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## Use of internet technologies in information and education environment in universities

This article describes the impact of the development of information technology on the learning process, the characteristics of the Internet educational resources were carried out. The analysis of trends in the use of modern information technologies in libraries was conducted. A wide range of services offered in Kazakhstan libraries of national importance is provided. The process of informatization of education in Kazakhstan with the introduction of computer technology in educational activities is reviewed. The use of information resources in the educational process enhances the effectiveness of the learning process, optimizes performance of trainees. Concept of internet technologies is introduced and its types such as WWW service, email and mailing lists, various search engines, ICQ, chats, html forums, guest book, teleconference, ftp servers and so on are examined. Also relevance of the use of information tools in education process, which according to study results contributes to an improvement in an effectiveness of study process and optimization of activities of students, is demonstrated.

*Keywords:* development, website, internet, electronic textbooks, programming languages, technologies, educational institution, system, information, electronic resource.

Nowadays informatization of an education is important condition for the development of humanity. Material and organizational prerequisites are realized for the development of a unified information educational environment in a society. This environment is a kind of guide for the trainees to study the basics of information culture and creates conditions for the development of educational content, modernization of innovative technologies in the education.

Recent development in the global computer network Internet has opened up new prospects for improving the education system. Firstly, this factor contributed to the emergence of new requirements for the technical support of educational institutions and their access to global information resources. Secondly, it gave a strong impetus to the development of the content of the teacher's activity, the use by the teacher of new forms, methods and types of training aimed at active cognitive school activities, cooperative learning, self-education.

Recently some regions and schools are actively using Internet technologies in educational process: telecommunication projects are developed, teachers create educational sites together with students, virtual subject cabinets, network methodological associations are implemented by enthusiastic teachers, lessons using Internet resources are conducted, organized tele, videoconferencing and seminars in Internet chat session. Developing informational educational environment significantly changes the positions of the participants of the educational process.

«Information component» is being developed in the content of pedagogical activity of the teacher in the conditions of use of Internet technology, which causes the formation of students' general educational and general cultural skills to work with information.

It is necessary to improve the training of teachers, which has the purpose of development of the content of the elements of pedagogical activity through the use of Internet technology, which is extremely important in today's informational society.

Website 'Profile education in high school' (<http://www.profile-edu.kz>) contains not only the basic regulations, but also interesting experimental materials for the design and implementation of elective courses in different regions of the country. There are also new materials on this topic appearing on the websites of publishers, electronic media.

A generator of electronic textbooks is the largest electronic resource on the Internet, containing a detailed description of the educational and methodical literature for pre-school, school and primary vocational education, including all textbooks from the federal lists, multimedia tutorials, news publishers of textbooks, as well as the base of curriculum data, publishers, booksellers. It is constantly updated. Current version of the catalog can be viewed online at:

<http://e-zerde.kz/generator/standart.htm>.

Important information on the academic literature is also available on the website of the Ministry of Education and Science of the Republic of Kazakhstan.

In Kazakhstan, the education informatization process involves the introduction of computer technology into educational activities. Multimedia technologies, that have become extremely popular and are finding increased application in addition to traditional printed textbooks are used in the electronic textbooks, educational-methodological complexes and other auxiliary instruments of education. Preparation of textbooks for publication in printing conditions requires a large investment of time, thereby making it difficult for the timely provision of students with textbooks, including educational literature [1].

The advantages of these educational programs are:

- Mobility;
- Availability of connection with the development of computer networks;
- The comparability/adequacy to the level of development of modern scientific knowledge.

Another advantage of the creation of e-learning programs is that it solves a problem of the regular updating of information material. In addition to that electronic books can contain a variety of examples and assignments. In addition, with the help of e-learning programs knowledge control is made possible through the use of computer testing.

Thus, the development of information technology provides a tremendous opportunity to create new methods and techniques in educational performance and thereby improve its quality.

Internet gradually becomes one of the most important sources of information for the governance of educational management and a very convenient tool for communication. The Internet has made the transmission of information directly on computer networks possible, as well as educational, scientific and it became possible to manage information in case of educational, scientific or managerial needs.

It can be said with great confidence that in the near future all schools will join their computers in the local network with access to the Internet. To do this, all the specialists of education should know the principles of research and the exchange of data on the network. No matter what information you will need, on the Internet you will for sure be able to find the information that you need.

There are a lot of resources in the Internet but there is no official list of them. There are a number of reasons for this. First of all, these resources are enormous and can not be exhausted. Secondly, due to the fact that anyone can create a new resource at any time they are updated and changed at an alarming rate. Generally, about a quarter of data in any network resource index is outdated per year.

It is very difficult to describe Internet resources in the field of pedagogy. This includes teaching and training databases, multimedia educational servers, virtual textbooks, all sorts of scientific literature, discussion groups, electronic versions of periodicals, research projects, different pedagogical software and so on.

There is no single list of educational conferences, seminars and projects. It is impossible to give any meaningful list of scientific-pedagogical and educational institutions due to its huge size.

Internet technology is a variety of services, which are presented to the user global network: support the WWW, email and mailing lists, the various search engines, ICQ, chat conversation, the html-forums, guest books, newsgroups, ftp-servers and other services. Some sources also treat various ActiveX technologies as internet technology. For example, browsers, web page editor the FrontPage web-compatible Office suite, programming languages VBScript, JavaScript, and others. Thus, Internet technology is a set of different types of network services and the various types of software [2].

Below are the educational resources of the Internet (the most frequently used sites and portals on the subject taught):

1. [www.edu.gov.kz](http://www.edu.gov.kz) - The official website of the Ministry of Education and Science of the Republic of Kazakhstan. It sets out the regulations of the Ministry of Education and Science, standards, data on the conducted experiments.

2. <http://www.nauka.kz> - Research portal. It provides information on the state of Kazakhstan science and the latest developments in it.

3. <http://www.mektep-rk.kz> - «My School» project. The program is designed to use interactive technology in the teaching process, in order to introduce into the educational process a new automated management system that provides a complete document management system, static calculations, in school communications, communication with parents through the Internet.

4. <http://www.edu-cip.kz> - International Programs Center of the Republic of Kazakhstan. The main purpose of this center is to carry out the selection of personnel for participation in international programs,

including the «Bolashak» scholarship. Establishment of contacts with foreign universities and organizations for the implementation of programs and projects in education are also its duties.

5. <http://www.schools.kz> - Information resource about secondary education in Kazakhstan

6. <http://www.obrazovanie.kz> - Modern education in Kazakhstan - Kazakh magazine devoted to education.

7. <http://www.nci.kz/> - National Center of Informatization of Education.

The Internet provides a tremendous opportunity to learn modern teaching methods by analyzing the experiences of colleagues who teach other subjects. Help of the network gives opportunity to not only get acquainted with the existing forms of organization and teaching methods, but also to create their new ones. This is due, firstly, to the use of the Internet in the traditional class-lesson-learning system, and secondly, due to the development of a distance learning system.

Various interesting lesson plans and other materials of a methodological nature are presented at various competitions and festivals. All the teachers tend to submit their best works in order to enter competition. With such a wide variety of lessons, you can create new and exciting lessons based on technology [3].

In addition, such competitions attract participants due to the fact that it is possible to use the teaching methods of teachers who teach other subjects.

It is impossible to identify which of the conducted competitions is the best since their number is huge and each of them has a purpose.

Work of Kazakhstan's August Internet-pedagogical council, which has been held before the start of the new academic year in-line on the site since 2008, is considered to be interesting and useful. Reports and methodical developments of online teachers' meeting participants were heard.

Lately the interest of teachers has been pointed at research activity. Internet provides great opportunities for this. Usually, the data on the most significant scientific conferences is distributed through ads on Web sites or e-mail. Sometimes conferences are held both in the usual real and electronical regimes. Network conference are also frequent.

You can easily select and order the modern scientific and methodical literature and get it by postal services. With the help of some search services, you can search for books in the databases of several bookstores.

Today more and more new information and communication technologies are applied. Libraries are not the last in the list. They are called virtual or electronic libraries. In these libraries, a certain part of the information fund becomes available through the network or disk after digital processing. There is a specialized personnel, which applies modern information technologies in its work in order to work with readers.

It is possible to work with catalogs in these virtual libraries. Access is provided to the materials in electronic form (digitalized books, journals, illustrations, etc.), pictures, animations, audio and video files, and more. In the main catalog and electronic materials are available free of charge., you have access to the materials in electronic form (digitized books, journals, illustrations, etc.), pictures, animations, audio and video files, and more. Majority of catalog and electronic materials are available for free.

Despite all these problems, the number of significant digital libraries only in the Russian part of the Internet is close to several hundred, although not all of them are regularly updated with new material.

What kind of materials useful for teachers can be found in free access mode in the domestic digital libraries depends largely on the status and funding of the library, in addition to its links with research centers.

The greatest number of valid electronic materials and a wide range of services including e-Kazakhstani libraries available in the libraries of national importance.

The largest library in Kazakhstan is Kazakhstan's National Electronic Library. The site of the library ([http:// www.kazneb.kz](http://www.kazneb.kz)) allows to work with catalogs for free. Kazakhstan's National Electronic Library forms the foundations of the Open Electronic Library, considering this job as a service to the spiritual revival of the nation. History and culture of Kazakhstan, School Books, textbooks, dissertations, and dictionaries are identified as priorities.

A scientific library ON-LINE EKSU named after A.S Amanzholov [4] can provide a great help in the professional activity of teachers. There is a variety of encyclopedias, dictionaries, monographs, domestic and foreign newspapers and magazines and other materials. Collection of links to educational resources of the network is constantly updated.

Education informatization is a process of active implementation of psycho-pedagogical developments, which can intensify the learning process on any subject, into the teaching activities. The attractiveness of the

computer still does not provide a stable interest to it and to the activities associated with its use. It is necessary to regularly seek opportunities to maintain interest in the content of the educational material and to improve teaching methods. Students can «travel» on different continents and countries, the oceans and seas, see the waterfalls by visiting different sites.

The use of Internet technology creates dynamic informative interest in many trainees, which often turns into design and research activities on specific themes and topics. According to results of research, the use of information resources in the educational process enhances the effectiveness of the learning process and optimization of the activities of students. The use of the Internet increases the cognitive activity of children, makes the learning process brighter and more interesting. There is a new possibility to create and use cartographic material with the card created directly in the classroom by using Internet technology in the educational process. Use of computer technology allows for individual pacing in material learning process. Using computer causes an increased interest and enhances the learning motivation of the students.

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### **Жоғарғы оқу орынының ақпараттық білім беру ортасында интернет-технологияларды қолдану**

Мақалада ақпараттық технологиялардың дамуы оқыту үрдісіне әсері қарастырылды, интернет-желінің білім беру ресурстардың сипаттамалары жасалған. Заманауи ақпараттық технологиялар кітапханаларда қолдану тенденциялары, мемлекеттік деңгейдегі кітапханалар ұсынатын қызметтері талданған. Ақпараттық технологияларды оқыту үрдісінде пайдалану оқу процесінің тиімділігін арттыруға, оқушылардың іс-әрекеттерін оңтайландыруға мүмкіндік туғызады. Интернет-технологияларға түсініктеме берілген және оның түрлері қарастырылған: WWW сервисі, электронды пошта және тарату беттері, әр түрлі іздеу жүйелері, ICQ, чат-сөйлесу, html-форумдар, телеконференциялар, ftp-серверлер т.б. Сонымен қатар оқу процесінде ақпараттық технологияларды қолдану өзектілігі көрсетілген, зерттеулердің нәтижелері бойынша ол оқу процесінің тиімділігін арттыруға, оқушылардың іс-әрекеттерін жақсартуға мүмкіндік туғызатындығын көрсетті.

*Кілт сөздер:* даму, web-сайт, интернет, электрондық оқулықтар, бағдарламалау тілдері, технологиялар, білім беру мекеме, жүйе, ақпарат, электронды ресурс.

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### **Использование интернет-технологий в информационно-образовательной среде вуза**

В статье рассмотрены вопросы применения интернет-технологий в образовательной деятельности вузов. Проанализированы основные характеристики образовательных ресурсов сети Интернет и тенденции использования современных информационных технологий. Приведен широкий спектр предлагаемых услуг в казахстанских библиотеках государственного значения. Рассмотрен процесс информатизации образования в Республике Казахстан с внедрением информационных технологий в образовательную деятельность. Отмечено, что использование информационных технологий способствует повышению эффективности учебного процесса, оптимизации деятельности обучаемых. Авторами раскрыта сущность понятий интернет-технологий. Описаны виды интернет-технологий, такие как сервис WWW, электронная почта и листы рассылки, различные поисковые системы, ICQ, чат-беседа, html-форумы, гостевые книги, телеконференции, ftp-серверы и т.п. Выделены возможности Интернета в образовании, что позволяет сделать процесс обучения более доступным и быстрым

для любого пользователя сети. Рассмотрены методы организации обучения с применением интернет-технологий в процессе обучения. Представлены формы работы с интернет-технологиями. Сделаны выводы, что рассмотренные информационные технологии показывают, что по мере их развития удавалось ставить и решать все более сложные задачи педагогики и образования.

*Ключевые слова:* развитие, web-сайт, Интернет, электронные учебники, языки программирования, технологии, образовательное учреждение, система, информация, электронный ресурс.

Репозиторий КарГУ