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INFORMATION TECHNOLOGIES IN PREPARATION FOR FUTURE PROFESSIONAL ACTIVITY MANAGERS, INSTITUTIONS AND ORGANIZATIONS IN EDUCATION

Urgency of the research. *Introduction of information technologies in the educational process is explained by the almost logical application of the acquired knowledge and the formed skills and skills of professional activity, is ensured by the introduction of information technologies in a rapid process.*

Target setting *The training of future specialists of various profiles with the established professional competence requires a clear system of organization and management of the educational process, which can be developed on the basis of information and communication technologies.*

Actual scientific researches and issues analysis. *Theoretical basis of information technology are revealed in the work of Yu. Mashbytsia; Issues related to the use of information technology in the educational process of the university, are covered in the works of R. Hurevycha, V. Monakhova.*

Uninvestigated parts of general matters defining. *Analysis of psychological and pedagogical literature shows that insufficient attention is paid to the role of information and communication technologies in the process of organizing the work of managers in the education field.*

The research objective. *The purpose of the article is to determine their role in improving the quality of the organization and management of the educational process of the university.*

The statement of basic materials. *The article considers the concept of "information technologies", and its use in the preparation of future managers of enterprises, institutions and organizations in the field of education. Classification is carried out on: information-learning, Internet technologies; Communication and search. Their advantages in the process of training and further professional activity are clarified.*

Conclusions. *The introduction of IT allows: to use the latest information technologies in teaching; improve the skills of independent work of students in the information environment.*

Keywords: *Information Technology; Cloud services; Blog; Wiki-encyclopedia; Web log; Web 2.0; multimedia.*

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ІНФОРМАЦІЙНІ ТЕХНОЛОГІЇ У ПІДГОТОВЦІ ДО ПРОФЕСІЙНОЇ ДІЯЛЬНОСТІ МАЙБУТНІХ КЕРІВНИКІВ ПІДПРИЄМСТВ, УСТАНОВ ТА ОРГАНІЗАЦІЙ У СФЕРІ ОСВІТИ

Актуальність теми дослідження. *Введення інформаційних технологій у освітній процес пояснюється практично-логічним застосуванням здобутих знань і сформованих умінь і навичок професійної діяльності, що забезпечується впровадженням інформаційних технологій в навальний процес .*

Постановка проблеми. *Підготовка майбутніх фахівців різного профілю із сформованою професійною компетентністю вимагає чіткої системи організації і керівництва навчальним процесом, розробити яку можна на основі інформаційно-комунікаційних технологій. Тому* ***метою статті*** *є визначення їх ролі у підвищенні якості організації і керівництва освітнім процесом ВНЗ.*

Аналіз останніх досліджень і публікацій. *Теоретико-методологічні основи інформаційних технологій, розкрито в роботі Ю. Машбиця; питання, пов'язані з використанням інформаційних технологій у навчальному процесі ВНЗ, висвітлено у працях Р. Гуревича, В. Монахова.*

Виділення недосліджених частин загальної проблеми. *Аналіз психолого-педагогічної літератури показує, що недостатньо уваги приділено ролі інформаційно-комунікаційних технологій у процесі організації роботи керівників у сфері освіти.*

Постановка завдання: *визначити інформаційно-комунікаційні технології, що сприяють підготовці майбутніх керівників підприємств, установ та організацій у сфері освіти до професійної діяльності.*

Викладення основного матеріалу. *У статті розглянуто поняття «інформаційні технології», та їх використання у підготовці майбутніх керівників підприємств, установ та організацій у сфері освіти. Здійснено класифікацію на: інформаційно-навчальні, Інтернет-технології; комунікаційно-пошукові. З'ясовано їх переваги у процесі навчання та подальшій професійній діяльності.*

Висновки. *Застосування ІТ дає можливість: використовувати в навчанні здобутки новітніх інформаційних технологій; удосконалювати навички самостійної роботи студентів в інформаційному середовищі.*

Ключові слова: *інформаційні технології; хмарні сервіси; блог; вікі-енциклопедія; веб-журнал; Web 2.0; мультимедіа.*

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Urgency of the research. Information technologies today concern all spheres of human activity, and perhaps the most important positive impact they have on education, as they open up opportunities for the introduction of new methods of teaching and learning. The introduction of information technology in the educational process of higher education institutions is due to the almost logical application of knowledge gained by future specialists and formed skills and professional activity skills. But it is possible to provide such a process by introducing information technologies and didactic means of their implementation.

Target setting. At the present stage of introducing a new education paradigm, the problem of organizing and managing vocational training in higher education institutions deserves increasing attention. The Concept of Vocational Training emphasizes that the main goal of education is to ensure equal access for young people to obtaining a profession. There is a need for successful training of specialists. This is due to the new labor market requirements. The training of future specialists of various profiles with the established professional competence requires a clear system of organization and management of the educational process, which can be developed on the basis of information and communication technologies. Therefore, the **objective** of the article is to define the role of information technologies in improving the quality of organization and management of the educational process of higher education institutions.

Actual scientific researches and issues analysis. Studies in this field, in particular the theoretical and methodological foundations of information technology, are disclosed in the work of Yu. Mashbits; Issues related to the use of information technology in the educational process of the university are covered in the works of R. Hurevych, V. Monakhov; The scientific foundations of technology training using information technology were considered in the studies of I. Bohdanovoi, M. Lukashchuka, L. Panchenko.

The Ukrainian scientist M. Zhaldak declares that "information technology is a set of methods and technical means of collecting, organizing, storing, processing, transmitting, presenting information that expand people's knowledge and develop their ability to manage technical and social processes" [1, p. 4]. I. Sokolova defines information technologies of education as "a system of general didactic, psychological, technological procedures for interaction between subjects of the educational process in higher education, taking into account technical and human resources aimed at forming the information competence of future specialists" [2, p. 213]. We support the view of I.Bulakh that "information technology is a system of tools and techniques that ensure the optimization of work with information on the basis of computer technology" [3, p. 26]. Summing up the views of scholars we came to the conclusion that in the scientific and pedagogical literature in the understanding of the essence of "information technology" Ukrainian scientists use two approaches: general technical (M. Zhaldak, M. Skopen) and pedagogical (I. Bula, I. Sokolova).

Uninvestigated parts of general matters defining. As the analysis of psychological and pedagogical literature shows, insufficient attention is paid to the organization of the educational process and to guide it on the basis of the modern educational paradigm. Additional research is required on the specifics of the organization of training in various higher education institutions using information technology.

The research objective. On the basis of the above, the following tasks have been singled out: to define information and communication technologies that help prepare future managers of enterprises, institutions and organizations in the field of education for professional activities.

The statement of basic materials. Two approaches to understanding the meaning of the concept of information technology also stand out. On the first one they were viewed as a didactic process based on a set of fundamentally new tools and data processing methods (training methods) embedded in the learning system, aimed at creating, transferring, storing and displaying data, knowledge, ideas at the lowest cost and in accordance with the laws of cognitive Activity of students. The second approach involves the creation of a special information environment for training, in which the central place is occupied by information technology. So, in the first case we are talking about

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information technologies for teaching (as a learning process), and in the second case, the use of information technologies in teaching (how to use information tools in teaching).
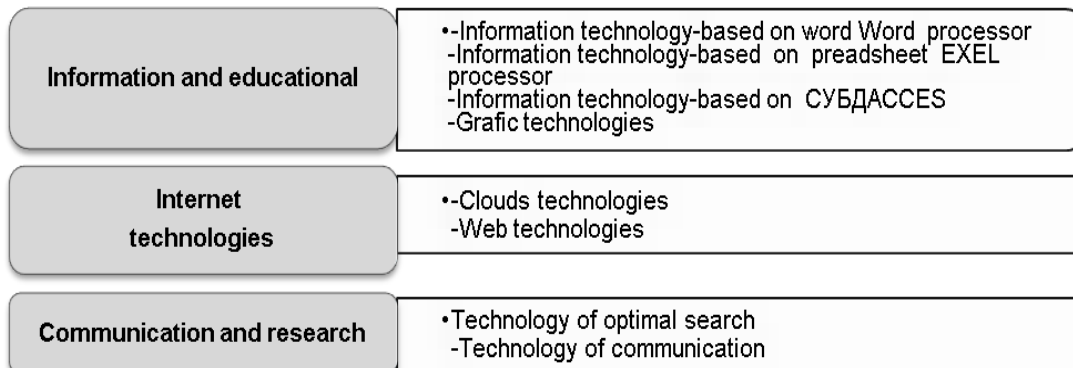
According to I. Sokolova, the correct use of the possibilities of information technology in teaching contributes to: the activation of cognitive activity, the improvement of the student's quality; The achievement of the goal of education with the help of modern electronic teaching materials intended for use in classrooms; Development of self-education and self-control skills among students; Increased activity and initiative in the classroom; Development of information thinking; Formation of information and communication competence [2].

The use of information technologies in higher education institutions, according to I. Bogdanova [4] and R. Gurevich [5], is psychologically and pedagogically grounded and allows to achieve the intensification of all the links in the educational process, the optimization of teaching methods, and the active use of open education technologies . Therefore, the role of information technologies was defined: intensification of the learning process and increase of its effectiveness due to the possibility of processing a considerable amount of educational information; Development of cognitive activity, independence, increasing interest in the academic disciplines, which use information technology; The establishment of a clear feedback, necessary for the management of the educational process; Systematic control of knowledge, skills and abilities using information technology; Improvement of forms and methods of organizing independent work of students; Individualization of the learning process.

Depending on the functions of information technology in the organization of the educational process, A. Zamoshnikov classifies them as: information-learning (electronic libraries, e-books, dictionaries, training manuals, computer programs, etc.); Interactive (e-mail, electronic teleconferences) search (implemented through catalogs, search engines) [6, P. 78-83].

Given this classification, we can more specifically consider information technology (Fig. 1).

In our opinion, such a classification is conditional, as technologies that are grouped together may overlap.

Information and educational	•-Information technology-based on word Word processor -Information technology-based on preadsheet EXEL processor -Information technology-based on СУБДACCES -Grafic technologies
Internet technologies	•-Clouds technologies -Web technologies
Communication and research	•Technology of optimal search -Technology of communication

Fig. 1. Classification of information technologies

Among the technologies mentioned, information and training technologies are most often used. They are the leaders in the educational process of the university.

Information technologies based on the word processor Word allow the user to prepare universal text documents of any complexity and perform such important functions as: creation and insertion of formulas, diagrams, organizational structures in the document; Inserting drawings, objects from the PC screen into the document; Inserting objects from the Excel spreadsheet, Access database, and PowerPoint presentation package into the document; Sorting paragraphs of text and table data; Perform calculations of data in tables; Automation of document processing.

The Excel spreadsheet is the environment for performing calculations of various complexity without much programming costs. In addition, the application allows you to perform such important

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functions as: creating and inserting into the book formulas, diagrams, organizational structures; Inserting drawings into the book, objects from the PC screen; Inserting into the book of objects from the Word Processor environment and the PowerPoint presentation preparation package; Import into the book of relational tables with the Access DBMS; Sorting the data in the table; Automation of data processing. To implement the first two functions, information technologies similar to Word applications are used.

The analysis of publications by N. Dementievsky, M. Zhaldak, Yu. Zhuk, devoted to multimedia technologies in education, allows to draw conclusions about the pedagogical features of multimedia technologies. We include them: the development of an individual computer-centered learning environment; Personalized software for the application of special teaching methods; Integration of the audience in the polling mode on the basis of existing software and hardware; Building computer-based learning tools and integrating them with other interactive technologies [7].

Multimedia in education contributes to the emergence not only of a new saturated field of communication, information transfer, but also a field for the emergence of new considerations, points of intersection, problems and solutions that have gained a new place in modern culture in comparison with traditional and well-known means of information transfer and learning tools.

Modern educational computer programs (electronic textbooks, computer task books, training manuals, hypertext reference systems - archives, catalogs, reference books, encyclopaedias, testing and modeling simulators, etc.) are developed on the basis of multimedia technologies, emerged at the junction of many Branches of knowledge.

One of the means of implementing multimedia technologies is the PowerPoint presentation package. It is intended for visual presentation of demonstration materials of various fields of activity in the form of a set of slides prepared on PC.

Depending on the functions of information technology in the organization of the educational process, A. Zamoshnikov classifies them as: information-learning (electronic libraries, e-books, dictionaries, training manuals, computer programs, etc.); Interactive (e-mail, electronic teleconferences) search (implemented through catalogs, search engines) [6, p. 78-83].

Technologies that meet these requirements include Web 2.0 technologies, cloud technologies.

Let us dwell on their characteristics.

Web 2.0 technologies. Among the modern promising web technologies that can help educators solve educational problems, stands out the technology Web 2.0 (Web 2.0) - the current generation of network services, is the basis of the global Internet.

Web 2.0 technologies are defined as social services of the Internet, because they are used together within a particular group of users, which can form entire network communities that unite their resources to achieve a specific goal. The main types of social services Web 2.0 include: blogs (web diaries), wiki-encyclopedia, blogs, means for saving bookmarks, social services for storing multimedia resources, knowledge maps, social geoservices, social search engines.

Analyzing the basic social services of the Internet, N. Balyk [8, p. 88-90] notes that they provide an opportunity to select those services, the use of which will effectively influence the methodical preparation of future managers of enterprises, institutions and organizations in the field of education to use educational web resources. Therefore, the issues of using and optimal implementation of this technology in a higher educational institution are decided by the teacher himself, taking into account the requirements for the academic disciplines and the target audience.

Cloud technologies. According to the official definition of the National Institute of Standards and Technology (NIST), "cloud computing is a model for providing ubiquitous and convenient network access on demand to the common space of computing resources to be configured (for example, to communication networks, Servers, storage, applications and services) and can be promptly provided and released with minimal management costs and calls to the provider". So, under the cloud can be understood a set of interconnected servers, on the side of which all the user's work on the preservation, updating, archiving and processing of information is remotely performed.

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Foreign scientists Justin Reich, Thomas Daccord, Alan Newber, Justin Reich, Thomas Daccord, Alan November, Virginia A. Scott, Alec Bodzin studied the peculiarities of implementing cloud technologies in the professional activity of future heads of enterprises, institutions and organizations in the sphere of education. , Beth Shiner Klaine, Alek M. Bodzin, Beth Shiner Klein, Starlin Weaver [9], etc., the domestic scientists M. Zhaldak [1], N. Morse [7] and others.

The scientist V. Oleksyuk identifies 4 models of deployment of cloud technologies:

1. Corporate - the clouds are usually created and controlled by one organization. According to the access to the resources of such clouds is limited to the employees of the institution.

2. Publicly accessible, which provides for the sharing of platforms by several organizations. The management of such a cloud is usually handled by an external provider, for example, Amazon EC2, GoogleApps, Salesforce.

3. Group, according to which organizations share the cloud services of the provider.

4. Hybrid - involves a combination of several models [10, p. 46-47].

The most famous in the world are the free cloud platforms Microsoft Live @ edu, Google Apps Education Edition and cloud based services.

Cloud services for obtaining skills in working with documents and web services (the Microsoft Live @ edu cloud platform (http://www.liveatedu.com) provides opportunities for hands-on learning of known office applications through a cloud-based web browser, the cloud-based Google Apps platform Education Edition).

1. Cloud services to develop your own or use existing tests. An example of a cloud-based Internet service for the rapid development of their own tests, provides the possibility of free maintenance of up to 100 students per month with one test manager in Lite mode, is OpenTest (http://www.opentest.ru/).

2. Cloud services and cloud storage. The most famous cloud storage is SkyDrive, Apple iCloud, Google Drive, Dropbox and others.

The main benefit of using cloud platforms and cloud services is the continuity and availability of training anywhere and anytime. Interaction of teachers, students or administrators with the cloud platform and its services is carried out with the help of any device (computer, tablet, mobile phone, etc.), which has a browser with the ability to connect to the global Internet. So, any student can begin to perform assignments in the classroom, and continue working at home without having to copy part of the completed task to any media because all the necessary information is stored in the cloud (data center) on the remote server.

Cloud technologies in the Ternopil Volodymyr Hnatyuk National Pedagogical University use the software components of the information and educational space, such as: a website, an e-learning server, a social network. It was these information resources that were used in the training of future managers of enterprises, institutions and organizations in the field of education.

Conclusions. Summarizing the above, we came to the conclusion that the use of IT makes it possible to address such pressing issues: to use the latest information technologies in training; Improve the skills of independent work of students in the information environment; To form an individuality taking into account personal abilities; To provide an opportunity to make extraordinary decisions, draw conclusions from their consequences.

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