources and discover the student's secret skills and abilities.

The pedagogue-moderator's basic work methods include methods that stimulate students to activate, activate them, identify the problem and expectations they have, organize the process of participating in conflicts, and set up climate of friendly cooperation.

The pedagogue-moderator acts as an intermediary between students.

Teacher-tyutor. The pedagogue-maker performs pedagogical cooperation for students. He develops group assignments and creates a group discussion of a problem. The activity of a pedagogue-maker is focused on working with the subjective experiences of a student, not on information processing, just like a teacher-consultant. The teacher analyzes the interests, goals, requirements and personal aspirations of each student. Develops special exercises and tasks based on modern communication techniques, personal and team support, develops motivation methods and options for success, develops the direction of project activity. The task of a teacher-tyutor is to help the reader to get the maximum outcomes, follow the course of study, give feedback on the assignments, organize group discussions, advise the students, support them, and maintain interest in studying the subject at all times. The above two models developed and the teacher in it, the role of the student, their interaction in education, and the well-established system of recommendations from the ETZ process, the students will be able to independently determine their own work.

LITERATURE:

1. Gromov, G.R. (2004). *Information Technology: The Internet Epoch*. Moscow: Nauka.
2. Polovina, G.B. (2009). Integration of Multimedia Technologies with Industrial Training Disciplines in Teacher Professional Development. *Informatika i obrazovanie*, (5), 116-119.
3. Khudayberdiyev, Sh.K. (2023). Formation of professional competence of programmers in a competitive environment. *International Scientific Journal SCIENCE AND INNOVATION*, Series B, Vol. 2, Issue 1.