The analysis of Moscow education leadership position: a case of Moscow educational services market

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Abstract The state of education system in Moscow can be characterized by the following parameters: the accessibility of educational services for children and young people in Moscow, including the state of government educational organizations network and their resource provision; quality of services provided by educational organizations of various types and forms of ownership; pedagogical personnel, executives and other educators. The provision of Moscow residents in their local area with a wide range of educational services must meet the increasing demands of Moscow families. Because of the high birth rate in recent years and the intensification of migrant influx, educational needs of Moscow population increase. It is also necessary to say about the problems in social differentiation of city population, the differences in social and cultural capital of families, which determine the social order for educational services.

In order to form leadership positions in education field, Moscow city-planning prospects are necessary at the first place. These prospects will be able to form an optimal educational network and infrastructure in development areas, where comprehensive access to pre-school general and additional educational services is provided. Moscow needs to meet the need for personnel of creative professionals in key areas. The main purpose of this paper is to analyse Moscow education system and forecast its leadership positions in the sphere of accessibility and quality of educational services.

1 Introduction

The 21st century has determined the new reality in which education system should be developed (Medvedev 2016; or Voronkova and Kvyliuk 2017). Large cities which constitute the hubs of knowledge, business and sustainable development of today’s world (Chiabai et al. 2014; or Radovic et al. 2018), are also the centres of education. Being the capital city of great possibilities and wealth, Moscow cannot stay aside from global trends and is rightly "the city of education". In Moscow, there are more than 6000 educational organizations of various types and forms of ownership, and total number of students is more than 2 million of people. Developed socio-cultural environment: theatres, museums, sport centres, research institutes and etc.; intellectual potential which sets special requirements for education; the economic features of international megapolis – all these forms the unique capital educational space.

The state of education in Moscow can be characterized through the following key indicators: First of all, it is the accessibility of educational services for children and youth of the city, including the infrastructure of public educational institutions network and their resource provision. Second, it is the quality of services provided by educational institutions of various levels of education and forms of ownership.
Finally, the third indicator is the teaching staff (including managers) and other educators. Our paper analyses “Moscow education” leadership positions taking into account key indicators. The directions of Moscow educational field development are proposed and analysed in great detail.

2 Literature review

As noted by Golodets (2018), education is the foundation on which the nation's future is built. Education is crucial for large cities (Crul and Schneider 2010; Florida et al. 2013) although modern trends in research and education that are evolving thanks to the Internet and modern technologies, are starting to change this trend (Strielkowski 2018). And Moscow, as the capital of the state, is rightfully “the city of education”. In Moscow, there are more than 5,800 educational institutions of different levels and forms of ownership, and the total number of students is over 2 million people.

Kalina (2019), Moscow Government Minister, Head of Moscow Education Department, believes that the dynamically developing information environment, new needs and opportunities form a new reality for young people, which are formulated in the Capital Education program.

Academician Asmolov (2018) believes that "The School of the Future" should, above all, give the right motivation. The main task of education is the formation of a value-semantic picture of the world. The leader of the future is able to construct opportunities, and the teacher is “a significant other”.

Kuzminov (2018) notes the necessity of education digitalization, for example, the introduction of digital simulators system for activities and professions. From the simplest digital models to role models, where a student learns to be a doctor, driver or guide and master certain production and social roles in the form of a game. In our opinion, to implement its functions successfully the system of education should be involved into the process of permanent renovation. Thence, let us consider "Moscow education" leadership positions in the light of key indicators.

3 Availability and quality of educational services

In the development of the State program "Stolichnoe obrazovanie" were used urban and federal resources: organizations of culture, sports, social protection, youth policy. However, for effective interaction between organizations of various departments, a coordination mechanism is needed.

State educational organizations that implement basic educational programs, including organizations with in-depth study of individual subjects are distributed in Moscow districts unevenly which can be considered a serious problem. In this regard, the reorganization was carried out - the union of individual educational organizations into large educational complexes providing services in the field of pre-school, general, additional and even secondary vocational education and large educational complexes were created.

Changes that have occurred in Moscow education system can be divided into statistical, socio-pedagogical and economic. Statistical indicators for 2017 are presented in Figure 1.

![Fig. 1. Statistical indicators of Moscow education system for 2018](Source: Own results based on Russia in figures (2018))

In addition, Figure 2 that follows shows the location of schools in Moscow distributed by the city’s numerous districts.
There are 1369 secondary educational institutions in the capital. Of these, 125 gymnasiums and 64 lyceums. At the same time, the number of private institutions is 15% – there are only 200 of them. Also, there are 183 specialized schools in Moscow. They are divided into the following main groups: language schools: 109 schools; Physics and Mathematics: 9 schools; schools with in-depth study of computer science: 7 schools; schools with in-depth study of biology and chemistry: 3 schools; schools with in-depth study of economics and law: 8 schools. The remaining 47 educational institutions belong to other specializations not listed above. In 2017-2018 more than 1 million 420 thousand people studied in Moscow.

The average number of students in one school in 2010 reached 437 people, then in 2017 it reaches over 1,500 people (excluding students of preschool groups). The number of children covered by preschool education has grown in 5 years from 288.6 thousand to 420.9 thousand people. The proportion of first-grade students in the 2017-2018 school year also increased. By the end of 2017-2018, 106 thousand people were enrolled in first forms of state educational organizations in Moscow, which is 20 thousand more than in 2010.

The additional children education is developed in Moscow, which is carried out not only in all schools of the city, but also in colleges and universities. In addition, the system of large institutions of additional education, which have a unique material and technical base, is developed in Moscow. At the same time, Moscow children have a unique opportunity to receive additional education in almost all social, cultural and scientific facilities of the city: in museums, theatres, parks, palaces of culture and sports. Thus, the accessibility of education is provided to residents of all Moscow districts. More than 840 thousand children aged from 5 to 18 years are engaged in circles, sections, studios of supplementary education in Moscow, and the total number of children involved in additional education in the city, according to the Unified service of recording and electronic journal, exceeds 990 thousand people.

In terms of higher education, Moscow is one of the world leaders. More than 700 thousand students are enrolled in state educational organizations of higher education. More than 200 thousand people from other subjects of Russian Federation study in Moscow, including more than 40% of them from Moscow region. At the same time, 48% of students at Moscow universities study full-time. Nearly 90% of graduates of general education organizations in Moscow, after mastering the educational program of secondary general education, go to state educational organizations of higher education.

**Table 1. University rankings**

| University                                | Level of education | Cost of education | Website | International cooperation |
|-------------------------------------------|--------------------|-------------------|---------|---------------------------|
| MGIMO (run by the Ministry of Foreign Affairs) | 7                  | 2                 | 7       | 10                        |
| MSU (Lomonosov University)                | 7                  | 1                 | 6       | 10                        |
| State University of Management            | 10                 | 6                 | 10      | 4                         |
| Plekhanov Russian University of Economics | 7                  | 3                 | 3       | 9                         |
| HSE                                       | 7                  | 2                 | 9       | 5                         |
| Financial University                      | 7                  | 2                 | 7       | 5                         |

Source: Own results based on Russia in Figures (2018)

Table 1 above presents the ratings of 6 universities that have the highest rating in a 10-point system, which is presented on the website (Vuzy Moskvy 2018), namely: MGIMO (run by the Ministry of Foreign Affairs), MSU.
(Lomonosov University), State University of Management, Plekhanov Russian University of Economics, RANEPA under the President of the Russian Federation, RSUH, MGLU, RUDN University, MSUPA of Ivan Fedorov, HSE.

Speaking about accessibility in education, we should not forget about inclusive education. In the 2017-2018 school year, 11,000 disabled children study in Moscow schools inclusively. The main thing is that in schools for children with disabilities, a motivating environment is created, allowing them to achieve meaningful educational results. Moscow has achieved significant results in creating conditions for disabled persons education. In the state educational organizations of Moscow, including specialized organizations that are included in the structure of large educational complexes, more than 20 thousand children with disabilities are currently studying. The number of state educational organizations in Moscow that implement adapted educational programs in the field of inclusive education.

By accessibility of education, Moscow is among the leaders but there is no way to assess the situation at different education levels more accurately and in detail because there isn't an effective system of objective assessing the education quality. It is necessary to note the problem of stratification of educational institutions by the education quality. This trend is aggravated by the influx of children from migrant families into the education system, who experience serious difficulties in mastering educational programs with relatively low socialization in the urban community.

The quality of education also depends on technologies that are used in the learning process. Unfortunately, education technologies do not meet the expectations of Moscow families. For example, the share of students from general education institutions who master educational programs for gifted and talented children and receive consultations in part-time and distance learning using capabilities of leading universities and research organizations is less than 4%.

It is also necessary to note the existing problems of successful employment for people who have graduated from educational institutions of higher professional education with a worldwide reputation and with high levels of education quality.

3 “Moscow e-school” project

The so-called “Moscow e-school” project is a unique service of Moscow schools, which includes such facility as an extensive library of electronic materials. The project provides teachers with access to interactive educational applications, virtual laboratories, ready-made lesson scenarios, which makes it possible to use the proposed materials to prepare and conduct interesting lessons using new educational technologies.

For students and their parents, the access to the library of electronic materials gives an opportunity to use materials while preparing for lessons or revising the material studied including usage of additional tests to prepare a child for examinations, which makes learning easier, more effective and expands the future capabilities of the child.

By the beginning of 2018, the library of electronic materials contains more than 14,000 published and approved e-scripts for lessons, 190 e-textbooks prepared by teachers of Moscow schools, as well as comprehensive interactive educational applications, e-textbooks, and school curriculum artworks (Kuzminov 2018).

The “Electronic Journal” and “Electronic Diary” services, within the framework of “Moscow Electronic School” project, allow teachers to design curricula and lesson schedules, create study tasks using electronic forms of textbooks and tests, and for parents and students greatly simplify monitoring the performance progress and allow to communicate with the teacher directly. Using the “Moskvenok” service, parents of students can receive notifications about when their child came to school and left, and parents can also set up child’s dietary rules at school and determine the list of foods permitted for purchase at the school canteen.

Nowadays, “Moscow e-school” project has been implemented in all general education organizations subordinate to Moscow Education Department. Subject classrooms of primary and secondary schools are equipped with new multifunctional interactive panels with touch screens and laptops for teachers. Full coverage of the premises by wireless broadband access to the information and telecommunication network Internet using Wi-Fi technology is organized.

4 Conclusions

All in all, it appears that every state educational organization in Moscow has a typical website with regularly updated information (including centralized update), state general education organizations of Moscow use electronic diaries and journals, conferences and conference calls of Moscow Education Department are weekly broadcast live on the Internet telecommunications network, an electronic reception desk is functioning on the official website of Moscow Education Department, all applications received by Moscow Education Department, including those which are made through an electronic reception desk, are considered in detail, all this ensures the information openness of the education system. Since 2014, selector seminars have appeared – meetings on
financial and economic issues and meetings on the issues of using information systems, as well as trade union meetings and parent selector meetings, and since 2016, “Moscow Educational Internet TV Channel” website has been operating.

The potential impact of society on the management of educational organizations is used much more efficiently than in previous periods. Each educational organization has collegial governing bodies created to ensure the state-public nature of education system management – governing councils to which significant 12 have been delegated.

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