

Ranking approach to educational space studies

Enfoque de clasificación para estudiar el espacio educativo

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Contents

- 1. Introduction
- 2. Purpose of the Study
- 3. Research Methods
- 4. Findings
- 5. Conclusion
- Acknowledgment
- References

ABSTRACT:

The article is devoted to studying the possibilities of global rankings use in order to study educational space. The authors state the following hypothesis: global rankings can become a method of educational space studies if theoretical bases for their application for this purpose are developed as well as appropriate methods, tools and mechanisms for their application. The article presents an understanding of educational space and characterizes the most important world rankings in the perspective of their short history, shows their possibilities for assessing the educational space and concrete examples of what the results of global rankings can reveal and how they can be analyzed if applied in various combinations.

Keywords: global ranking, educational space, ranking approach.

RESUMEN:

El artículo está dedicado a estudiar las posibilidades de uso de rankings globales para estudiar el espacio educativo. Los autores plantean la siguiente hipótesis: las clasificaciones globales pueden convertirse en un método de estudios espaciales educativos si se desarrollan bases teóricas para su aplicación con este fin, así como métodos, herramientas y mecanismos apropiados para su aplicación. El artículo presenta una comprensión del espacio educativo y caracteriza las clasificaciones mundiales más importantes en la perspectiva de su corta historia, muestra sus posibilidades para evaluar el espacio educativo y ejemplos concretos de lo que los resultados de las clasificaciones mundiales pueden revelar y cómo pueden analizarse si aplicado en varias combinaciones.

Palabras clave: clasificación global, espacio educativo, enfoque de clasificación.

1. Introduction

State educational authorities and universities around the world pay more attention to global rankings in the education system. Russia is no exception in this sense. It is known from the documents of the Ministry of Education and Science and the mass media that 50 billion rubles have already been allocated in the country for the entry of Russian universities into world rankings. There are 21 Russian universities, which are additionally financed for these

purposes. It is known from open sources that during five years only five universities appeared in the rankings (however, they did not occupy the top lines!); some universities from this list even worsened their positions (Stiv 2015). Currently, the media reports that at the official level there are two opinions on how to allocate the remaining 30 billion to solve the problem specified in the Presidential Decree (Federal Law of the Russian Federation on December 29, 2012 No 273-FZ). According to the first one, it is necessary to distribute this money among all the same universities to achieve the goal (the opinion of Deputy Prime Minister O.Yu. Golodets), according to another opinion (Minister of Education of the Russian Federation O.Yu. Vasilieva), to invest these funds only in six universities, which now achieved not impressive, but still more significant results compared with the rest of the universities (TASS).

2. Purpose of the Study

Let's try to understand whether the goal for gaining top places is attainable for Russian universities. What possibilities do rankings have for educational space evaluation? Does it mean that the quality of education and the quality of training specialists for the Russian labor markets become better when the university appears in the rankings and improves its position?

3. Research Methods

The subject of global rankings was considered by E.V. Bebenina (Bebenina 2014), in foreign (Academic Ranking of Universities of the World, RIA News) and Russian sources (World University Rankings). Particularly significant publications are those of Hazelkorn E. (Hazelkorn 2011), Loukkola T. (Hazelkorn et al. 2014) Yudkevich M., Altbaha P, Rambli L. (Yudkevich et al. 2015).

The concept of "educational space" is regarded as a philosophical and pedagogical category. In previous studies, S.V. Ivanova determined that "the first use of the concept of educational space in the Russian scientific literature was recorded in 1993 in the article of I.D. Frumin and B.D. Elkonin "Educational space as a development space ("school of growing up")" (Shendrik 2003). Later, in 1994 it was mentioned in the article of E.A. Yamburg, however, the term was not clarified (Yamburg 1994), then in 1997, it was mentioned in the article of V.I. Ginetsinskiy (Ginetsinskiy n.d.). Further in 1998, S.K. Bondyreva described the "unified educational space as a special socio-cultural phenomenon, the interaction of individuals who individualized their positions serving as the decisive factor for its structuring" (Bondyreva 1998). In 2005, B.L. Vulfson describes the world educational space as a "new concept", "which denotes the totality of all educational institutions, scientific and pedagogical centers, state and public organizations for education in different countries, geopolitical regions and in a planetary scale, their interaction and interrelation in an intensive internationalization and globalization of various spheres of social life" (Vulfson 2006). Revealing the features of education system functioning in a post-industrial society, A.M. Novikov represents the educational space through objectivity and subjectivity, as "the totality of all subjects and objects directly or indirectly participating in educational processes, either interested in them or influencing them" (Novikov 2013). I.G. Shendrik calls the space "the systemic set of real human interactions with reality, given to the subject through perception and action" (Yamburg 1994).

It is important to note that the Federal Law No. 273-FZ "On Education in the Russian Federation" Article 2 presents a thesaurus, however, among 34 definitions of the basic concepts of the Law, it does not contain the notion of an educational space. However, the Law introduces this term in Art. 3 and 11. In paragraph 4 of Art. 3, the principle of "unity of the educational space" is specified, and Clause 1 of Article 11 specifies that federal state educational standards and federal state requirements ensure "the unity of the educational space of the Russian Federation" (Frumin and El'konin 1993).

By the clarified definition of S.V. Ivanova: "The educational space is an objective world, a set of objects related to the formation of objects that create and fill this space, and at the same time the subject of subjective activity, consisting in perception, action, and the impact of

subjects on this space” (Ivanova 2013).

The study of normative acts, scientific sources shows that in such a formulation the problem of interrelation between global rankings and educational space has never been considered. Our research is aimed at helping to understand what the most significant global rankings represent, for what purposes they were created. Therefore, we can give far from complete, but sufficiently definite answer to the question: how and in what cases should rankings be applied and considered as a measure of education quality in a particular country and in specific socio-economic conditions. The authors plan to present the possibilities of assessing the educational space with the help of rankings when creating a certain methodology for their application.

4. Findings

The authors admit that this article does not describe the whole study, nor they consider it possible to give detailed answers to major questions in a single paper. It is important to take into account that the separate (intermediate) stage of the conducted research is described, or rather the reference points depending on the results of a particular part of the study.

4.1. A Brief History of the Question

The first rankings appeared as credit ratings of bonds in the USA in 1909. Since the 1970s, rating agencies have been “on the brink of a wave” of financial globalization and began to rapidly expand their activities. International investors, such as the International Monetary Fund and the World Bank Group, have taken measures to increase the confidence of international investors in the stability of financial systems; the financial regulators introduced credit ratings of independent agencies into regulatory practice now at the international level. The period from the 1970s to the present was characterized by a constant increase in the growth dynamics of the ranking business. The history of rankings, starting as a history of credit ratings of bonds, now covers virtually all areas of services - banking, insurance, various activities in the field of economics and, what is most important for us, the sphere of education.

Global university rankings, having appeared in the existing form since 2003, have made significant changes in the world educational space.

4.2. Relevance of rankings

The most, perhaps, important point is: what explains the popularity of the rankings? Who needs rankings?

Stakeholders who pay attention to the universities positions in the rankings are as follows:

- students and their parents when choosing a university;
- teachers when choosing a job;
- corporations in selecting universities for research and development;
- education management bodies, founders and investors to evaluate the quality of the university’s work and promising outlook for investment.

Let’s pay attention to the fact that we mentioned the word “choice” in all listed cases. Ranking solves the problem of choice, one of the most significant problems for the individual and humanity, which creates a powerful motivation for the development and use of rankings in different situations.

The influence of rankings in the modern world is so great that many countries develop government programs to support universities in their promotion in global rankings. By the way, it is this goal of choice - the choice of the most suitable universities for the training of Chinese students at the expense of the state - that underlies the creation of one of the most prestigious rankings - Shanghai, which was initiated by the Chinese government to assess the differences between Chinese universities and world-class universities.

The scientist, administrator, professor Steve O. Michael states that fifty years ago, someone who said that the rankings would place universities all over the world, could be considered a madman. And today people are so satisfied with the idea of forming world rankings and readily accept their results that this cannot but cause alarm. According to his forecasts, the situation may change in the same way: "I can say with certainty that the rankings will be used in the future, and their number will only grow, because they are psychologically comfortable for people and offer simple solutions suggesting to distinguish marketing tricks from the real state of things" (Decree of the President of the Russian Federation of May 7, 2012 No. 599).

4.3. The current situation with the use of rankings

Until now, the wide application of rankings has remained at the level of the previously mentioned "simple solutions", the goal of creation, the degree of objectivity and the range of applicability of rankings are not sufficiently assessed.

In the sphere of education, with the help of ranking, the state of the educational system in the city and in the region is assessed. Although there are separate rankings of schools and universities, but usually they do not take into account the social and economic conditions that directly affect the educational space (Ivanov and Ivanova 2016).

It is known that there are a large number of different rankings, the results of which can be applied in assessing the educational space state. However, we state with certainty that today various global rankings (and not just rankings related to education) are not taken into account when assessing educational space. For this reason, managerial decisions often come into conflict with what the results of the combined use of various rankings show in assessing the educational space state (in the world, in the country, in the region).

At present, the relevance of this approach to rankings use for the theory of pedagogy and for educational practice is quite obvious. In the case of the proposed approach, the development of strategies for the modernization of education will be carried out on the basis of an objective assessment of the educational space state.

Here are some examples of rankings use in earlier studies conducted by us.

Our research shows, for example, such dependencies as:

1. The education level index, given in two independent rankings, does not depend on its absolute funding. In other words, the number of people receiving education at all levels does not depend on public and private spending on education, including grants and donations from international agencies and non-governmental organizations.
2. The presence of a strong correlation of the education index with the health index and the index of business development makes it possible to make the assumption that the level of education depends not so much on investing in education as on the life quality.

The analysis of the results of rankings carried out can show the existing specificity of educational space formation. For example, the ranking indicators of post-Soviet countries have a number of features:

1. There is a significant correlation between the indicator "education" in the ranking of prosperity and the place in the ranking by the level of research activity (70.8% against the other world countries' 58.5%). As in general, there is a much higher correlation between indicators related to education and research and development in post-Soviet countries in comparison with the global trend. Most likely, this fact suggests that more developed in the field of science of the post-Soviet countries tend to invest more in education than in the world as a whole.
2. Significantly less correlation (67.8% versus a relatively high 84.4%) with an indicator of entrepreneurship development, is revealed, which underscores the less influence of entrepreneurship in the sphere of science and education in the post-Soviet countries.
3. The presence of a negative correlation in a number of indicators with absolute and relative expenditures on education shows that with higher education costs (both in absolute

values and per capita in a country), the indicators for social and economic development is lower. The proof is rather impressive list of negative correlation of education expenses:

- with a place in the ranking by the index of human development (-4,1%);
- with a place in the ranking by gross income per capita (-11.5%);
- with a place in the ranking according to the level of scientific research activity (-7%);
- with places in the world prosperity index of the Legatum Institute: economy (-23.6%); security (-3.8%); personal freedoms (-11.2%);
- with a place in the ranking by the level of the gross domestic product (-32.9%);
- with a place in the ranking on absolute expenses for R&D (-13.8%);
- with a place in the ranking for absolute expenditures on education (-47.3%);

An incomparably lower correlation probably shows that in countries of the post-Soviet space, as in countries with a common history and relatively more homogeneity, it is even more obvious that the relative costs of education are not directly dependent; moreover, there are quite a few examples of the reverse dependencies.

4. There is a clear discrepancy between the absolute and relative costs of education: the richer countries of the post-Soviet space are less willing to invest in education, which underscores the worldwide trend of greater concern for the formation of human capital in countries that are less well endowed with natural resources, and above all in Western Europe.

4.4. Characteristics of the major rankings, used in educational space assessing

Rankings can be conditionally divided into three groups (depending on their "remoteness" from education, in other words, whether they are internal or external to education) (Ivanova 2012, Rating of the best universities in the world according to the Quacquarelli Symonds Center).

Rankings that characterize the situation in education

These include, first of all, the education level index and the ranking of the countries in terms of the cost of education, as well as the global university rankings, of which the three are most known in Russia, since it was the entry of five universities in the top-100 of these rankings that became one of the tasks of the Presidential Decrees.

Rankings describing the situation in science and technology development

This group of rankings is built on external conditions that affect education, and indirectly shows the level of its development. Science and technology are among the customers of the qualitative education development. In other words, the quality of science and the quality of education are closely interrelated and interdependent. As an example, the following rankings can be cited:

World Ranking by Level of Expenditure on R&D

Ranking of countries in terms of research activity

Global Innovation Index

Network Readiness Index

Ranking of countries in terms of development of information and communication technologies

Ranking of countries by the number of patents

Knowledge economy index.

Rankings describing the quality of life

This group of rankings also refers to external circumstances; it characterizes various aspects of welfare and success of the world countries, connected with the general level of education

of its members and the success of the application of this education.

These rankings form the most extensive group, including hundreds of rankings, with the new ones constantly appearing; in particular, we can mention the following rankings, previously used in our studies:

Human Development Index

World prosperity index

Gross national income.

The rule of law index

Competitiveness ranking of the countries

Ranking of countries in terms of the level of sustainability

Global competitiveness index

Ranking of countries in terms of economic freedom

World ranking by level of health expenditure

Quality of public administration

The globalization index of the countries

Gender equality index.

4.5. The relevance and opportunities of the ranking approach to the educational space evaluation

Analysis of the literature on the educational space, analysis of rankings use in the education system shows that there is no such methodological approach that would allow for a comprehensive assessment of the educational space, objectively take into account the social, economic, sociocultural and other conditions for the formation of the educational space. In the course of the study, we determined that global rankings (both in different sets and separately) could serve as a tool for such a comprehensive assessment.

The ranking approach ensures:

- comprehensive evaluation by varying the results of various ratings;
- validity - both by the proven validity of these known world rankings, and mathematical calculations when processing large (scale) databases;
- objectivity of the evaluation – by the methodological foundations.

The problem of the present time is that in pedagogical science such methodological grounds have not been created, an approach to global rankings has not been developed as a tool for assessing the educational space state.

What will the creation of such a ranking approach promote as well as the assessment of the state of the educational space by taking into account the results of various rankings using special methods, based on a special methodology?

This will allow:

to objectively assess the state of the educational space;

on the basis of objective scientific data, to predict the development of the educational space in general, and specific educational institutions, in particular, universities;

in management practice to make decisions, create strategies, design the formation of the educational space, implement modernization projects taking into account the real state of the educational space and the forecasts of its development.

4.6. Challenge for creating a system for assessing the educational space state with the help of global rankings

In the development of our research, it is necessary to solve a number of serious scientific

problems in creating a system for the educational space state assessing with the help of global rankings. To do this we need:

to develop theoretical bases of the ranking approach to an educational space condition evaluation;

to create a methodology for using rankings as a tool for educational space assessing;

to develop a methodology applicable for processing various large databases using statistical methods and mathematical modeling;

to develop a unified monitoring mechanism with the help of rankings for changes in the state of the educational space after managerial impacts, in order to evaluate the implementation of decisions taken.

5. Conclusion

The challenges mentioned above are complicated because the developed theoretical positions of a methodological nature should have variants of models for their implementation, taking into account the stated goal of educational space state assessing. The *model principle* will make it possible to apply unified theoretical positions in various circumstances of studying the educational space; for example, take into account the global risks or geopolitical features of a country which educational space is being evaluated. The factor-based application of the ranking approach should also find its place: the gradual taking into account of various factors in the organization of the educational space in accordance with the increasing, or in a specific application, the accounting of one of the factors, or the simultaneous recording of all the factors that are present.

The developed approach based on the possibilities of global rankings for educational space state assessing has a systematic character, the modeling principle can, in our opinion, take into account many of the circumstances and conditions of the modern world: globalization, digitalization, global risks, media age issues, etc.

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[Index]

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