



## Electron trainer and its importance

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### ABSTRACT

Electronic simulators designed for teaching computer science in educational institutions, including higher educational ones, can be classified according to various grounds: by the age of the studied science and students, by the degree of their mastery of foreign languages and information and communication technologies, by the need for internet connection and by the device computer, mobile device that ensures the operation of the program. Depending on the student's native language, trainers can be divided into universal as well as trainers specially designed for speakers of a particular language, taking into account the usual difficulties encountered in the study of foreign languages and information and communication technologies and mistakes made during the test.

### Keywords:

information, technologies SQL, electronic, lesson, education

If the age of the educators is chosen as the basis for the classification, then it is allocated to trainers intended for adults and children. When developing simulators, the features of the study, as well as the interests of students of a certain age group of users, are taken into account.

Internet connection can be divided into online and offline simulators depending on the need. In the first case, it is necessary to connect to the network, in the second-there is no such need. The positive aspects of online trainers include regular updating and correction of materials, as well as access to contact with the teacher. With offline simulators it is possible to work in autonomous mode, regardless of the possibility of connecting to the Internet.

Depending on the device that ensures the operation of the program, computer and mobile versions of simulators can be distinguished.

It is considered appropriate to consider the new means of electronic teaching, as well as the features of their functioning in the context of electronic pedagogy. Its pressing problems can

be attributed to the theory of teaching in the modern information and educational environment and the absence of a conceptual apparatus as a component of it. This problem has not lost its relevance even today.

The confirmation of this rule is that in the scientific and methodological literature there are also various options for their nominations in the practice of using electronic educational resources in the educational process.

The above is fully consistent with the use of simulators in various areas of knowledge. Currently, the following options for simulators are more common:

- electronic trainer;
- virtual trainer;
- computer trainer;
- interactive trainer;
- test trainer;
- test-trainer;
- electronic test-trainer;

The presented options can be combined into the following groups:

1. Nomination related to computer application: virtual, electronic, interactive, computer.

2. Nominations that reflect the life of the trainer: test trainer, test trainer.

3. The name of the trainer, taking into account several of the above features: electronic test trainer.

In our study, we will consider the above nominations in more detail in order to justify the choice of terms.

Virtual-can occur under certain conditions; Real non-existent, the surrounding world imitates properties and is carried out only on a computer.

Interactive-a dialogue interacting with a computer, which makes it possible to carry out such interaction, dialogue is carried out between human and mass media.

Electronic-refers to a computer network, carrying out electronics through a computer network.

In studies dedicated to Information Technology in education, the definitions of "Computer" "Electronic" terms do not always differ. However, we consider it necessary to distinguish these concepts from each other. The definition of "electronic" is consistent with the concept of "electronic education" (e-learning), the meaning of which is to improve the quality of education due to the use of new technologies of multimedia and resources of the Internet, as well as servers, as well as remote exchange of knowledge and work in cooperation. The researchers noted that "e-learning is a learning process in which interactive e-learning tools of information transmission are used." Thus, the definitions under consideration reflect the form of existence of a particular source educational resource.

In scientific sources, there are various definitions of the trainer, some of which we will look at.

We will first clarify the meaning and essence of the concept of "trainer".

In the most general sense, the trainer is considered to be a device designed for training.

In education, a trainer is understood as a device, the content of which, intended for the effective implementation of the educational

process, must include the following three main parts:

- konusturuktiv (referring to an exact or virtual copy of the workplace);

- model (this trainer is an adequate model of posture and process that must be taffered);

- Didactic (the trainer must create an educational background that will allow the teacher to independently and fully master the subject area covered. Within the framework of this environment, there may be automated means of controlling individual achievements of educators or the creation of a special workplace for the teacher with a program for assessing and controlling the behavior of educators);

Simulators arise mainly when the need arises for mass training of specialists to work in jichoses of the same type, as well as those whose level of training is insufficient, which can cause injury to employees. The use of simulators in these plots is quite common due to the possibility of combining theoretical knowledge with practical skills.

A significant contribution to the development of trainer technology was made by the achievements in the field of improving computer technology and creating a virtual being, and as a result of these factors, a new class of simulators, namely computer simulators, appears.

The following definitions reflect the specifics of simulators developed on the basis of information and communication technologies.

A computer trainer is a program designed to develop the unique actions and skills of educators, as well as to ensure that the teacher performs the necessary functions for this [page 126, 32].

A computer trainer is a computer – aided learning tool related to the development of relevant skills, as well as designed to develop specific activity skills and Abilities [page 36, 25].

Computer simulators have a number of advantages such as:

- the cost of purchasing computer equipment is significantly lower compared to these pointers for special equipment;

- it takes little enough time to start and prepare computer devices;

- it is very easy to change the parameters of the trainer inside the computer system;
- the use of virtual simulators is much safer than the use of mechanical simulators.

It can be seen that the development of computer simulators is considered a promising direction for the introduction of information and communication technologies into the educational process.

A teaching trainer is a software complex based on the original methodology for assessing the knowledge, skills and abilities of educators and their purposeful training in the process of multiple-time re-solving of issues. Such simulators are aimed not only at the procedures for controlling the quality of students' knowledge, but also at Better Mastering the topics and strengthening the material covered, as well as optimizing the independent work of Educators [page 60, 60].

From the analysis of the definitions presented, it follows that, despite the different district interpretations of the concept under study, the main signs that distinguish the trainer (both traditional and Electronic) from other types of means of training include:

- to generate and strengthen the skills of using theoretical knowledge through multiple repetition of teaching actions;
- harmonization of educational and control functions.

Now let's look at the issue of how to call an electronic training tool, not an electronic visibility exercise system, but an electronic education trainer.

A.I. Bashmakov noted that the main reason for the possible conceptual errors in the creation of computer training tools is their use in a narrow interpretation, that is, as an electronic analogue of suitable traditional educational and methodological tools. On its basis, however, lies the lack of understanding that the computer tool of Education embodies the best of traditional tools and that new qualities must definitely be realized [page 36, 10].

Today, in scientific and methodological sources, together with the term "computer trainer", the term "electronic educational trainer" also appeared.

N.A. In the process where assignments are presented in stages, a software complex will be implemented that will help to strengthen the knowledge and skills necessary in the study of the subject, requiring active behavior from the trainer [91].

In this regard, it can be noted that it is not equitable to imagine the concepts of "electronic education trainer" and "electronic appearance exercise system" as synonyms.

The exercise system refers to the totality of exercises combined by type and appearance according to the function, material and method of its execution [page 9, 276].

Despite the fact that the system of exercises can be carried out both as a traditional and as part of electronic educational and methodological complexes or teaching aids, it is considered a more complex means of teaching (from a methodological and technical point of view).

Electronic training is the difference of the trainer from the system of exercises in electronic form and is considered to be the following.

1. An electronic training trainer is a flexible system that takes every specific user of it with an indication of their mistakes and changes the set and sequence of tasks depending on the difficulty of completing tasks.

2. The e-learning trainer includes not a system of exercises organized in a certain way from the initial appeal to the user, but a set of ungrouped tasks on topics that are presented in random order. However, when finding the mistakes of the educator, the e-learning trainer switches to the mode of formation of the necessary qualifications for working with the error-causing phenomenon, the presented reference information, instruction, indication of the error search field, as well as ensuring the receipt of the desired result on the basis of the full purpose of the actions.

3. The e-learning trainer complex is an independent e-learning tool. The exercise system, on the other hand, is part of a textbook or tutorial (electronic or traditional).

Despite the variety of so-called training resources, we consider this tariff to be satisfactory, since such a naming of the teaching

resource is consistent with active practical activity, which brings a significant result in the form of formation and strengthening of skills in the minds of users. Such an opinion is supported by the following argument, that is, in most publications devoted to the use of electronic education simulators in the learning process (in teaching solving their problems in mathematics, etc.), this term is used as a universally accepted and universally used term [121,85,48,103].

Based on the considered definitions of e-learning simulators in education, we form a definition that takes into account their main signs and more fully reflects the yield of the application itself.

Interactive electronic educational simulators are a resource of electronic education, which includes a Bater of assignments, designed to form, correct and improve the communicative skills and abilities of educators, is an object of control at the time of testing, allows maximum individualization of the exercise process at the expense of setting communicative-cognitive tasks with the personal component, as well as the formation of

The distinguishing features of interactive e-learning simulators that allow you to improve the quality of training are as follows:

- implementation of a personality-oriented approach in education and the formation of its individual trajectory;
- maximum increase not only the necessary material, but also the methods of working with them;
- we provide fast reversible connection;
- an objective assessment of the knowledge and qualifications of educators, an assessment of the level of readiness for assignments;
- reducing the anxiety of the Test Test using habituation and skill formation in the educational person when working with assignments;
- to increase the subjective confidence of those who receive education in preparation for passing test tests;
- increase emotional comfort during preparation for assignments;
- exemption from work that the teacher does manually;

- formation of universal educational activities that allow a person living in an informed society to study independently for the rest of his life;

- the possibility of working in distance and traditional education (independent with the teacher).

Learners can use an interactive e-learning trainer to prepare for assignments to focus on increasing their training by not focusing on the negative reaction of a teacher or groupmates to incorrect answers or a low pace of work.

Another important aspect of the interactive e-learning trainer in preparation for completing assignments is the exemption of teachers from manual work.

The use of a trainer allows the teacher to deal less with the selection and verification of exercises aimed at the formation of skills for working with information and communication technologies, with SQL query language commands of the "database". In addition, some modern researchers believe that the test method of testing knowledge prevents the implementation of the social and intercultural goals of education and an individual approach to educators", since "the emphasis on the exam reduces the focus on the educational process and individual students, the educational process itself becomes teaching to the test". An interactive e-learning trainer, on the other hand, is an effective tool for solving this problem, since, firstly, the independent implementation of a large part of the work on the study of SQL query language commands, and secondly, it makes it possible to individualize this preparation at the expense of creating an individual educational treaktoria for each educator. Such an organization of the educational process allows the teacher to devote much more time to training, creative types of activities, develop skills in working with SQL query language tools in the educational person and more fully realize the educational purpose of the lesson.

Interactive e-learning trainer the following functions of a modern teacher can be implemented: constructive-organizational;

instructive; educational; Gnostic; evaluative; motivational - stimulating.

Interactive e-learning the trainer can be used in both distance and traditional education (with the teacher and independently).

Interactive e-learning when any of the mentioned Training Systems is used as a trainer, a full-fledged independent work is provided aimed at creating skills for applying SQL query language commands.

Let's look at the position of interactive e-learning simulators when performing assignments in the Innovation Information and educational environment.

Interactive e-learning simulator a, designed to study a complex of SQL query language commands. N. Bogomolov believes that electronic teaching aids or electronic educational resources necessary for the optimal organization of the educational process are considered.

The interactive e-learning trainer is a necessary element of the innovation information and educational environment for the following reasons:

- serves as a tool for the development of competence for independent education at the expense of the development of universal educational activities, and also provides algorithms for ensuring quick return links and completing assignments;

- allows to assess the level of training of educators to work with SQL query language commands;

- allows you to choose the optimal strategies for completing tasks;

- allows control over operations during the execution of tasks.

Interactive e-learning a trainer is a more complex and multifunctional learning tool than from a methodological point of view.

When developing a trainer, the above features can be taken into account.

Thus the interactive e-learning trainer has the following few advantages as a tool for preparing SQL query language commands:

- automatic verification of the correctness of the execution of tasks (this allows you to save time);

- the ability to receive not only the correct answer in the event of an error, but also the necessary comments (according to the user's wishes);

- an algorithm for teaching the execution of various tasks (providing the necessary information about the specifics of their tasks, the optimal strategy for completing tasks, as well as a step-by-step work plan);

- the possibility of collecting statistics for the presentation of information about the success of the educational activity of the educational recipient to the teacher (in the case of using e-learning simulators as a means of additional education in cooperation with the educational person), as well as maintaining the results of completing assignments;

- the possibility of Real-time consultation of teachers who carry out the support of an interactive system of electronic educational simulators for independent learners of information and communication technologies.

In addition, depending on the mistakes made by the educators, the trainers offer him more step-by-step instructions on how to complete this type of assignment.

This feature of interactive e-learning simulators helps to maximize the individualization of the educational process.

Taking into account the pace of information perception in interactive e-learning simulators is clearly manifested in the fact that the educational person works at a comfortable pace for himself. This is especially important at the stage of familiarization with the program and the formation of all the necessary qualifications.

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