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The Problem of Mastering Work with Electronic Educational Resources in Higher Educational Institutions

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Abstract: Education must outstrip life. This is an axiom that has long become a common place but still remains (at least in Russia) a pure declaration. When education really works ahead of the curve, there are phenomena like the University of Berkeley which while remaining an educational institution is also a research center that gives birth to technologies that conquer the whole world (for example, the Unix OS of the BSD family). How can education outstrip life? It is clear that it is impossible to teach what is not yet. But it is possible to give the student the most up-to-date knowledge while at the same time orienting him to the solution of fundamental, conceptual questions. It is the conceptual education in the system with awareness in the field of the latest concrete realizations that stimulates the search for new, more advanced, more daring solutions. Informatization as the leading trend of social and economic progress of developed countries is an objective process in all spheres of human activity including education. Informatization of education as an integral part of this process is a system of methods, processes and software and hardware integrated with the purpose of collecting, processing, storing distributing and using information in the interests of its consumers. The goal of informatization of education is to global intensify intellectual activity through the use of New Information Technologies (NIT). Modern advanced education is inconceivable without a large-scale study and global use in the teaching of computer equipment and computer information networks. The information saturation of modern society, its functionality at a decent level today imply such information traffic speeds that only computer networks integrated into the global information space can provide.

INTRODUCTION

The term "e-learning" appeared in Russia relatively recently. It integrates a number of innovations in the field of application of modern Information and Communication Technologies (ICT) in education such as computer-based learning technologies, interactive multimedia, web-based learning, on-line training, etc. Gradually this term replaces the widely known and fashionable nowadays term "Distance Learning" (DO). This is due to the use of ICT in modern DOs and with the widespread adoption of these technologies in traditional universities. Thus, the boundaries between learning at a distance and directly within the university are blurred. This integration of distance and traditional organization of educational process on the basis of ICT and reflects the term "e-learning".

The development of a modern education system in Russia, Germany, Austria and other countries is conditioned by the influence and introduction of Information and Communication Technologies (ICT) in all areas of educational institutions and is largely due to the emergence of free access to Internet technologies. These processes predetermine significant changes in the traditional approaches to the educational process[1].

Modern ICTs provide students and teachers with access to non-traditional sources of information, increase the effectiveness of independent work, give completely new opportunities for creativity, display and identify their abilities, gain and consolidate various skills and enable the implementation of fundamentally new forms and methods of teaching. These are such means of access as local and global information networks, teleconferences, e-Mail, forum, chat, etc.

At present, worldwide application of e-learning technologies comes to the fore in education[2]. The most relevant is in the conditions of university education, where there is a process of prevalence of modern pedagogical technologies, including e-learning technologies, over traditional ones.

Perhaps this is a tribute to the fashion but it seems to us that the current conditions for a constant increase in the level of informatization of society determine the direction and development of its most significant and basic structure-education.

In recent years, there has been an increasing decline in the effectiveness of traditional teaching, both at the secondary school level and at the university level, manifested in the authoritarianism of pedagogical requirements in teaching that is loosely related to the needs of the learner with his individual resources. Strict regulation of the activities of students in the classroom, the compulsion of training procedures, often leads to misunderstanding of the student's goals of their actions, to the lack of awareness of the need for the material being studied and its practical importance. In this connection, students have a lack of educational motivation, lack of skill in planning their activities[3].

Modern pedagogical technologies and to a greater extent e-learning technologies are personality-oriented and are aimed at developing individual resources of students. In contrast to the presentation of knowledge in the finished form with traditional training in the absence of the possibility of developing students above their "zone of proximal development" in the predominance of explanatory-illustrative and reproductive methods of teaching, e-learning technology provides for increasing the level of independent work of students at an individual pace with one hand, providing opportunities for wide communication with other students and joint planning of their activities on the other[4].

With regard to the psychological aspect of the evaluation of student's knowledge, electronic learning technologies provide an opportunity to reduce the role of stressors in the process of passing exams and examinations by students and to increase the level of psychological comfort in class. Reducing anxiety when students pass attestation, lack of fear of punishment and receiving unsatisfactory evaluation, allows to increase motivation to study and initiative of students. The application of e-learning methods in the university allows to increase the level of education and improve the quality of educational services provided by the university and also provides greater flexibility in implementing the educational goals of the university[5].

A decisive role in the development of e-learning of course was played by the Internet. E-learning provides an opportunity for HEIs to increase productivity, reduce the cost of in-person training, improve knowledge sharing and minimize training costs. The use of electronic technology in the university will:

- Expand the range of high quality educational services provided by the university and ensure its continuity from the moment of planning the training course to its completion
- Increase the effectiveness of students passing exams
- Increase the attractiveness of the study material by improving the conditions for obtaining education
- Expand the opportunities for professional growth and professional development of university teachers
- Provide the teachers of the university more space for studying the experience of colleagues and for retraining
- Increase the number of students at the university who are studying at the same time
- Reduce the academic burden of students
- To ensure more effective and timely updating and dissemination of training resources as well as to increase their accessibility

- Ensure the continuity of student learning by removing spatial and time constraints
- Provide a personal timetable for the work of students and a list of training courses taking into account their interests in the framework of the educational standard
- Conduct an interim and final certification in the form of testing
- Increase the effectiveness of feedback for teachers of the university and students, etc.

Proceeding from the foregoing, it can be concluded that the application of e-learning technologies in higher education institutions favorably affects the psychological and pedagogical aspect of the educational process including the development of individual resources of students and teachers, forms goal-setting skills, independent thinking, initiative and responsibility for the work performed and also reduces the psychological stress on students and teachers in the process of mutual knowledge sharing[6].

The development and implementation of e-learning is carried out through the integration of various forms of education (full-time, correspondence, computer, network) which is aimed at a systematic, organized process of building knowledge, skills and skills through electronic means of instruction. The development of e-learning, in many European countries, necessitates the development of a system for improving the qualifications of educators, the same trends are observed in Russia. Increasing the skills of educators in the field of Internet technologies, the use of various forms of e-learning promotes the development of international cooperation in the educational environment[7].

The possibility of education is through e-learning, since the value of learning in the information age is revealed through the factor of competition, as the key to career and self-expression. E-learning is determined by the following learning opportunities: comfortable conditions (workplace, freedom of choice of time for training), efficiency (multimedia, interactivity, communicative), insignificant training cost. The organizational component in the implementation of educational network projects is most relevant at the moment as it is determined by non-traditional approaches[8]. The organizational component is determined by three main factors:

- Kind of educational principles
- The influence of the environment
- The goals of people involved in the educational process

These factors determine the criteria: the ability to individualize education to correlate the needs, abilities, intentions of the learner with educational principles; ability to more in-depth education; the ability to improve education, changing and developing its comprehensiveness. The main tasks to be performed in the framework of various projects:

- Enrich the content of specific academic disciplines with new didactic materials that are received by colleagues abroad
- A new look at the very structure of our curricula and standards, so that, they correspond to the generally accepted in world practice
- To raise the qualification of some teachers in leading universities of the world which makes it possible to further use the knowledge they have acquired by other teachers of the departments
- Actively join the scientist of the university in joint research projects use the funds of the world's largest scientific libraries
- Organize the exchange of teachers and students on an ongoing basis, especially in the countries of the studied language
- Ensure the academic mobility of teachers and students

Recently, experts have been discussing the question: how to treat e-learning-as a technology or as a paradigm? The paradigm is an initial conceptual scheme, a model for posing problems and their solutions, research methods that dominate a certain historical period in the scientific community[9]. Thus, the paradigm is the basic, basic understanding, on which new knowledge is crystallized. Why do we gradually begin to rethink the role of ICT in education and consider e-learning as a new educational paradigm?

Research in the field of educational technologies covers the problems of teaching, cognition use of Information and Communication Technologies (ICT) as well as problems of social sciences. To all those who work in this field, it is necessary to have knowledge both in the field of psychological and pedagogical sciences and in the field of information and technological sciences. The common tasks facing the scientific community are to develop innovative approaches to the application of modern ICT which will help make education continuous (throughout life), person-oriented, comprehensive, flexible and productive[10].

With the traditional organization of the educational process, the actions of its participants are rigidly synchronized in the space-time framework of the existing audit resource. When using the same network (distance) educational technologies, it becomes possible to significantly weaken the space-time dependence of participants in pedagogical interaction while maintaining the required level of the quality of the educational process. Students have the opportunity to study at a

convenient time and at a convenient pace. However, the distance form of instruction presupposes predominantly independent mastering of the educational material[11].

Students, having the opportunity to choose (university, course, teacher, teaching materials), become really responsible for their education. The teacher is no longer the main figure in the educational process, he ceases to be a carrier of knowledge and becomes only a tutor an assistant of students in choosing an educational trajectory and a consultant on the material studied.

At the same time, studies devoted to determining the effectiveness of the use of information and communication technologies show that the teacher, first of all is the guarantor of successful implementation of ICT in the educational process.

The potential of new technologies remains insufficiently realized because only a small part of teachers use the computer and other means of information and communications in full.

The basis of the quality of knowledge in the e-learning system is determined by three main components: the quality of educational materials (training content); professional competence of teachers; quality of information saturation and material and technical equipment of the educational environment including the necessary range of educational services provided. It is necessary to remember and about students with their desire to study independently, their motivation for such training.

The main mistakes in the development of e-courses are that they sometimes contain a lot of "passive" content and few interactive elements. We go into explanations instead of drawing an animation. In this case, a person has a feeling that it is better to take and read the book.

The success of the introduction of e-learning, in addition to the above is largely determined by the motivation of students and faculty. The common problem of e-learning is the creation and effective use of information and education environment on the basis of ICT.

Considering e-learning as a paradigm, it is advisable to study relevant problems through the prism of various sciences (political science, economics, sociology, psychology, pedagogy, etc.) in order to obtain a systematic, holistic view of this phenomenon. Without claiming such a comprehensive analysis, we will discuss only some didactic aspects of e-learning. Particular problems of the Information and Communication environment (ICT) of e-learning:

- Organization of independent cognitive activity of students
- Organization of individual support for each student's teaching activities by teachers
- Organization of group educational work for students (discussions, joint work on projects, etc.)

There are three most important private problems associated with the development and use of the information and communication environment of e-learning. They concern the organization:

- Independent cognitive activity of students
- Individual support of the educational activities of each student by the teacher
- Group educational work of students (discussions, joint work on projects, etc.)

A decisive role in solving the first of these didactic problems of e-learning-the organization of independent cognitive activity of students-has educational and methodological support or as it is sometimes called, Electronic educational resources (ESM). The ESM nomenclature for teaching support is quite large:

- Electronic copies of ordinary printed manuals
- Electronic interactive textbooks implementing didactic schemes of programmed instruction
- Multimedia presentations of educational material
- Computer Testing Systems
- Overview lectures on audio and video cassettes or on CD-ROMs
- Computer simulators and virtual laboratories based on mathematical models of studied objects or processes
- Intelligent learning systems
- Training packages of applied programs, etc
- Educational multimedia complexes

The most effective in the didactic plan is the use of educational multimedia complexes that support the independent educational work of students at all stages of cognitive activity from the initial acquaintance with the teaching material to the solution of non-typical professionally oriented tasks[12].

Impressive progress in the development of hardware and software means ICT provides good technical opportunities for implementing various didactic ideas. The problem is the quality of many ESMs. There are two important factors that predetermine the low level of didactic and consumer characteristics of many developments in e-learning. First, the methodological aspects of e-learning lag behind the development of technical means.

The second factor is related to the closure of most of them which does not allow teachers and students to make changes and use any fragments for their own development.

The educational process is not an automated production line. Teachers, even when they are in the role of tutors are always inclined to make any changes in the content of the ready-made teaching materials and methods of instruction depending on the contingent of students, the specific conditions of the educational process and their

own ideas about it. In addition, it is known that the probability of successful implementation of any innovation to a significant extent depends on the degree of involvement in it and the co-authorship of specific performers.

Organization of individual support of educational activity of each student by teachers. The most important advantage of traditional (face-to-facet) teaching methods from tutoring to group lectures is the educative-stimulating nature of the influence of the teacher's personality. Sceptics say about the danger of losing such an impact.

Numerous examples show that sometimes only one public lecture can determine the whole life's business for someone from the audience. And imitation of the Teacher? It is often not realized by the students themselves but its importance in the educational process can not be overemphasized[13].

MAIN MODELS OF GLOBAL EDUCATION

The theory of globalism is not something alien and artificially introduced into Russian soil. Its origins lie in the writings of outstanding domestic and Foreign philosophers and educators of the 17th-19th centuries. The first steps in the development and organizational design of the theory of globalism date back to the early 1960's. of the last century[14]. The theory of global education took shape in the United States and certain countries of Western Europe only in the 1970's. It became a kind of response to the demands of society which collided with the threat of a planetary tragedy.

By this time, two models of global education whose researchers are American philosophers R. Henki and Botkin have become most famous. According to Henvey's views, the essence of global education is in the aggregate of the following basic dimensions:

- The formation of an unbiased view of the world that is an awareness of the heterogeneity of the perception of the world
- Awareness of the state of the planet
- Cross-cultural literacy (understanding of the culture of other peoples)
- Knowledge of global dynamics
- Conscious choice

According to this researcher, education is one of the most important foundations, called to help each person enter the world to harmoniously fit into the system of interrelations at the cultural, social, economic and other levels of modern life.

With the Henry model, Botkin's Model echoes, the main theme of which is the need for each individual to move from an unconscious adaptation to the world in the position of active and sensible socialization, conscious anticipation and personal involvement. The concept of "anticipation" appears in Botkin as a kind of broad demand for the successful resolution of new situations that had not previously occurred in the life of an individual, foreseeing and forecasting events and their consequences, relating the past to the present and the future, personal initiative in determining alternatives and acceptance of responsibility for those or other decisions. Participation means the capacity for active cooperation, dialogue, mutual understanding and empathy[15].

Thus, the above-mentioned models of global education not only do not contradict but also significantly complement each other. Organically combining the universal and local aspects, the philosophical approach and the capacity for concrete actions, they put forward the priority task of shaping the view of the world as a single whole as a huge community in which the well-being of everyone is directly dependent on the well-being of the others[16].

Tendencies of economic, information and cultural globalization immeasurably increased by the end of the 20th century. In the 1990's, after the collapse of the USSR and the "socialist camp," many people began to feel that the place of cultural and political dualism, supported by the division of the world into two systems was political uniformity. Many began to ask themselves the question: Do not we stand at the threshold of the era when there will be only one-the world-culture, one-the world-philosophy and one-the world-education?

On the one hand, one can't fail to see the tendencies that tend to adapt themselves to the unification of everyday, ethical, aesthetic, educational standards that are aimed at solving various problems of human existence[17]. For example such an important field of activity as natural science was practically completely universalized, turning scientists-naturalists into a class of actual or potential cosmopolitans. Something similar is observed in art, primarily in music, variety, cinema.

On the other hand, the processes of globalization and integration are accompanied by processes of regionalization disintegration. For example, in education, a regional component is introduced at all levels of education, the overwhelming majority of countries have national theaters and philharmonic societies, in science each country seeks to emphasize the achievements of domestic scientists. Moreover, in many European countries in recent years the "anti-globalization" movement is gaining strength, it is a conglomeration of different age and occupation of people and political parties-anarchists, communists, "leftists", etc. This was particularly evident in the summer of 2001 when Genoa hosted a meeting of leaders of the countries in the economic development (the so-called G-8). The mass actions of "anti-globalization" participants from different countries led not only to their clashes with the Italian police but even to human casualties[18].

In essence, two understandings of globalization are now emerging: globalization as an objective process, going hand in hand with regionalization and dialogue of cultures (the two sides of a single seemingly contradictory phenomenon) and globalization as a unification is a process imposed on the world as supposedly objective subjective group interest of transnational corporations. Learning management system lotus learning space as a standardization factor.

GENERAL INFORMATION

Lotus learning space is one of the most dynamically developing and widely used worldwide systems related to distributed learning management systems and not just the course creation environment. However, learning space includes all the necessary development tools and elements of a modern computer course.

Learning space is the most modern and powerful software for distance learning, far superior in its capabilities and potential to all existing analogs. Both WebCT and Blackboard declare the use of the multi-level software architecture in the next versions of their products, according to which learning space was created initially.

This software system uses open standards and meets modern requirements in terms of integrability and scalability. Learning space can integrate, practically with any type of corporate information system. The completeness of the program's features, its interface, the ability to integrate new additional program modules, the use of standard ODBC-compliant relational databases put the learning environment of Learning Space out of the competition, offering the teacher and student virtually unlimited choice in means and methods of teaching. The basic architecture of this package is based on five main databases that are used to manage various aspects such as creating courses and their accompaniment:

- Schedule-list manager
- Media Center-library manager for multimedia courseware
- The Course Room is an electronic interaction tool that allows you to create both general student forums and specialized ones.
- The Profile Manager-contains basic information about participants such as a home page or online CV

The assessment manager is a tutor tool for conducting confidential testing, evaluating their results and sending the results to the subjects. It also allows you to create a progress log of all students of this course[19].

The learning space system operates on the principle of client-server and is designed to work through the worldwide Internet or LAN. The learning environment learning space has a multi-level system of protection against unauthorized intrusion. The server program must be installed on a computer that meets certain technical requirements which will store databases with special information used in training.

The main part of the stored information is provided by the server program in the form of hypertext. Thus, data from the server can be obtained using a standard Web browser (Microsoft Internet Explorer, Netscape Navigator, etc.). This greatly facilitates the task of distributing and implementing the package, since, it does not require the installation of a special client program on the trainee's computer. Web browsers have an intuitive interface, HTML controls are easy to learn and familiar to many, so using such programs as clients almost does not require additional time spent learning to use the program. Lotus learning space is the basis for managing and implementing training courses on-line. Learning space provides a Web-based interface and an auxiliary database management system (DB) for organizing, presenting and tracking on-line courses. The content of the course is determined by the seller-intermediaries. It can also be created using one of the available tools or with the help of the materials module. After the content of the course is created and registered in learning space, they will be guided by the authors of the course and students will be able to access it through web browsers.

The server software provides basic Java and SQL technologies for communication with network users with databases and with training materials located on the Content Server. User names, access permissions, course structure and student success information are stored in a relational database located on the database server (DB2, Oracle or SQL Microsoft Server). The DB merges with learning space during the installation process.

CONCLUSION

Thus, global education can be defined as one of the trends in the development of modern pedagogical theory and practice, based on the need to prepare people for life in a rapidly changing, increasingly integrated world, growing global problems and crises. The scientific approach to solving the problems of globalization and the informatization of education places the immediate goal of mastering a complex of knowledge, skills, skills and the development of such personality traits that could ensure successful fulfillment of professional tasks and comfortable existence in the information society. The technological direction of global education is in the following areas of its implementation:

- Introduction of BAT in the educational process
- Increase the level of computer (information) training of participants in the educational process

- System integration of information technologies in education, supporting the learning processes, scientific research and organizational management (improving the organization and management of the educational process on the basis of BAT, carrying out research work of a supporting nature, etc.)
- Construction and development of a single educational information space

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