

# *Practice of implementing electronic educational resources at the university of economics*

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**Abstract** — The relevance of the study of implementation of electronic forms of education into the educational process in the Russian Federation is determined by the need for a new positioning of Russian universities. Nowadays, universities consider students as active seekers of knowledge who wisely use various types of information resources in order to constantly learn depending on personal or professional needs. The latest advances in information technology can help realize the concept of student-centered education through providing the right tools. Digital technologies contribute to mastering of self-regulation skills, active learning and individual formation of knowledge. Today is the moment when e-learning comes into force as an independent learning tool.

**Keywords** — *electronic educational resources, digital technologies*

## I. INTRODUCTION

In modern economic conditions, the implementation of digital technologies is one of the main ways to increase the competitiveness of the educational and scientific activities of Russian universities. At the same time, Russian universities are experiencing difficulties of the transition period due to the transformation of their core activity as the range of educational opportunities is expanding. The impact of social and economic forces along with globalization and advances in information technologies has a great influence on the future of teaching and learning approaches [1].

For universities, the quality of perception of the proposed educational “product” by the target audience, i.e. those who are interested in receiving educational services – by students – is getting more important. Since the main target group, which is the most numerous one, are graduates of schools belonging to the secondary education system, it is necessary to pay special attention to the issues related to the preferences of applicants.

## II. RESEARCH METHODOLOGY

According to the Russian legislation, an electronic educational resource (EER) is an educational resource

presented in electronic digital form and including the structure, subject content and metadata about them [2].

An electronic educational resource may include data, information, software necessary for its use in the learning process.

The main purpose of this article is to develop recommendations for improving development and implementation of electronic educational resources into the educational process of departments of universities.

To achieve this goal it is required to solve the following tasks:

- analyze available EERs,
- systematize the experience of scientific and pedagogical staff of Plekhanov Russian University of Economics in the development and implementation of the EERs,
- conduct a study of the opinions of the REU students in relation to the EERs used,
- design a system for implementing EERs based on the results obtained.

Nowadays, the main role of the university is to prepare students for their future professional careers [3]. Despite the fact that universities are not commercial institutions, they are forced to fight for their students in much the same way as commercial organizations do in the struggle for their clients, since currently financing of universities is largely determined by their positions in international or national ratings [4].

The traditional approach of universities is mainly focused on the teacher or on the subjects taught. In a teacher-centered approach, impeded access to learning resources often leads to the teacher being the only source of knowledge for students. This approach has many drawbacks, first of all, it is a strong dependence on the teacher, possible difficulties in communication, etc. It should also be noted that dependence on the teacher can sometimes be created artificially, for example, because of his egocentricity or other psychological characteristics.

The subject-oriented approach is mainly aimed at the transfer of knowledge. Although knowledge transfer has a positive aspect, such an approach lacks the motivational aspect of learning. The subject-oriented approach is based on the maximum possible dissemination of knowledge. This approach is no longer viable in the modern educational process, so universities should use an approach aimed more at meeting the needs of students and responsibility for their own learning [5].

The new positioning of university sees the student as an active seeker of knowledge, who reasonably uses various types of information resources in order to constantly study depending on personal or professional needs. A more modern student-centered approach includes more active, collaborative, but independent study programs in which students are responsible for obtaining the necessary knowledge. Using this approach creates a separate environment.

It is assumed that students who are given the freedom to study problem areas selected in accordance with their interests and who are properly supported by the educational system, not only achieve higher academic results, but also assume an increase in personal values such as flexibility, self-confidence and social skills.

Nowadays the latest advances in information technologies can help realize the concept of student-centered learning through providing the right tools. Digital technologies contribute to mastering of self-regulation skills, active learning and individual formation of knowledge so that students would become more responsible for the educational process. Today is the moment when e-learning comes into force as an independent tool in the learning process [6].

The use of electronic educational resources requires a more individual approach [7]. People will be able to study where and when they prefer. This is what made learning more accessible for almost everyone. E-learning solutions were mostly technological. Nowadays, EERs are focused on both asynchronous (assuming an independent pace) and synchronous (in real time mode under the guidance of a teacher) online learning supported by various types of IT technologies.

### III. RESEARCH RESULTS

An analysis of the introduction of electronic forms of education in Russia showed that the first to start introducing such learning methods were Moscow State University of Economics, Statistics and Informatics, Moscow State Industrial University, Moscow Technological Institute, and the International Independent Ecological and Political University. They have created in their structure separate units of online programs that are focused on the development and support of student learning via the Internet.

Faculties and centers of distance electronic education also operate in the Plekhanov Russian University of Economics, Higher School of Economics, Financial University under the Government of the Russian Federation, Moscow State University of Civil Engineering, Moscow Power Engineering Institute.

One of the direct consequences of learning with using EERs in higher education institutions is to increase the educational level of the population outside capitals and major megacities. On the one hand, a student who has acquired the necessary knowledge without moving anywhere is likely to remain in his small homeland, which will contribute to the educational level of the region. On the other hand, the level of spatial mobility of citizens is still low in Russia, and the rapid development of distance education forms can fixate those things [8]. However, at the moment, these conclusions remain hypotheses. Not all universities are ready to implement EER-based learning technologies in their business processes, and there are still relatively few higher education institutions that have successfully implemented EERs in Russia.

We list some of the developed electronic educational resources for the training of specialists in the field of hospitality and tourism:

1. Educational program complex "Organization of Entrepreneurial Activity in the Hospitality Industry". The software package is designed to teach students the basics of entrepreneurship in the hospitality industry. The training material formed by the software package allows students to interactively study the following topics: "Fundamentals of Entrepreneurship", "Organizational and Economic Aspects of Entrepreneurship", "Efficiency of Entrepreneurship in the Hospitality and Tourism Industry", "Business Planning of Entrepreneurial Activity". Type of computer: IBM PC-compatible. Language: Pascal (Delphi). OS: MS Windows XP, MS Windows 7/8/10. The method of use is local.

2. Educational program complex "Investment Solutions in Hotel Management". The software package is designed to teach students the basics of managing the investment activities of a hotel enterprise. The training material formed by the software package allows students to interactively study the following topics: "Theoretical Foundations of Investment Activity in the Hospitality Industry", "Planning Investment Activity in the Hotel Business", "Evaluation of the Effectiveness of Investment Projects in the Hospitality Industry". The software package can be used at hospitality industry enterprises to improve the skills of employees, including self-training. Type of computer: IBM PC-compatible. Language: Pascal (Delphi). OS: MS Windows XP, MS Windows 7/8/10. The method of use is local.

3. An electronic educational resource on the platform "1C: Enterprise" on the discipline "Information Technologies in Management" for the training directions of "Hotel Business" and "Tourism". The structure of the educational material includes lectures (in hypertext format), tests, and reference material (glossary). The educational material is placed in an e-learning system, which is accessed through a web interface. The method of use is online.

4. Educational program complex "Tourist Destinations: Management and Law". The software package is designed to teach students the modern organizational and legal foundations of state regulation of the tourism sector of the Russian Federation using the foreign experience of state regulation of the hospitality and tourism industry. The training material generated by the software package is visualized in the

form of hypertext and allows students to interactively study the following topics: “Tourist Destinations as an Object of Management”, including subsections “Tourism Policy and the Effectiveness of Regulating Tourist Destinations”, “Organization of Regulating Tourist Destinations”, “The Activity of Rostourism and Its Interaction with Other Structures”, “Legal Aspects of the Management of Tourist Destinations” (including the subsections “Fundamentals of Tourism Policy in the Russian Federation”, “Regulation of Tourism Activity in the Russian Federation”, “Main Directions of Regulation of the Hospitality and Entertainment Industry in the Russian Federation”), workshop (tasks solving and practical exercises). Type of computer: IBM PC-compatible. Language: Go. OS: MS Windows XP / 7/8/10. The method of use is local / online.

5. Electronic educational resource on the platform “1C: Enterprise” on the discipline “Management of Investment Activity of a Hotel Enterprise” for the training direction “Hotel business”. This EER is a set of educational information presented in electronic digital form and including structure, subject content (data, information, necessary software for the use in the learning process) and metadata about them. Metadata is an information about educational content, characterizing its structure and content, necessary for the search for EER through a technological training system.

The EER “Management of Investment Activity of a Hotel Enterprise” is based on the content of the bachelor educational program. The course contains theoretical (lectural) material, computational tasks, tests, control questions, reference material (glossary). It is intended for independent study of theoretical material (textual, hypertext). The glossary allows the trainee to obtain the necessary background information at any time on the terms used. The glossary includes information, both duplicating and complementing the textbook material.

Computational tasks allow to work out methods for solving typical problems to visually relate theoretical knowledge to specific problems that they can be addressed.

The testing system contains 100 test questions and is a universal software shell with a subsystem that allows to accumulate and analyze test results.

The content of the electronic course is devoted to the study of approaches and methods for managing the investment activity of hotel enterprises aimed at ensuring the sustainable development of the hotel business.

The educational material formed by the software package is visualized in the form of hypertext and allows students to interactively study the following topics:

Topic 1. Fundamentals of the investment activity of a hotel enterprise.

Topic 2. Planning of investment activity of a hotel enterprise.

Topic 3. Development of an investment strategy of a hotel enterprise.

Topic 4. Financing the investment activity of a hotel enterprise.

Topic 5. Development and analysis of investment projects.

Topic 6. Realization of modern methods of evaluating the value of hotel enterprises.

The purpose of this electronic course is the acquisition by students of the necessary qualifications for managing the investment activity of a hotel enterprise, mastering the fundamentals of investment management, mastering the techniques and methods of making optimal management decisions for conducting an effective investment policy. To teach to analyze the investment projects of a hotel enterprise, to conduct financial modeling and evaluation of the economic efficiency of investment projects in market conditions.

To use theoretical, practical and test materials in the classroom, teachers can give students tasks for self-training and / or self-testing in the form of computer testing in systems.

#### IV. DISCUSSION

With the aim of a more detailed study of the abovementioned problems, the authors analyzed the experience of introducing EERs in the Plekhanov Russian University of Economics (PRUE). In the period from March to May 2018, the authors of the article conducted a study of the opinions of students and experts of the PRUE on the basis of a written questionnaire with a focus on the following EERs: “Management of Investment Activity of a Hotel Enterprise” and “Technology of a Hotel Activity”. 87 second-year and third-year students of full-time education (training direction – Hotel Business, profile – Economics and Management of a Hotel Enterprise, higher education level – bachelor) and 126 PRUE experts who participated in the study were invited to express their opinion about the use of EERs in the educational process.

The main task was to identify the opinions of students and teachers about the use of electronic courses in the educational process.

The survey results are presented on Figures 1-4 and they clearly demonstrate the positive attitude of the vast majority of respondents to the use of e-learning elements in the educational process of the university.

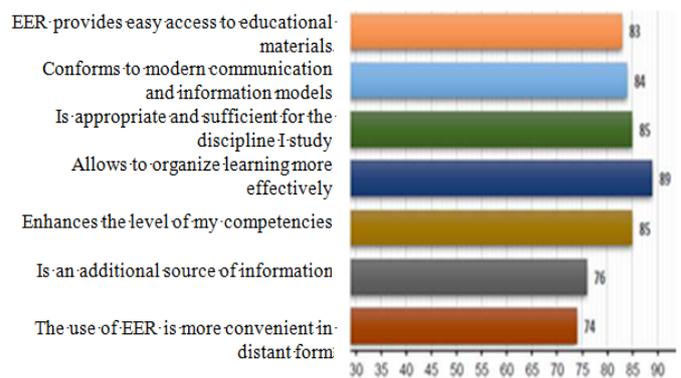


Fig. 1. The number of students who agree with the first part of the thesis, %

The vast majority of students surveyed believe that EERs provide easy access to educational materials and are consistent with modern models of communication and working with

information (total 83% and 84%, respectively). However, despite such a high opinion of students about EERs, 74% of students believe that their use is more convenient in distant form. Thus, almost a third of respondents consider the use of EERs in full-time form inadvisable.

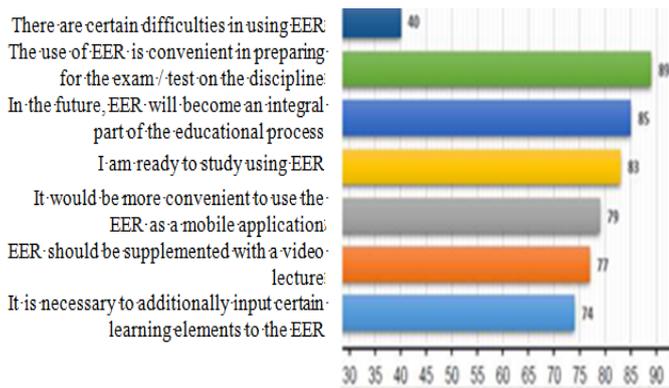


Fig. 2. The number of students who agree with the second part of the thesis, %

40% of the survey participants see the negative side of using EERs in the educational process of the university as well, believing that there are certain difficulties, bearing in mind the technical difficulties in using them.

Most of those who took part in the survey are ready to study (or are already studying) using electronic courses (83%). The vast majority of students are sure that electronic courses are convenient in preparing for the exam / test on the subjects studied (the total figure is 89%). Students (11%) who disagree with this thesis explain their position as follows:

- the electronic course will not help, there is the Internet, books, and we are preparing using them;
- there is nothing particularly new written there, the same material is given in lectures;
- inconvenient interface and functionality, since when passing the test it is not possible to see the correct variant of answer;
- material and questions presented in electronic courses may differ from material on the exam / test;
- e-courses do not contain all the information

The opinion of teachers

In general, it should be noted that the experts of the PRUE somewhat more positively assess the use of elements of e-learning in the educational process.

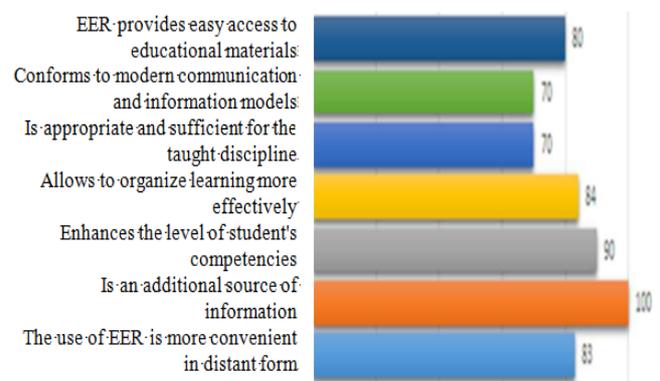


Fig. 3. The number of teachers who agree with the first part of the thesis, %

Most experts (83%) believe that EER allows to organize learning more effectively. Work can be organized in small groups according to the “one computer per group” model. At the same time, teachers select the EERs necessary for conducting the classes, depending on study task, and orient students toward conducting mutual research, developing group projects, and performing electronic assignments collectively.

Teachers also believe that EERs are an additional source of information (100%) and correspond to the modern models of communication and working with information (70%), since electronic courses are able to include huge massives of data for training with quick and easy access.

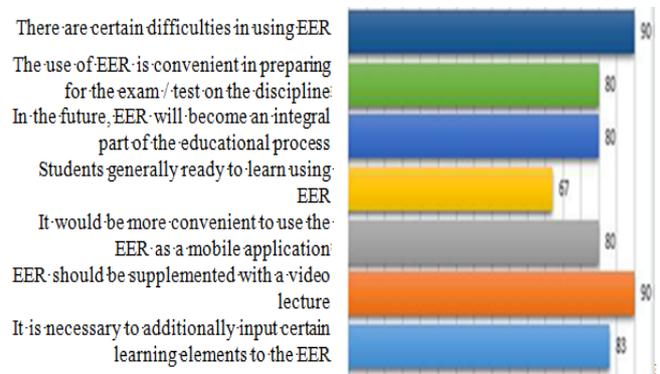


Fig. 4. The number of teachers who agree with the second part of the thesis, %

V. CONCLUSIONS

The results of the study showed that the tasks of implementing EERs into the educational process are perceived by most domestic universities as ones requiring prompt solutions. However, the speed of implementation varies significantly. Universities most advanced in this direction have formed a complete online learning system – Learning Management System (LMS) environment, the other pole is represented by open video courses on various disciplines. Various platforms are used to post video lectures: international – Coursera, domestic – “Open Education”, etc. [9].

In the Plekhanov Russian University of Economics EERs are currently used as an independent product, which is implementing by the scientific and pedagogical staff of the departments and integrated into the LMS [10]. A survey of university experts and students showed that in general the

team supports the use of modern digital teaching methods. Moreover, according to the results of the analysis of the questionnaires, a number of valuable comments were received aimed at improving of the implementation of electronic educational resources into the educational process.

Based on the results of the study, the following conclusions can be drawn aimed at improving the implementation of EERs:

- the development and universalization of modern technical means is needed that can provide teachers with the opportunity to create video lectures, integrate the material created into the student's personal account, as well as a number of other technological improvements;
- It is necessary to increase the motivation of teachers. In particular, to equate the development and implementation of EER to the study load of the first half of the day, as well as to form and develop the interest of teachers in team work on the development of EERs.

### **References**

- [1] Zhenova, N.A. Lifelong Learning for Business // Distance and Virtual Learning. 2017. № 5 (119), pp. 119-125.
- [2] GOST R 53620-2009 Information and communication technologies in education. Electronic educational resources. General provisions. FOCT P 53620-2009
- [3] Kovaltchuk, A.P., Kulgachev, I.P. Directions of development of hospitality and tourism industry enterprises in modern conditions in Russia // Problems and prospects of the hospitality and tourism industry: collection of articles. Plekhanov Russian University of Economics. Ufa, 2017, pp. 94-97.
- [4] Denisov, I.V., Khachatryan, M.V. Innovative economy in the context of social responsibility // Economics and Entrepreneurship. 2017. № 9-1 (86-1).
- [5] Zaitseva, N.A., Ilina, E.L., Nikolskaya, E.Y., Romanova, M.M., Larionova, A.A. The main strategic directions of the education system development (On the example of higher education institutions on personnel education for the hospitality industry). International Journal of Environmental and Science Education Volume 11, Issue 16, 2016, pp. 9155-9168.
- [6] Zaitseva, N.A., Kozlov, D.A., Nikolskaya, E.Yu. The use of computer testing to assess the qualifications of employees of the tourism and hospitality industry // Bulletin of the National Academy of Tourism. 2017. №3 (43), pp. 70-75.
- [7] Denisov, I.V., Kovaltchuk, A.P. Electronic educational resources: problems of implementation and their solution // Russian Economic Internet Journal. 2018. № 4, pp. 12.
- [8] Romanova, Yu.D., et. al. Analysis of the development of digital education: models, platforms and technologies. Plekhanov Scientific Bulletin. 2019. № 1 (15), pp. 104-121.
- [9] Gerasimova, V.G., Romanova, Y.D., Zhenova, N.A. Russian market of LMS for higher education. Astra Salvensis. 2018. T. 6. C. 757-767.
- [10] Gerasimova, V.G., Melamud, M.R., Tutaeva, D.R., Romanova, Yu.D., Zhenova, N.A. The adoption of e-learning technology at the faculty of distance learning of plekhanov russian university of economics. Journal of Social Studies Education Research. 2018. vol. 9. Issue 2, pp. 172-188.