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Priority Fields of E-learning Development in Russia

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Abstract

The paper analyzes the advantages and disadvantages of e-learning application by all the subjects of educational process in Russia. Hereon, the fields that allow increasing the efficient use of e-learning in educational process were shown.

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1. Introduction

At the present stage of the education system development in Russia, the focus is not only on the issue of its availability, but also the development of domestic learning software. Within the Concept of the Federal target program of education development for 2016-2020, there is an intensive development of educational resources (including learning software). Therefore, the implementation of e-learning technologies in educational process is considered as a priority target of Russian higher educational institutions. Approximately 162 thousand people study by means of the Internet technology in Russian higher educational institutions at the moment.

It is worth noting that e-learning has a unique benefit – availability anytime and anywhere. Furthermore, e-learning allows for higher quality and technological advancement. This very mode of education is aimed at solving a number of social issues, raising access to high quality education for all citizens of the Russian Federation, regardless of their mobility and residence.

Having passed several stages in its development, e-learning is carried out based on the technology including an

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organization system of educational information environment (via forums, chat rooms, video conferences, learning software, simulators), and a set of tools (teaching materials). Meanwhile, there is a persistent problem in the e-learning development of Russia – lack of technologies allowing the e-learning subjects to participate in the development and implementation of learning software. In order to involve them, the software shall focus on the development of cognitive activity methods and set up control mechanisms of their own activities. Current state of learning software does not involve the intervention of other participants. Learning software that does not involve participation of the subjects of educational process in its adjustment and understanding preserve the conventional approach. Therefore, formally e-learning exists, but, in fact, it remains conventional. At the same time, the quality of education lags behind the requirements of international standards. Graduates gain underdeveloped competencies for search, analysis, processing and updating of information, as well as commitment to work independently. The level of learning and teaching support, correspondent laboratory and teaching equipment, efficient use of information and communication technologies are not sufficient for the e-learning implementation. Therefore, it leads to the need for new areas of improving the efficiency of e-learning implementation and application, since the creation of the necessary infrastructure and educational basis is one of the fundamental conditions for the effective functioning of any educational system.

In this regard, the objective of the study is to find the fields that raise the e-learning efficiency in order to improve the image of Russian educational institutions in the world market of educational services. Within the scope of this concept, it is necessary to present the content of e-learning, identify the advantages and disadvantages of implementing the learning system in the given mode from the perspective of the subjects (students and educational institutions). To achieve the objective, the following theoretical methods have been used: analysis of psychological and educational references concerning learning based on information and communication technologies and personal professional experience at the educational institution).

2. Priority fields of e-learning development

Russian education system, developing in the framework of information society, is characterized by the following features: extension of the concept of education via eliminating its identification with the formal face-to-face education and rendering of any activity that aims to change attitudes and behaviors of individuals by providing them with new knowledge and skills; educational functions are performed by various social institutions in the modern system; enterprises assume important educational functions; a significant part of the education system refers to modern computer and telecommunication technology for storage, processing and transfer of information supplemented by the conventional information technologies; establishment and adoption of market mechanisms, formation and development of the market of educational products and services; globality – a distinctive feature of the new education system and its development process; this is the system of open, flexible, individualized lifelong learning.

In order to reveal the content of e-learning process, it is necessary to turn to the etymology of the term ‘e-learning’. The pedagogy reveals the concept of ‘learning’ as a purposeful pedagogical process of organizing and stimulating active learning and cognitive activity of students while acquiring knowledge and skills, and developing creative abilities and moral ethical views. If this process is organized by means of interactivity and carried out distantly (i.e. out of the classroom), then training assumes e-learning mode. Thus, it can be concluded that e-learning is a process, guided by a specially trained person, which solves social problems of the person education in a close relationship with its upbringing and development by means of interactivity (computer and telecommunications technologies). Moreover, it should be noted that e-learning is a two-sided process. In the course of its implementation, along with the benefits, take place the problems which all the subjects of the process have to deal with (students, educational institutions).

2.1. Benefits and drawbacks of e-learning from the students’ point of view

Take the research results by Nabiyeu (2014) who accurately classified the advantages and disadvantages of applying e-learning in education process from the students’ point of view (See Table 1).

Table 1 – Students' advantages and disadvantages of e-learning.

Advantages	Disadvantages
1. Learning at their own pace – pace of studying the materials is regulated by the students subject to their personal circumstances and desires. Freedom and flexibility of learning – students can select any of the elective courses, as well as self-assess the time and the duration of their studies.	1. Lack of face-to-face communication between students and teachers.
2. Availability of learning for everyone – regardless of your geographical location and time condition, a student can remotely get higher education in any university that supports these technologies.	2. Individual and psychological conditions are not taken into consideration in distance learning. E-learning requires regular rigid self-discipline, but learning outcomes largely depend on independence, skills and self-consciousness of a student.
3. Feedback – effective implementation of the feedback between an educator and a student is an integral part of the learning process.	3. Constant access to the sources of teaching materials (e-books, videos, etc.). Sufficient technical equipment at home is required, but not everyone, willing to get education, has a personal computer and the Internet access.
4. Workability of the educational process – teaching based on the latest advances and discoveries of information and telecommunication technologies.	4. The lack of practical training, necessary to theory consolidation and better knowledge acquisition.
5. Social equality – equal opportunities for e-learning, regardless of place of residence, health status, nationality and financial status of the student.	5. The lack of regular students' assessment on the third hand, which is a negative sign for the Russian people. Few people can manage to overcome their own laziness.
6. Students' creative self-expression in the course of learning.	6. Electronic educational programs and courses are not always well designed and meet all international standards due to insufficient training of specialists.
7. Availability of teaching materials – a student gains an access to all the relevant references after logging in on the University website or receives educational materials by mail.	7. E-learning supposes training, conducted mainly in writing. For some students, the lack of opportunities and requirements to present their knowledge in oral form may result in poor-quality acquisition of knowledge.
8. E-learning is cheaper (due to travel and accommodation savings, and in the case of international universities - visa and passport costs).	8. The need for a personal computer and the Internet access.
9. Education in the relaxed environment – intermediate certification of e-learning students is held by means of on-line tests. Therefore, students are less worried about meeting with an educator at the examinations. The possibility of subjective evaluation is excluded: automatic system evaluating the test is not affected by the students' overall academic performance, social status and other factors.	
10. Individual approach – conventional approach doesn't allow an educator to give sufficient attention to all the students in a group or adjust to the individual pace of work. The use of e-learning technologies matches the organization of the individual approach.	

Considering e-learning from the standpoint of a student the advantages are obvious: a person itself determines when and how much time to allocate to studies, therefore, it is possible to acquire new knowledge in parallel with career building and taking care of the family. In addition, e-learning has a positive effect on personal development – level of self-organization, responsibility, and computer literacy increase improving communication skills. It is also important that e-learning is not just a mode, but a technology of education, then based on distance learning technologies, one can get full higher education in the shortened terms.

Offering any product associated with e-learning, educational institutions realize that students must possess such qualities as dedication, perseverance, and self-organization. The question is whether a student has got such qualities? Of course, not all students are ready to study distantly in a deliberate and efficient way. Nevertheless, distance learning is becoming widespread. Note that the implementation of e-learning technologies is significant from the standpoint of a student, as the technology allows understanding the sequence of actions that lead to the result (Gerasimov & Kudryashov, 2014; Ovsyannikov, 2002; Schurkova, 2002; Karpenko, et al, 2000; Shadrikov & Kuznetsova, 2013). The pressing issue of distance learning is a contradiction between the potential of e-learning technologies (aimed at the development of the personal identity of intellectual activity, the need for updating its skills and capabilities, the nearest area and range of development of a particular individual, speed of perception and processing of information, self-regulation when selecting the pace, organizational and methodical nature of the learning process, etc.) and insufficient psycho-pedagogical support of learning software.

Thus, the given mode of learning will allow discovering new areas of research and education for the students, as well as opportunities for their self-development. Instead of reproducing knowledge, students are involved in the process of new knowledge inquiry. Distance learning allows students to expand opportunities in the development of

educational programs and interaction with the teacher, which helps create a comfortable learning environment to prepare for career.

3. Merits and demerits of e-learning from the perspective of higher educational institutions

Take the view of educational institutions in terms of benefits of applying e-learning. Analysis of studies of several authors (Nikulicheva, 2012; Ivanova, 2011; Maslikov, 2012; Khmelidze, 2014) allowed us to highlight the advantages and disadvantages (See Table 2) of the implementation of distance learning from the perspective of higher educational institutions.

Table 2 – Advantages and disadvantages of e-learning development by the higher educational institutions in Russia.

Advantages	Disadvantages
1. Workability – learning based on modern software and hardware makes e-learning more efficient.	1. Organization:
2. The use of multimedia technologies, audio, video, make distance learning courses comprehensive and interesting.	1.1 Technology (access to the Internet, storage servers and software for creating teaching materials, etc.).
3. Accessibility and openness of education - the opportunity to learn distantly, staying at home or in the office.	1.2 Information (storage and delivery of educational information, exchange and access to resources, requirements for the memory, speed of the Internet access, speed of information exchange, etc.).
4. Distance learning is cheaper than full-time learning, as tuition fee is reduced due to the lack of rental charge, travel costs, etc.	1.3 Staff (recruitment and training of e-learning coordinators, development of teaching materials, distance educators, professionals and information technology services).
5. Freedom and flexibility, access to high quality education – there are new opportunities to select the course. It is quite easy to choose several courses from different universities in other countries. One can learn at the same time in different locations, comparing the courses.	1.4 Finance (purchase of hardware, software, the Internet access, personnel salary).
6. The possibility of teaching a large number of students increases the interest in learning, grows the productivity of learning, allows studying when it is necessary, and attracts people of different age groups, including the learning possibility for people with various disabilities.	1.5 Time (timing for the development and implementation of electronic textbooks, courses, efficiency of communication in distance learning, students' task performance). High labor intensity of the development of distance learning courses: creation of 1 hour of actual distance multimedia interaction takes more than 1,000 hours of professionals' workload.
7. When implementing distance learning, an institution attracts plenty of foreign students; universities are able to increase the number of students by enrolling remote participants from different countries and cities.	2. Motivation:
8. Documentation of the learning process – students can keep the course itself and e-mail correspondence with the teacher, so they can refer to them later, if necessary.	2.1 Development of the economical payment schemes for all participants in the development and implementation of distance learning.
9. Individuality of distance learning systems.	2.2 Non-financial motivation of personnel.
10. The introduction of e-learning reduces stress and nervousness when taking tests or exams.	2.3 Compliance with copyright for online tutorials, online courses, environments and other intellectual resources of e-learning (external examination, conclusion of license agreements for the royalties).
11. Application of modern Internet technologies and distance learning make it easy to create different virtual professional communities (e.g. teachers' community), share experience and information, discuss issues, solve common problems, etc.	2.4 Development of new approaches to the distribution of teaching load taking into account the increased workload for the preparation of teaching materials and the time required to carry out e-learning courses.
12. Improving the quality of education by means of implementing modern tools of electronic libraries and up-to-date equipment.	3. Methodology
13. Mobility, timely and efficient feedback between teachers and students.	3.1 Retraining of teaching staff devoted to methodology development and implementation of distance learning courses, creation of electronic textbooks, etc.
14. The guarantee of social equality, access to high quality education, regardless of health status, place of residence,	3.2 Development of the organizational model of distant learning for an educational institution (developing a model of e-learning, internal regulatory documents of e-learning, economic mechanism of e-learning).
	3.3 Development of learning and teaching materials for distance learning (e-learning courses, electronic textbooks, system of distance learning, etc.).
	3.4 Conversion of methodological materials of e-learning products into the desired web-based interface.

material security, social status and elitism of students.	Independent examination of learning and teaching materials of distance learning.
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Definitely, the basis for e-learning development in the Russian environment is readiness of teaching staff, at the implementation stage, for the use of information and communication technologies in educational process. As most teachers associate it with career prospects and have a desire to learn new technologies and software, they will be able to organize the teaching material in electronic form and make it more available and interesting. In turn, the problem solving in the development of distance learning will create a high-quality education system, raise the profile of institution, expand the training load, improve the overall level of information culture of the teaching staff, introduce innovation and reflect the results in scientific research.

The disadvantages of e-learning, identified by all the subjects of educational process, can be resolved in the course of solving the following problems. Firstly, it is necessary to increase the personnel motivation to develop high-quality interactive products. In this case, quality depends on the amount of required time and its cost. No doubt, the more time is available for developing, the higher the quality is. Secondly, copyright protection of the interactive products will increase the interest of teaching staff to its creation and use in educational process. Thirdly, the development process requires professional technical support. Fourthly, a well-coordinated and detailed mechanism of informing the consumer is required. In this case, just advertising (booklets, TV and radio commercials) is not enough, because the consumer must be familiar with these products. It is necessary to organize free short-term training courses for those who want to study distantly, or develop interactive guidelines for use of the product (application containing clear, short, step by step instructions). Finally, it is required to create centers for information technology support of educational process. Teachers and students of educational institutions and representatives of other organizations can apply for assistance to these centers. The main purpose of the centers is to support and make up the scenarios using a blended learning model in the educational institution. The functioning of these centers will allow consolidating more resources and solving problems of using distance technology more efficiently and systematically.

4. Conclusion

Thus, implementation of the presented fields as a whole will eliminate major drawbacks of the use of distance learning by all the subjects of educational process. In addition, it will strengthen the benefits of developing and applying this mode in educational process. Since distance learning is not just a specifically organized educational process, but provides motion of the subject towards other intellectual layers, develops intellectual capacity, promotes awareness of its own viewpoint and the development of subjectivity. Moreover, e-learning allows students to base training on two principles: to keep applying for a variety of programs and covering their weaknesses, and to develop their own potential, which, of course, is important for building labor potential. E-learning is perfect for getting education by modern busy man when everyone sets priorities in life. It is e-learning which has the flexibility that is needed in modern life.

References

- Gerasimov, E. N., & Kudryashov, M. E.(2014). Aktualizatsiya i modernizatsiya klyuchevykh ponyatiy teorii pedagogicheskikh sistem V.P. Bespal'ko i yèè osnovnyye printsipy s pozitsii kompetentnostnogo i tekhnologicheskogo podkhodov k obucheniyu v VUZe [Updating and modernization of the key concepts of the theory of educational systems by V.P. Bespal'ko and its basic principles from the perspective of competence and technological approaches to learning in higher educational institutions]. *Universum: Psikhologiya i obrazovaniye: elektron. nauchn. zhurn* [Universum: Psychology and Education: electronic scientific journal], 4(5). <http://7universum.com/ru/psy/archive/item/1210>.
- Karpenko, M. P., et al. (2000). Sotsial'nyy portret studenta negosudarstvennogo VUZa [A Social Portrait of the Student in a Nonstate-Run Institution of Higher Learning]. *Rossiyskoe obrazovanie i obschestvo* [Russian Education and Society]. 42(7), 48-54.
- Khmelidze, I. N. (2014). Rol' prepodavatelya v realizatsii elektronnoy obucheniyu [The role of a teacher in the e-learning implementation]. *Otkrytoye i distantsionnoye obrazovaniye* [Open and distance learning], 4, 45-49.
- Ivanova, M. A. (2011). Nekotoryye problemy organizatsii distantsionnogo obucheniyu v vuze [Some of the problems of distance learning in higher educational institutions]. *Problemy vzaimodeystviya khozyaystvuyushchikh sub"yektov real'nogo sektora ekonomiki Rossi: finansovo ekonomicheskyy sotsial'no-politicheskiy, pravovoy i gumanitarnyy aspekt: sbornik nauchnykh trudov* [Problems of interaction between

- economic entities of the real sector of the Russian economy: financial and economic socio-political, legal and humanitarian aspects: collection of scientific papers], 256-258.
- Maslikov, V. A. (2012). Gotovnost' rossiyskogo prepodavatelya k distantsionnomu obrazovaniyu cherez Internet [Readiness of the Russian teacher for distance learning via the Internet]. *Rektor VUZa* [Rector of the University], 7, 34-41.
- Nabiyev, I. M. (2014). Perspektivy distantsionnogo obrazovaniya [Prospects of distance learning]. *Molodoy uchenyy* [Young scientist].2, 799-801.
- Nikulicheva, N. V. (2012). *Distantsionnoye obucheniye v obrazovanii: organizatsiya i realizatsiya* [Distance learning in education: organization and implementation]. Saarbrücken: LAP LAMBERT Academic Publishing.
- Ovsyannikov, V. I. (2002). Zaachnoye i distantsionnoye obrazovaniye: bliznetsy ili antipody? [Correspondence and distance learning: twins or polar opposites?]. *Otkrytoye obrazovaniye* [Open Education], 2, 64-73.
- Schurkova, N. E. (2002). *Pedagogicheskaya tekhnologiya* [Pedagogical technology]. Moscow: Pedagogicheskoye obshchestvo Rossii.
- Shadrikov, V. D., & Kuznetsova, M. (2013). Students' development in different educational systems. *International Journal of Developmental and Educational Psychology*, 2(1), 229-234.