

# Accounting Features of Intellectual Property in High School

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## Abstract

Implementation of the strategic goal of integrating Russia into the world economy requires the definition of new priorities that determine the country's competitiveness in international markets. Generating new knowledge creation on their basis of technologies and their use in the socio-economic development of the state directly determine the role and place in the world community, the standard of living and national security.

Traditionally, it is universities and academic institutions were the source of the fundamental knowledge that underlies the new products and processes. And it is this knowledge now determines the economic competitiveness of universities, institutes, companies, and the country as a whole. Inclusion of universities in economic relations occurs, including through the commercialization of intellectual property.

**Keywords:** competitiveness, intellectual property, commercialization of intellectual property, intellectual property

## 1. Introduction

The world has enough of any criteria and indicators to judge the development of a country, but to see the perspective necessary to pay more attention to the fundamental sources of development and primarily education. Without education is a meaningless argument about human capital. In the 21st century people need to get new skills, knowledge and skills than in the past, and that the modern education system must meet these requirements. Globalization of Higher Education is the most important part of the global innovation economy. And educational and research functions of universities is increasingly becoming a critical link in global innovation linkages. Today, the effectiveness of the integration of education, science and business to a large extent depend on the prospects for socio-economic development, competitiveness and effectiveness of responses to the new challenges of the global economy.

One of the main mechanisms for promoting higher education institutions in the rankings is to integrate the resources, talents and motivated young people aimed at the result. Log in this kind of world scientific and educational society, which creates recognized universities of the world. International practice shows the increase of competitiveness, it is necessary to create a set of strategic initiatives of the world's leading centers, although it is not the fruit of a large but close-knit team (Avrlev & Efimova, 2013).

Implementation of quality management at all levels ensures the continuity of the process, as at certain stages of its implemented and target priorities and resources, software and technological support, and monitoring results.

Designing an effective system of quality management education is determined by a number of conditions and factors that create discomfort or, conversely, to ensure adaptability (Chuprunov, Gurbatov, & Bednyy, 2010).

Analysis of the problem clearly indicates the reasons of its origin in the new socio-cultural environment of our community. This crisis of former systems of values and priorities, the formation of a new philosophy of society built on human and national values; development priorities and regionalization, municipalization of education systems; increased stratification processes (Avrlev, 2013). And in this regard, the development of the education market, the uneven development of the socio-economic conditions, as well as the division of society into rich and poor; revitalization of regional denominations and the revival of spiritual life; development of management theory and practice based on the achievements of management and marketing, the emergence and implementation of international quality standards, the transition to the development of educational systems and

progressive model of education and technology, etc. All of these reasons, no doubt, are prerequisites for giving sufficient grounds to find effective mechanisms for quality management (Avrlev & Efimova, 2013).

The innovative character of the economies of the industrialized countries confirmed by the constant increase in the proportion of new knowledge embodied in engineering and technologies (up to 80-95% of gross domestic product), the presence of Intellectual Property Institute. At the same legal protection of new technologies, in accordance with the legislation on intellectual property allows firms to maintain a monopoly position on the market of specific products.

The concept of "the commercialization of intellectual property" is inextricably linked with the concept of "commercialization of new technologies," which is for domestic business and Russian universities relatively new. Commercialization - is the process of transforming the results of research and development, preserving its market relevance and demand in the products and services on the market to generate income from the sale, licensing or self-use (Altbach & Salmi, 2012).

It should be noted that the potential for intellectual property development and commercial use of innovative technologies obtained in Russian universities, little used today. Thus, the share of spending on activities related to the protection and management of intellectual property, is less than 2% in R&D expenditure of universities (for comparison: in the USSR was prescribed regulatory guide for these purposes at least 10% of these costs).

## 2. Materials and Methods

The main problem of Russian science is that there is virtually no infrastructure for commercialization of innovations, including universities in the scope of its activities and cooperation. For transformation of scientific and technological developments in product innovation is necessary to have the infrastructure of innovation, with a complete cycle of innovation innovation at different levels: inside and outside of university. Each level has its own infrastructure goals and objectives (Kovazhenkov & Bgantseva, 2009). Result of scientific and technological activities in the form of intellectual property can be successfully innovation cycle from concept t production in the presence of the university:

- Developed innovation infrastructure accompanying research and development activities,
- Opportunities to attract a strategic partner for the successful organization of production, which have successful experience in innovative business
- Support systems scientists who create intellectual property.

Different countries have built their approaches to improving the competitiveness of their universities. Society and the state gradually realized a new stage of its integration into the global system of universities. We have to take the best features, best practices, while preserving their national identity of our universities (Bainbridge, 2010).

Modern period development of Russia clearly identified the need to update the main priorities in the field of education in line with global trends. One such leading priority, as the quality of education found expression in national doctrine of Russian education. This circumstance is dictated by the presence of the basic contradiction between the modern requirements for quality of education provided by educational institutions and restrictions apply methods and technologies in the management process. Designing an effective system of quality management education is determined by a number of conditions and factors that create discomfort or provide adaptability alternatively (Nevzorov, 2014).

Mandatory element of innovation infrastructure and commercialization process is a system of accounting and evaluation of intellectual property (IP) and intangible assets.

From the point of view of the intangible assets related to one of the most difficult to define user categories. In International Financial Reporting Standards (IFRS) for intangible assets understand identifiable non-monetary asset without material form. Under IFRS, the asset is classified as an intangible, if it has the following characteristics:

- It can be separated from the company and to sell, convey, get it licensed, rented or exchanged, either individually or together with the related contract, asset or liability;
- It arises from contractual or other legal rights, regardless of whether it can be separated from the company or from other rights and obligations and transfer to another company.

Additionally, the standard identifies three feature allowing attributed to intangible assets, namely intangibility, identifiably and non-monetary.

### 3. Results

From the standpoint of the essential intangible assets are divided into three groups:

1. Intellectual property (goodwill, inventions, utility models, industrial designs, trademarks, appellations of origin, trade name, service marks, trade secrets, know-how, computer programs and databases, integrated circuits, copyright and related rights including licenses for certain activities).
2. Property rights – the right to use natural resources (land, water resources, mineral resources, etc.) and assets (buildings and facilities, equipment).
3. Deferred (or, as they are called, capitalized) costs (organizational costs, the cost of research, development work, etc.). In turn, organizational costs include the costs of setting up an enterprise (including capital contribution), broker place on the exchange, etc.

It should be noted that, according to foreign statistics in total assets of foreign companies account for the largest share of intangible assets (70%).

From a commercial point of view, as practice shows, more attractive as an intangible asset is intellectual property, since it represents an economic resource with unlimited potential (Figure 1).

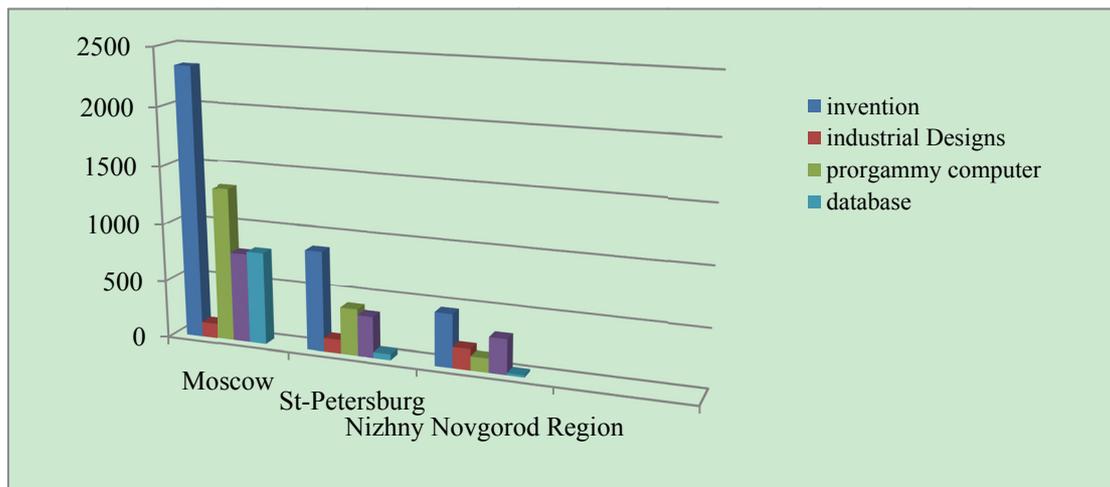


Figure 1. The use of intellectual property (calculated according to the State Statistics for 2013)

Intellectual property – is a collective term used to refer to, rights relating to intellectual property in various areas (industrial, scientific, literary and artistic). The notion of "intellectual property", according to the provisions of the Civil Code, may be defined as a set of exclusive property rights to the results of intellectual activity and means of individualization (Klimov, 2014).

By the results of intellectual activity in accordance with the Civil Code of the Russian Federation include:

- 1) works of science, literature and art;
- 2) programs for computers (computer programs);
- 3) of the database;
- 4) performance;
- 5) the phonogram;
- 6) message broadcast or cable radio or television (broadcasting organizations broadcasting or cable);
- 7) of the invention;
- 8) utility models;
- 9) industrial designs;
- 10) selection achievements;
- 11) integrated circuits;

- 12) secrets (know-how);
- 13) brand names;
- 14) trademarks and service marks;
- 15) appellations of origin;
- 16) commercial designations.

Changes in the system of higher education, revitalization of university research led to the need to systematize and accounting results of intellectual activity. Availability of university intellectual property is becoming one of the criteria for assessing progress in the implementation of government programs in the field of higher education. Of course, new performance requirements demanded perfection universities and accounting systems and evaluation.

Accounting and valuation of intangible assets is carried out in universities under the current regulations and the provisions.

Organizational control over the use of intellectual property provided by specialized structural unit. There is a such division is Technology Commercialization Center (TTC) in UNN. Accounting OIC delegated to the Office of Finance and Reporting and Research Department of the University.

Intangible assets shall be accounted for at historical cost (Lopatin, 2011), i.e the total of actual investments on their acquisition (creation), taking into account the amounts of VAT charged establishment suppliers and contractors (other than purchasing them within the income-generating activities subject to VAT, unless otherwise provided by the tax legislation of the Russian Federation).

Inventory item of intangible assets recognized set of rights arising from a patent, certificate, contract for the alienation of the exclusive rights to results of intellectual activity or means of individualization, or in any other manner prescribed by law, designed to perform certain independent functions. As an inventory of the intangible asset can be recognized as a complex object, comprising several protected results of intellectual activities (film, other audiovisual work, theater and entertainment representation, multimedia product, a single technology).

Cost of acquisition (creation) of intangible assets includes:

- amounts paid under a contract for the alienation of the exclusive rights to results of intellectual activity or means of individualization of the right holder (seller);
- Customs duties and customs duties;
- non-refundable taxes, state and patent fees paid in connection with the acquisition of the intangible asset;
- remuneration paid to the intermediary organizations and other entities through which the acquired intangible asset;
- amounts paid for information and advisory services relating to the acquisition of the intangible asset;
- any other costs directly attributable to the acquisition of an intangible asset and the provision of conditions for the use of assets as planned.

#### **4. Discussion**

Valuation of intangible assets whose value is determined on the acquisition of foreign currency is made in rubles by converting the foreign currency at the exchange rate of the Bank of Russia on the date of acquisition organization objects to the right of ownership, economic management, operational management.

According to Federal Law 23.08.1996g. № 127-FZ "On Science and State Science and Technology Policy" article. 5, paragraph 3, pp 3.1., If the nominal value of intellectual property is more than five thousand rubles, the object must be evaluated by an independent appraiser.

All costs associated with the formation of the historical cost of intangible assets when they become available, pre-assembled on the account 010632320 "Increasing investments in intangible assets - other movable property of an institution."

The useful life is determined by the Commission CCT UNN, whose composition is determined by the order of the rector of the University. Commission assesses the appropriateness of accounting for assets, acquisition of patents and their support.

The useful life of intangible assets received free of charge is determined by:

- objects received from other budgetary institutions, and government and municipal institutions - given the timing of actual operation and previously accumulated depreciation;
- objects received from other businesses and individuals - based on the market value of the property and the terms of operation, the Commission established institutions.

Accounting for intellectual property being in the program IC: Accounting and on paper.

Intangible assets used in performing R&D are registered in a general manner, as well as all other objects IA. Intellectual property, which have not been patented, protected by trade secret and shall be registered as a general procedure. Analytical accounting NMA objects maintained in inventory card asset accounting.

Initial and replacement cost accounting objects NMA reimbursed depreciation method produced by periods throughout their useful life. Accounting accumulated depreciation is recorded in account 10439 "Amortization of intangible assets - other movables institutions." (Guidelines for creating budget scientific and educational institutions of higher education business entities for purposes of practical application (implementation) of the results of intellectual activity, 2009).

Budget and autonomous institution without consent of the owner is not entitled to dispose of the intangible assets related to particularly valuable movable property assigned to him by the owner or acquired by the owner of the allocated funds (§§ 2, 3 tbsp. 298 Civil Code), so the realization of such intangible assets subject to agreement with the parent organization and property management authority. Implementation of the intangible asset should be carried at market value, which can be determined by an independent appraiser (Guidelines for inventory assets and financial liabilities, approved by the Ministry of Finance of the Russian Federation, 1995).

The carrying value of the intangible asset sold and the amount of accumulated depreciation on it to be written off. Implementation of an intangible asset is recognized using account 0401 10 172 "Income from assets."

Inventory of intangible assets in the institution in accordance with:

- Guidelines for inventory assets and financial liabilities, approved by the Ministry of Finance of the Russian Federation of 13.06.1995 № 49 (ed. 08.11.2010);
- Regulations on budgetary accounting for budgetary institutions, approved by the Ministry of Finance of the Russian Federation of 16.12.2010 № 174n.
- Order of the Ministry of Finance of the Russian Federation "On approval of the accounts of budgetary accounting and instructions for its use" from 06.12.2010 № 162n (red.24.12.2012).

Inventory of intangible assets is held once every three years, for which the University has created a central inventory commission and working inventory commissions.

Composition of the central inventory commission and working inventory commissions approved by order of the rector of the university.

Inventory Commission ensures the completeness and accuracy of entering into the inventory data on actual documents confirming the rights of the use of objects IA, accuracy and timeliness of registration materials inventory. Inventory of intangible assets by determining the actual commission of the document confirming the right to organize the use of objects IA.

As noted earlier, the commercialization of intellectual property – procedure for universities is relatively new and to date to be finalized. Effective commercialization of intellectual activity prevent such things as:

- Imperfection of the legislation on intellectual property;
- Lack of a developed innovation infrastructure, including the lack of patent services, technology transfer centers in universities (Instructions budgetary accounting for budgetary institutions, approved by the Ministry of Finance of the Russian Federation, 2010);
- Lack of knowledge among university staff in matters of design, protection, commercialization and registration of intellectual property;
- Inadequate accounting system of intellectual property (Order of the Ministry of Finance of the Russian Federation "On approval of the accounts of budgetary accounting and instructions for its use", 2010).

## 5. Conclusion

Communication and collaboration in order to create a capsule model to date are the main mechanisms in the promotion of higher education institutions in the world space. We must clearly understand that we can get from the collaboration. We must increase the rank of citing including through joint work within the overall research.

In the coming years we should see the result of the high schools in the direction of improving their global competitiveness. To do this we need to attract foreign teachers and researchers, to integrate them into scientific and educational environment of the higher school of our country, we must find ways to retain foreign students, including through the expansion of campuses, improve infrastructure should develop partnerships, create a Russian scientific schools with foreign researchers, attract eminent members of the various councils of foreign universities to promote your site to conduct their own continued support of Russian scientists, which are published in leading journals, we must integrate the Russian high school in the world scientific and educational space. And to address these issues should not only be given an opinion, and through the prism of other people with other values (Efimova, 2013).

The main task in the field of higher education is to make it competitive on the world stage by creating a balanced and has its own specific differentiated structure, involving the development of research universities are generalists, and educational research universities, universities own definition of the level and specificity, as well as improve management policies, including by strengthening the mechanisms of competition and the distribution of funds (Weber & Duderstadt, 2012).

As the decisive conditions for the implementation of reforms in the field of science and education focuses on three points:

- loosening of central government control and giving autonomy to universities in the field of teaching and learning activities, research, technological development and services;
- a new system of recruitment to universities with different types of tests in addition to the exam;
- improving the quality of education.

Today, throughout the world there is a tendency to move from bilateral cooperation of individual universities within specific educational or research programs to multilateral interaction consortia of universities widely formulated problems and issues (Avrlev & Efimova, 2014).

The emergence of this trend due to the fact that more and more scientific problems require cooperation among scientists from different countries, and with the fact that the aim of modern educational programs becomes training with the skills and experience of interaction with native cultures and the maximum amount demanded in the global market.

Today we have to think how to improve the potential of high school, how to attract good professors, while realizing that behind their Russian scientists struggle is very large, so it is necessary to expand the geographic scope of the search of world-class specialists.

Communication and collaboration in order to create a capsule model to date are the main mechanisms in the promotion of higher education institutions in the world space (Thurman & Efimova, 2014).

Thus, in the organization of the process of commercialization of intellectual property in universities requires a systematic approach that would form the basis of intellectual property in various stages of commercialization to organize their transfer to industrial use. Essential element towards the development of commercialization in universities is infrastructure restructuring, aimed at the creation of specialized centers of innovation and technology transfer and other similar structures, capable of providing the entire chain of commercialization of innovative development cycle.

## References

- Altbach, P., & Salmi, D. (2012). *The Road to Academic Excellence. The Making of World-Class Research Universities* (p. 410). The whole world, Moscow. <http://dx.doi.org/10.1596/978-0-8213-8952-2>
- Avrlev, N. (2013). The Process of Merging Universities as One of the Key Tools to Improve Their Competitiveness and Strengthen the Rating Positions in the Global Market of Educational Services. *World Applied Sciences Journal*, 25(9), 1378-1382.
- Avrlev, N., & Efimova, I. (2013a). The Role of the International University Network Organizations in the Innovative Development of Russia. *Middle-East Journal of Scientific Research*, 14(10), 1277-1291.
- Avrlev, N., & Efimova, I. (2013b). University Rankings as a Tool to Enhance Competitiveness, Clustering and Transnational Governance of Higher Education in the Context of Globalization. *Middle-East Journal of Scientific Research*, 16(3), 357-361.
- Avrlev, N., & Efimova, I. (2014). Global university rankings as indicators of the implementation of the integration process and competitive tool in the context of globalization of higher education. *Life Sci J*,

11(10), 648-652

- Bainbridge, D. I. (2010). *Intellectual Property* (7th ed., p. 237) Pearson Education Limited.
- Chuprunov, E. V., Gurbatov, S. N., & Bednyy, B. I. (2010). Comprehensive Research University in the Innovative Knowledge Society. *University Management: Practice and Analysis*, 1, 6-16.
- Efimova, I. (2013). Rankings as Tools to Promote Global Education Market. *World Applied Sciences Journal*, 25(10), 1400-1404.
- Guidelines for creating budget scientific and educational institutions of higher education business entities for purposes of practical application (implementation) of the results of intellectual activity. Letter from the Ministry of Education and Science of the Russian Federation dated 03.12.2009 #20-1834.
- Guidelines for inventory assets and financial liabilities, approved by the Ministry of Finance of the Russian Federation from 13.06.1995 № 49 (ed. 08.11.2010).
- Instructions budgetary accounting for budgetary institutions, approved by the Ministry of Finance of the Russian Federation of 16.12.2010 № 174n.
- Klimov, A. (2014). Accounting for intellectual property. *Current accounting*, (6).
- Kovazhenkov, M., & Bgantseva, Y. (2009). Innovative management strategy commercialization of intellectual property of the university. *Creative Economy*, 11(35), 21-28.
- Lopatin, V. (2011). Intellectual Property at the University. *Intellectual property rights*, (1), 48-54.
- Nevzorov, I. (2014). Intellectual property in the year 2114. *Desiring to guess the future*, Law, (5).
- Order of the Ministry of Finance of the Russian Federation "On approval of the accounts of budgetary accounting and instructions for its use" from 06.12.2010 # 162n (red.24.12.2012).
- Thurman, P. W., & Efimova, I. (2014). Use of rankings to improve global competitiveness of Russian's higher education institutions and technology exports. *Life Sci J*, 11(11), 285-289.
- Weber, L., & Duderstadt, J. (2012). *Global Sustainability and the Responsibilities of Universities* (pp. 150-152). Economica Ltd, France.

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