

# Features of Financial Support of the Educational Process with the Use of E-Learning and Distance Learning Technologies

A Yu Valyavsky<sup>1</sup>, M N Ivanov<sup>2</sup>, N V Uchevatkina<sup>1,3</sup>

<sup>1</sup>Autonomous noncommercial organization of higher education «MOSCOW INTERNATIONAL UNIVERSITY», Leningradsky Prospekt 17, Moscow, 125040, Russian Federation

<sup>2</sup>Federal State Budget Institution of Higher Education «Financial University under the Government of the Russian Federation», Leningradsky Prospekt 17, Moscow, 125993, Russian Federation

<sup>3</sup>Center for Coordination and Monitoring of Research Activities, Federal State Budgetary Institution «National Medical Research Center for Preventive Medicine» of the Ministry of Healthcare of the Russian Federation, Petroverigskiy lane 10 str 3, Moscow, 101990, Russian Federation

E-mail: uchevatkina@yandex.ru

**Abstract.** The article presents an analysis of the regulatory framework for the financial activities of an educational organization and features when using e-learning and distance learning technologies. The use of information resources in the educational process is an essential component of any distance learning system. The construction of the educational process is impossible without the competent design of a distance learning course, which is a complex task. To successfully solve this problem, the teacher needs to possess not only information and communication, but also pedagogical technologies, which will ensure the successful use of the distance course in educational activities. The introduction of e-learning and distance learning technologies in the educational process of universities will help to solve complex socio-economic problems in the conditions of market competition. Important is the financial support of the educational process using e-learning and distance learning technologies, which can increase the competitiveness of the educational institution.

## 1. Introduction

The development of information technology always goes at a faster pace relative to the regulatory and legislative framework. Therefore, it is not surprising that the field of education is no exception. Over the past two decades, the system of higher education that has been built has undergone fundamental changes, which are difficult to comply with the current legal and regulatory framework.

At the same time, it is not only and not so much about reforming the educational system in countries as a whole, which, of course, also leaves its mark, but about the development of distance educational technologies and e-learning, which allow us to expand the boundaries of educational services many times and put the concept into practice education "through life" and take the educational process to a new level.

In recent years, with the growth of technological expansion, one of the approaches that have been useful for improving the efficiency and effectiveness of education is the use of information and communication technologies (ICT) [1,2]. Distance education, e-learning and virtual universities are new ICT achievements that can provide the desired solutions to overcome the complexities of traditional approaches [3].

The current policy in the e-learning system as one of the important factors encourages students to study better, creating a competitive atmosphere [4, 5].

Undoubtedly, information technologies themselves do not solve all problems and do not allow providing quality educational services without the appropriate faculty, material and technical base of the educational organization and relevant educational content. However, they help to make the material more accessible, interaction with teachers and the administration of educational organizations simpler, and the use of Internet technology allows you to erase the boundaries and distances between the student and the educational organization. In other words, the constant development in the field of communication technologies has led to the appearance of more effective and cost-effective teaching methods in comparison with traditional approaches to teaching [6].

## **2. Relevance**

The costs associated with the implementation, development and support of the distance education system are directly dependent on the administrative scheme adopted by the educational organization. Financial support must be targeted and irrevocable. The intended use of funds is understood as the expenditure of funds for predefined goals. So, in the Tax Code of the Russian Federation [7] provides a list of funds that relate to targeted financing:

- budget allocations to state institutions, including in the form of subsidies to budgetary organizations;
- grants (cash or other property) that are provided free of charge and irrevocable for the implementation of programs in the field of education, art, culture, science, physical education, health and the environment;
- investments provided by the results of investment competitions;
- funds received from funds supporting scientific and innovative activities.

Irrevocability is understood as the fact that the funds provided to educational institutions are not directly returned or reimbursed by them, and have unconditional social utility.

Educational activities should be subsidized taking into account the following principles:

- planned - funds are provided for in the preparation of the budget (financial plan);
- phasing - allocation of funds as they are spent;
- economy - the correct and rational spending of funds.

The regulatory framework for the financial activities of an educational institution in the Russian Federation is regulated by various legislative international and Russian acts [8-11].

Regulatory costs for the provision of state or municipal services in the field of education include the cost of remuneration for teachers, taking into account the level of average salaries of teachers for their teaching work and other work.

Sources of funds to the educational institution are divided into budgetary and funds from income-generating activities (previously called extrabudgetary).

An educational institution can be financed by a state or a municipality, or by a private individual. In addition, the concept of "self-financing" is known.

Thus, there may be the following types of funding sources:

- budget allocations;
- sponsorship funds;
- subsidies (grants);
- own funds at the disposal (of property).

The sources of funds may also include:

- income from the sale of goods, works, services (income from the implementation of various activities);

- income from non-operating activities (these are fines, penalties, forfeits, etc.);

- donations (gifts, sponsorship, probate, etc.).

All these sources of cash flow are present in the activities of educational institutions.

In real practice, if an educational organization does not have targeted grants, then educational activity is usually financed from funds from income-generating activities, i.e. from the provision by educational organizations of paid educational services and the implementation of other income-generating activities. In this regard, local regulations that have a direct impact on the costs associated with the functioning of educational activities, in particular e-learning (EE), are important. These local acts include:

1. The order on the approval of the norms of pedagogical load (CPD);

2. The regulation on the development and use in educational activities of electronic educational resources (ESM).

These local regulations may have different names, but in essence they regulate two cost items - this is the payment of faculty (faculty) and the cost of preparing new and updating existing electronic educational resources (ESM).

An analysis of the subjects of economic relations in the educational services market allows us to conclude that this phenomenon is not constant and static. The process of formation and development of the educational services market is natural.

The formation and development of the educational services market takes place in accordance with certain global trends [8]:

1. the desire for a democratic education system, that is, the availability of education to the entire population of the country and the continuity of its levels and levels, the provision of autonomy and independence to educational institutions;

2. ensuring the right to education to everyone (the opportunity and equal chances for everyone to get an education in an educational institution of any type, regardless of nationality and race);

3. significant influence of socio-economic factors on education (cultural and educational monopoly of certain ethnic minorities, paid forms of education, manifestation of chauvinism and racism);

4. The increase in the range of educational and organizational activities aimed both at satisfying diverse interests and at developing students' abilities;

5. the growth of the educational services market;

6. expanding the network of education and changing the social composition of students (becoming more democratic);

7. in the field of education management, the search for a compromise between strict centralization and full autonomy;

8. Education is becoming a priority subject of financing, especially in the developed countries of the world;

9. constant updating and adjustment of educational programs.

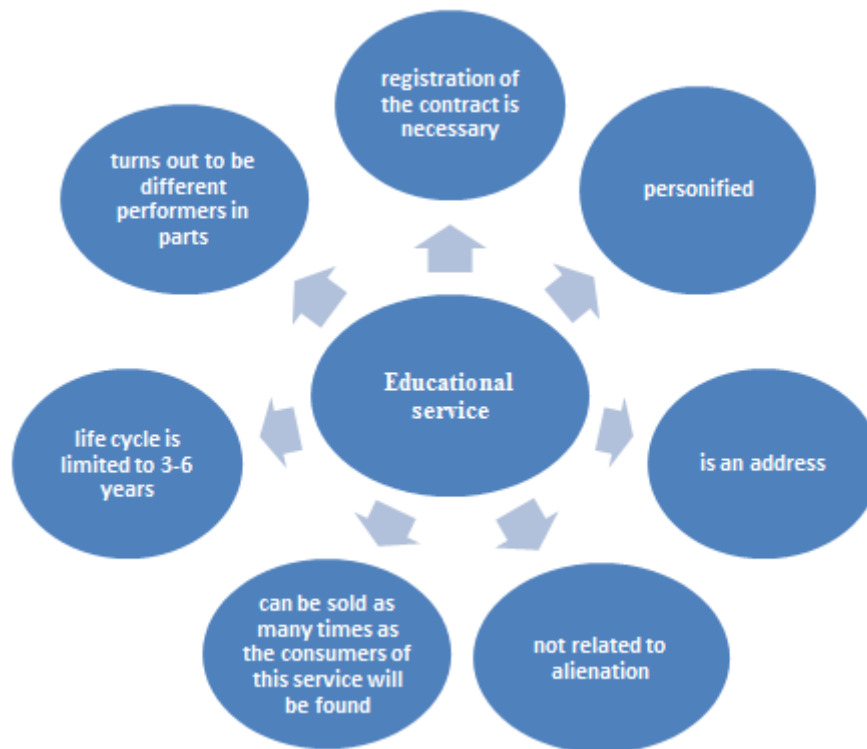
Generalized features of the educational service that distinguish it from the product are shown in Figure 1.

In general, the market for educational services consists of many segmented, interconnected markets. The difference between the market for educational services from other forms is high dynamism, sensitivity to market changes; personification and high speed of turnover of capital formed.

The distance learning system, at the present stage, is unthinkable without a financial and economic assessment, since the modern theory of the economy of education considers education as a commodity.

When developing an economic system of remuneration for a teacher of distance education, it should be borne in mind that DO is a much more laborious and multidimensional process than full-time study, for which, basically, standards for the remuneration of teachers of universities are developed.

Educational services are not tangible or tangible until they are acquired. To create an economically sound mechanism of remuneration, it is necessary to formalize the most significant parameters to achieve actual results. In the education system, such parameters are curriculum and calendar - thematic plans, programs, information on methods, forms and conditions for the provision of services, the educational services themselves (for example, in the form of distance learning courses), various certificates, licenses, and diplomas at the end of the course [12].



**Figure 1.** Features of educational services.

The procedure for determining the teaching load of teaching staff is regulated by order of the Ministry of Education and Science of the Russian Federation dated December 22, 2014 № 1601 «On the duration of working hours (norms of hours of teaching work for the wage rate) of teachers and on the procedure for determining the teaching load of teachers, as stipulated in the labor contract» (As amended and supplemented) [13]. Unlike the previous document [14], it revised the duration of teachers' working hours (the norms of hours of pedagogical work at a wage rate). The provisions of 273-ФЗ «On education in the Russian Federation» and the amendments made to the Labor Code of the Russian Federation are taken into account.

Currently, when developing and creating online courses, authors and customers are faced with a number of issues, such as minimizing the time to develop and implement an electronic educational resource (ESM), and determining its cost. Moreover, the cost includes not only the costs of royalties, but also the payment to employees involved in assessing the quality of ESM and its implementation.

The fundamental factors affecting the creation (writing), development and design of ESM are:

- 1) The level of ESM and its quality;
- 2) The number of videos, graphics, modeling elements, etc.
- 3) Human resources:
  - the number of people working on its development and creation and providing further support and support;
  - the level of qualification of employees;

- The role of the teacher / curator (tutor);
- 4) Duration of studying an online course;
- 5) The level of education of people for whom ESM is developed;
- 6) Requirements for educational content: prepared at the modern level multimedia content, or traditional materials adapted to the digital environment.

The costs of designing and developing an online course largely depend on the chosen model for building the educational process.

The development of electronic educational content with less laborious discipline is more difficult than with a larger one, and this is due to the fact that for the development of a lesser course, more detailed study and the ability to present in a concise form a sufficiently capacious and accessible presentation of the material are necessary, which, as part of large courses, are not observed. However, to write a very large electronic course, a lot of knowledge is needed to prepare it. It is also important that the described discipline has open access to educational and professional literature that is available and in demand in the educational process.

To the essential terms of the contract for the provision of paid educational services, according to Part 3 of section 54 of Federal Law № 273-ФЗ «On Education in the Russian Federation» [9], the price of the contract applies: the total cost of paid educational services and the procedure for their payment.

According to section 424 of the Civil Code of the Russian Federation [15] the execution of the contract is paid at the price established by agreement of the parties, while in the contract for the provision of paid educational services (section 709 of the Civil Code of the Russian Federation) [16] the price is determined by agreement of the parties and includes the costs of the contractor and his remuneration ( Article 783 of the Civil Code of the Russian Federation) [16].

In accordance with the letter of the Ministry of Finance of Russia dated 01.10.2014 N 02-01-09 / 49180 «On sending Methodological recommendations for establishing general requirements for the procedure for calculating the amount of financial support for the fulfillment of state (municipal) tasks for the provision of state (municipal) services (work)» [17] to the regulatory costs directly related to the provision of public services, these include:

- standard costs for labor remuneration and accruals on payments for labor remuneration of personnel directly involved in the provision of public services;
- regulatory costs for the acquisition of inventories consumed in the process of providing public services;
- other regulatory costs directly related to the provision of public services.

### **3. Practical significance**

The distance learning system, at the present stage, is also unthinkable without a financial and economic assessment. When developing the economic system of remuneration for teachers of distance learning and the cost of education, it should be borne in mind that distance education is a much more laborious and multidimensional process than full-time education, in which there are standards for the remuneration of university teachers.

When determining prices for the provided services (work) of an educational organization, it is necessary to be guided by the following algorithm [18-19].

1) Develop and approve methodological materials, regulations, etc. by the council or the academic council. to calculate prices for services provided by an educational institution, including:

- determination of the basis for calculating prices (according to planned or actual costs, i.e. from what level should start);
- the procedure for determining the amount of direct and overhead costs, based on the content of the services provided;
- a mechanism for accounting for inflation depending on the period of provision;
- Features of pricing for various types of services, taking into account the current tax system;
- a mechanism for accounting for market conditions;

- existing legislative restrictions on pricing for various goods and services;
  - a mechanism for establishing benefits, differentiation and price changes.
- 2) Find out the price situation for similar or substitute services in the region.
  - 3) Take into account the level of inflation in pricing, especially in the provision of long-term services.
  - 4) Carry out the calculation in accordance with the approved documents and approve the cost by the Senate or the Academic Council.

The price of paid services of an educational institution is a cost estimate of the material, labor and other costs used in the process of its provision and includes:

- 1) costs for the provision of services - direct and overhead (indirect);
- 2) taxes (on a specific type of activity);
- 3) planned savings (profit).

Since distance education is focused on increasing the independent work of students who receive the same amount of knowledge as full-time, but through telecommunication and information technologies, the calculation of the cost of providing educational services will have some specifics, also related to extraterritorial distribution. There are many methods for determining the cost of educational services using distance learning technologies and e-learning [20], demand-oriented, using the costly method of calculating the price of educational services, as well as based on the balance of supply and demand. However, in any case, you must adhere to the following order:

1. To develop an intra-university methodology for calculating the cost of distance education in an expensive way to determine the lower border of the price, i.e. determine:
  - unit of price calculation (one discipline is recommended);
  - procedure for determining the size of direct and indirect (overhead) costs;
  - features of pricing taking into account taxation;
  - existing legislative restrictions on pricing;
  - mechanism for establishing benefits, differentiation and price changes.
2. To clarify the conjuncture of the price of distance learning in this region and establish a mechanism for accounting for market conditions.
3. Develop a business case for the price.

#### **4. Summary**

To summarize, in calculating the cost for distance education, it is first necessary to calculate the cost of discipline in an expensive way, then to examine consumer demand to estimate the maximum value of the price, to correct the price, it is necessary to analyze the pricing strategy of competitors [21, 22].

The use of information resources in the educational process is an essential component of any distance learning system. Substantial and well-designed educational materials can stimulate the process of self-education and, thus, increase the effectiveness of training. The introduction of e-learning and distance learning technologies in the educational process of universities will help to solve complex socio-economic problems in the conditions of market competition.

The existing legal framework already today fully describes the process of implementing educational programs using e-learning and distance learning technologies.

The construction of the educational process is impossible without the competent design of a distance learning course, which is a complex task. To successfully solve this problem, the teacher needs to possess not only information and communication, but also pedagogical technologies, which will ensure the successful use of the distance course in educational activities.

When creating distance learning courses, questions arise regarding the observance of copyrights of both their own and the authors whose works are used to create them. It is important to understand that authors can exercise their right by allowing the use of the created product to be used at their discretion.

**References**

- [1] Zagrodi B, Bordbar A and Elghae T 2010 *Journal of Medical Education Development Horizon* (Iran:Zanjan University of Medical Sciences & Health Services) vol 4 pp 11–17
- [2] Hoseyni Z and Salehi M 2009 *Iranian Journal of Medical Education* (Iran: Medical Education Development Center, Isfahan University of Medical Sciences) vol 3 p 114
- [3] Kheyrandish M 2011 *Education Strategies in Medical Sciences* (Iran: Iranian Association of Medical Education BMSU Education Development Center) vol 4 pp 137–142
- [4] Welle-Strand A and Thune T 2003 *Evaluation and Program Planning* (United Kingdom: Elsevier Science Publishing Company) vol 26 pp 185-192
- [5] De Freitas S Oliver M 2005 *Journal of Higher Education Policy and Management* (United Kingdom: Carfax Publishing Ltd.) vol 27 pp 81-96
- [6] Lee J 2002 *International Journal of Instructional Media* (USA: Westwood Press Inc.) vol 29 pp 27-45
- [7] The Tax Code of the Russian Federation (Part Two) 05.08.2000 № 117-FZ (as amended on 07.30.2019)
- [8] The Bologna Declaration of 19 June 1999: Joint declaration of the European Ministers of Education
- [9] Federal Law «On Education in the Russian Federation» 29.12.2012 № 273-FZ (as amended and supplemented, entered into force on 08.08.2018)
- [10] The Budget Code of the Russian Federation 31.07.1998 № 145-ФЗ (as amended on 19.07.2018)
- [11] Decree of the Government of the Russian Federation 26.06.2015 № 640 (as amended by the editor 19.07.2018)
- [12] Nikulicheva N V 2016 *Federal Institute for the Development of Education* (Moscow: Federal Institute for the Development of Education) p 72
- [13] Order of the Ministry of Education and Science of Russia 22.12.2014 № 1601 (as amended on 13.05.2019)
- [14] Order of the Ministry of Education and Science of the Russian Federation 24.12.2010 № 2075
- [15] Civil Code of the Russian Federation (Part One) 30.11.1994 № 51-FZ (as amended 18.07.2019)
- [16] Civil Code of the Russian Federation (Part Two) 26.01.1996 № 14-FZ (as amended 30.12.2018)
- [17] Letter of the Ministry of Finance of Russia 01.10.2014 № 02-01-09 / 49180
- [18] Belyakov C A 2007 *New lectures on the economics of education* (Moscow: MAKS Press) p 424
- [19] Kalyanov A Yu 2012 *Economics of Education* (Tula: Publishing house TSPU im. L.N. Tolstoy) p 173
- [20] Bartley S J and Golek J H 2004 *Educational Technology & Society* (Taiwan: Taiwan E-Learning and Digital Content Association, National Taiwan Normal University) vol 7 (4) pp 167-175
- [21] Gorbacheva V Calculation of the cost of distance learning at a university <http://www.e-learning.by/Article/Raschet-stoimosti-DO-v-vuze/ELearning.html> Access Date: 08.10.2018
- [22] Egorkina E B and Ivanov M N 2014 *V Materials of the VII international scientific and practical conference* (Yekaterinburg: Russian State Vocational Pedagogical University ) pp 320-323