

The Use of Electronic Educational Resources in Training Future Specialists in Higher Education Institutions

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Abstract

The main purpose of the study is to determine the key aspects of the use of electronic educational resources in the training of future specialists in higher education institutions. The importance of using electronic educational resources in the preparation of university students is proven. The relevance of the chosen topic is due to the high rise of globalization in the process of training future specialists in higher education institutions. The theoretical and methodological basis of the article is the fundamental and modern provisions of the theory, the work of scientists and specialists in the management of electronic educational resources in the field of education. Based on the results of the analysis, the main characterizing aspects of the use of electronic educational resources in the training of future specialists in higher education institutions were identified. Further research needs to analyze new, experimental electronic means in the system of student training.

Keywords:

Electronic Resources, Education Resources, Students, Future Specialists.

1. Introduction

The problems of informatization of the educational environment of modern institutions of higher education actualize the issues of using educational web resources in the practice of professional training of future teachers and the classification of these electronic learning tools.

The implementation of many educational tasks at the present stage of the formation of the information society is impossible without the use of methods and means of modern global technologies in the training of qualified personnel for all sectors of the country. Therefore, the information and educational environment of a modern educational institution should be aimed at developing the ability of an individual to perceive dynamic changes that

affect his education and psychological well-being in society.

Informatization and technologization of production processes in all spheres of the national economy actualize the development of human potential, which is largely determined by the state of the system of vocational education. In this regard, attention is being paid to the reform of vocational education, taking into account the progress of the high-tech and communications industry and the digitalization of educational activities. Accordingly, European regional and national education programs are being improved, new curricula are being introduced, significant investments are being made in computerization and informatization, electronic educational resources are being developed, and appropriate training of future specialists in higher education is being carried out. This problem is of particular relevance for the training of skilled workers in the context of its approach to global trends in economic and social development, the requirements of the modern labor market, and the personal needs of future specialists.

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2. Methodology

The theoretical and methodological basis of the article is the fundamental and modern provisions of the theory, the work of scientists and specialists in the management of electronic educational resources in the field of education. To fulfill the tasks set to achieve the goal, general scientific methods were

used: theoretical: analysis of psychological, pedagogical, scientific, technical, and educational literature on research problems, comparison, concretization, systematization, and generalization of theoretical and practical material. All this forms our methodology for studying the key aspects of the use of electronic resources in the process of training future specialists.

3. Research Results and Discussions

The current state of the educational industry indicates an urgent need for the introduction of not only the latest information and communication technologies in education and science, but also the use of new open electronic systems designed to support and facilitate information circulation, create electronic resources to support information exchange, and ensure free access to the results of scientific research, to promote the integration of education and science into the global information space.

It should be noted that the use of electronic educational resources is closely related to modern information technologies, which are increasingly being introduced into the modern educational environment. This phenomenon is associated, first of all, with the informatization of society, namely with the transition to automation of workplaces. The competitive ability of a modern specialist in the labor market depends on the skills of working with information technology and the ability to quickly learn. The widespread use of electronic resources in educational activities is determined by the following factors: an increase in the number of computerized jobs (computer hardware and software); adoption of a large number of state programs, laws, and strategies for the development of the educational industry; the emergence and rapid development of the global Internet and wide access to its resources; control of students' knowledge in the form of computer tests; the emergence of a new generation of teachers with experience in working with modern information technologies [1-3].

Services based on cloud technologies are just beginning to actively develop and integrate into various social spheres of life from business to education. Currently, the issues of developing open and electronic educational resources, educational cloud services, and methods for their use in the educational process of resource centers for distance

education are relevant. Any introduction of the latest technologies into the educational process requires solving current issues related to the acquisition, configuration, and maintenance of hardware and software, and training of resource center employees. The use of electronic educational resources in the professional activities of teachers has a positive effect on the intensity and effectiveness of student learning. In this regard, the priority direction of training using modern information technologies in educational activities is to make a transition from teaching aspects of work (technical, technological) with computer equipment and office equipment to learning based on the correct formation of knowledge and skills, selection and proper pedagogically balanced use of educational electronic resources in the educational process

Note that proper management of electronic educational resources is impossible without a properly designed system. Electronic educational resources consist of three main components: content (educational materials), methodological support, and appropriate software. In addition, each of these components must be developed under certain requirements to be effectively used in the educational field, that is, an electronic educational resource must be developed in full accordance with the didactic principles of teaching, be of high quality, and suitable for its effective use [3-5].

The main electronic educational resources for the preparation of students of higher educational institutions are presented in Table 1.

Table 1: The main electronic educational resources for the preparation of students in higher educational institutions

<i>Nº</i>	<i>The main electronic educational resources</i>
1	Database of electronic documents

2	Electronic dictionary system
3	List of electronic textbooks
4	List of electronic manuals
5	Distance learning system

The content of the filling of the electronic educational resource should be developed in full accordance with the didactic principles of education, taking into account the psychological and pedagogical conditions of education and the age characteristics of the students who use it. In addition, electronic educational resources must be consistent with the goals and objectives of education. It should also be noted that electronic educational resources stored on electronic media must be relevant, sufficiently complete in terms of the content of the educational purpose, and logically interconnected. Electronic educational resources have their own organization and structure or architecture that ensure the correct functioning of all components of the resource. The main components of the architecture of educational resources are learning blocks that provide the necessary quality of knowledge acquired by the user. These blocks are in certain functional relationships with the user and among themselves within a specific resource.

The first block of the user's work with information is the organization of training activities. The user positions himself in the resources by entering certain

data about himself and selects the level of volume and complexity of the work to be done. The second block is the actualization of basic knowledge. This block is linearly connected with the previous one and allows you to update the necessary previously received information and transfer it to the category of assigned (useful) information. The third block of work with information is the acquisition of the necessary new information. When working with this block, the user acquires the necessary information on the topic of the lesson. The fourth resource block is the assignment of the collected information. When working with this block, the user translates the collected necessary information into the status of useful information. The sixth block is monitoring the quality of the acquired knowledge. With a successful result of the work on the transformation of useful information in the knowledge, the student proceeds to check the quality of assimilation of the studied material by performing a test of the selected level of complexity. This block is linearly related to the previous one. The seventh block is an independent assessment of the quality of the user's learning activity. At this stage, the results of the user's work with the resource are summed up [6-8].

The key elements of the system for using electronic resources for the training of future specialists are presented in Table 2.

Table 2: The key elements of the system for using electronic resources for the training of future specialists

<i>№</i>	<i>The key elements of the system for using electronic resources</i>
1	Formation of an Internet space management system for additional assistance in the training of future specialists

2	Creation of web databases with electronic documents
3	Formation of an electronic depository of resources
4	Creation of electronic systems of practical activity

Educational computer programs are not a random component in the electronic educational and methodological complexes of technology teachers. Demonstration of the didactic capabilities of ready-made educational computer programs and digital educational resources at advanced training courses, followed by independent work of students in a mobile computer class, gives the future specialist new guidelines for improving the teaching process. A large number of illustrations, animations and video clips, hypertext presentation of the material, and sound accompaniment in educational computer programs, makes it possible to choose a convenient pace and form of perception of the material, which, of course, meets the modern requirements of the state educational policy. The quality of the electronic educational complex allows not only to make the most of all available opportunities for studying information technologies, to organize scientific information to quickly correct this knowledge in practice but also to provide a systematic approach to the didactic process as a whole. The study of the topic from different angles forms the universal types of educational activities for students. The development of electronic educational and methodological complexes and their use in the educational process is the most important means of increasing the methodological, information and

communication, professional competence of future specialists.

A modern teacher should be able to use modern information technologies in their professional activities and possess all the necessary skills to work with them. Priority and important areas of training teachers to use educational electronic resources in their professional activities are familiarization with all aspects of the use of electronic educational resources; formation of an idea of the place and role of electronic educational resources in the modern information society; mastering the methods of introducing electronic educational resources into the educational process [9-11].

One of the most important components of any methodological system of teaching a discipline is teaching methods. Without appropriate methods of activity, it is not possible to realize the goals and objectives of training, as well as to achieve positive learning outcomes. Teaching methods as a component of the methodological system are closely related to other components of the system. Teaching methods are divided into two components: objective and subjective. The objective component is based on provisions that must be in any method, regardless of which teacher uses it. The second component of the methods is due to the personality of the teacher, his creativity, skill; characteristics of students, and specific conditions for the course of the educational process.

In the conditions of reforming the educational industry and reorganizing educational institutions, the question of the competitiveness of teachers and students is becoming more and more rigid. Therefore, everyone should be able to use modern resources to improve the quality of education [12-17]. Electronic educational resources are transformed into a determining factor in learning systems, and their use becomes an essential condition for the transformation of pedagogical activity. The necessary components of the learning environment are multimedia equipment to support the educational process and a component that mediates the content of learning and management of the learning process, that is, electronic educational resources, which include electronic educational tools and electronic tools intended for management activities.

Interactive multimedia Internet resources of a new generation open up new opportunities for independent educational activities. But a significant

expansion of the functionality of electronic educational resources entails a change in the educational process at all levels. As with any innovation, the main factor is the human factor. Only with social changes in the content and methods of the teacher's work can one expect the effect of the introduction of new educational materials.

Providing both external and internal operational feedback, electronic educational resources as a component of the learning system allow for pedagogical control, self-control, and adjustment of the organization of educational and cognitive activity of students. Communicative activity, which involves communication between a teacher and students, is also undergoing certain changes - the introduction of electronic educational resources allows organizing rational communication: elements of tension that sometimes arise in interaction with a teacher are removed, psychological obstacles are erased, and the range of interaction options is expanding.

Electronic educational resources are an integral part of the educational process, have an educational and methodological purpose and are used to ensure the educational activities of students, and are considered one of the main elements of the information and educational environment. The purpose of creating electronic educational resources is the modernization of education, the content of filling the educational space, ensuring equal access for participants in the educational process to high-quality educational and methodological materials, regardless of their place of residence and form of education, created based on information and communication technologies.

4. Conclusions

Summing up, it should be noted that the modern development of computer technology and information technology is quite fast. Attracting all today's achievements to the professional activities of future specialists is a rather successful and balanced decision. Widespread introduction and trend in the global community of the educational industry are acquiring distance learning, websites of educational institutions, and electronic publications. The state requires the readiness of specialists who are aware of and can implement these technologies in their professional activities. The introduction of new

learning technologies and their skillful use requires a certain willingness and awareness to work with these technologies.

We believe that an educational resource is a resource of educational purpose, the use of which will lead to the enrichment of knowledge, skills, and user skills of this resource.

Educational electronic educational resources are educational electronic resources, which include: electronic textbooks and teaching aids. Currently, as an electronic educational resource, it is an information resource or educational data presented on electronic media, which can only be managed using a personal computer and peripheral devices connected to it.

The main and most important purpose of the educational process is to provide psychological and pedagogical conditions for the comprehensive development and self-development and self-realization of a student who is the subject of the educational process. For the proper implementation of the goals of educational activities, namely the professional, spiritual, and moral development of students, it is necessary to take into account the age and individual characteristics of the student. The ability of a teacher to learn, understand and appreciate a student is one of the main and most important components of a teacher's professionalism. Studying the experience of teaching the management of electronic educational resources in educational institutions, it can be noted that at present there is no system with which it would be possible to manage all the electronic educational resources of an educational institution. To solve this problem, further research requires an analysis of the use of web-based computer content management systems (contents) of the website, educational content management systems, and content management systems for special purposes.

The research is not without limitations. During our analysis, the specifics of the educational process of individual regions and the technical capabilities of higher educational institutions were not taken into account.

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