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DISTANCE EDUCATION IN RUSSIA: A HISTORICAL OVERVIEW

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Abstract

Distance education has long been an integral component of the education system of the Russian Federation and the former Soviet Union. A great many students and teachers in the country have been benefiting from the merits of distance education. The statistics announced by the state officials indicate strong evidence for the presence of mainstream remote learning. However, there is little information with regard to distance education of the country in the western literature. This necessitates an overview of the system and the history of the integration. This article, thus, sheds light on the general information regarding the history and demography of the general and higher education system across the country. It further takes a slight detour to the history of distance education and contemporary practices.

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1. Introduction

Russia, also known as the Russian Federation (RF), is a huge nation that occupies most of Eastern Europe and the Northern part of Asia. Russian independence was achieved in December 1991, when the Soviet Union was dissolved, and Russia became a sovereign state for the first time in history. It is the largest nation across the world in terms of land size, covering more than 17 million square kilometres and accounting for about one-eighth of the world's settled land area. With sixteen autonomous republics, Russia encompasses eleven time zones and has the largest land borders of any nation on the globe, making it the ninth most crowded with 145 million residents. Moscow, the capital, is Europe's biggest city. Located in Southern Russia, Saint Petersburg is the second biggest province with its cultural diversity. In Russia, the majority of people speak Russian, which is the most broadly used Slavic language in the world.

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Russia will have a population of 146.2 million people in 2022, making it among the most sparsely inhabited and metropolitical countries. It's Europe's most populous country, and the world's sixth most populous country, according to the World Population Prospects (23 per square mile). In recent years, Russian demographic issues have been referred to as a "demographic disaster," due to the country's high death rate compared to its low birth rate. In 2018, there were 1.6 children born to every woman in Russia, making it one of the countries with the lowest fertility rates on earth. To put it another way, Russia's population is among the world's oldest with an average age of 40. In 2009, Russia had its first increase in population after a decade of stability. This mostly stemmed from the death rates and higher birth rates, as well as more immigration.

Figure 1. *Land governed by the Russian Federation*

Russia is composed of more than 150 ethnic groups. Approximately 85% of the population migrated from Europe. Slavs constitute the vast bulk of the population, while Finnic and Germanic peoples are regarded as the minority. The United Nations estimate the immigrant population of the country at around 11.6 million, mostly from post-Soviet republics, notably Ukrainians.

2. Education in Russia

The Russian Ministry of Education and Science supplies educational services that are regulated by the state. Regional authorities govern education in their territories in accordance with federal legislation. Despite an increase from 2.7% of GDP in 2005 to

3.8% in 2013, Russia's education spending remained under the OECD average of 5.2%. Soviet Union's educational program was ten years long until 1990, but an 11-year comprehensive program was put into use in 1991. Free secondary school education and university education are provided by government-owned institutions. A significant percentage of students enroll on full pay. Women outnumber males with 57 % of the students only in post-secondary education. Russia's literacy rate was estimated by the US Central Intelligence Agency in 2015 to be 99.7 %. 54 % of Russian individuals aged 25 to 64 have a post-secondary education, which ranks Russia the second in the group of 35 member nations of the Organization for Economic Cooperation and Development for university education attainment. While 47.7% of the population has a high school diploma, 26.5 % and 8.1 % has accordingly secondary school diploma, and primary school diploma (4 years). Women between the ages of 35 and 39 have the greatest rates of higher education (24.7 %). In terms of the number of students in each classroom, Russia is among the lowest in the OECD, and the shortest in comparison to G20 countries.

In Russia, general education is divided into four different sections, including pre-school, elementary (4 years), lower-secondary (5 years), and upper-secondary (2 years). The program of study, thus, lasts eleven years in a linear path (see Figure 3). In addition to standard academic courses, students may participate in vocational-technical schools of various durations in upper-secondary education. The Russian constitution states that every Russian citizen has the right to get a general education, which is guaranteed by the country's constitution. This has been mandatory till grade eleven since 2007 (before, it was mandatory till grade nine). The education of children studying in public schools is offered at no cost. Private schools are also available despite only being in limited numbers compared to public schools. According to official figures, only around 1,600 of Russia's 42,600 educational establishments were privately run in 2015.

	2000/01	2005/06	2010/11	2013/14	2014/15
All Schools	20,553.5	15,630.9	13,642.4	13,877.4	14,398.9
State Schools (excluding evening schools)	20,073.8	15,185.1	13,317.7	13,643.2	14,191.6
Private Schools	60.6	72.3	73.5	94.9	99.9
Evening schools	479.6	445.8	324.7	234.3	207.3

Source: Ministry of Education, Federal Agency of State Statistics, Higher School of Economics, 2016

Figure 2. *Number of students studying at Russian Schools*

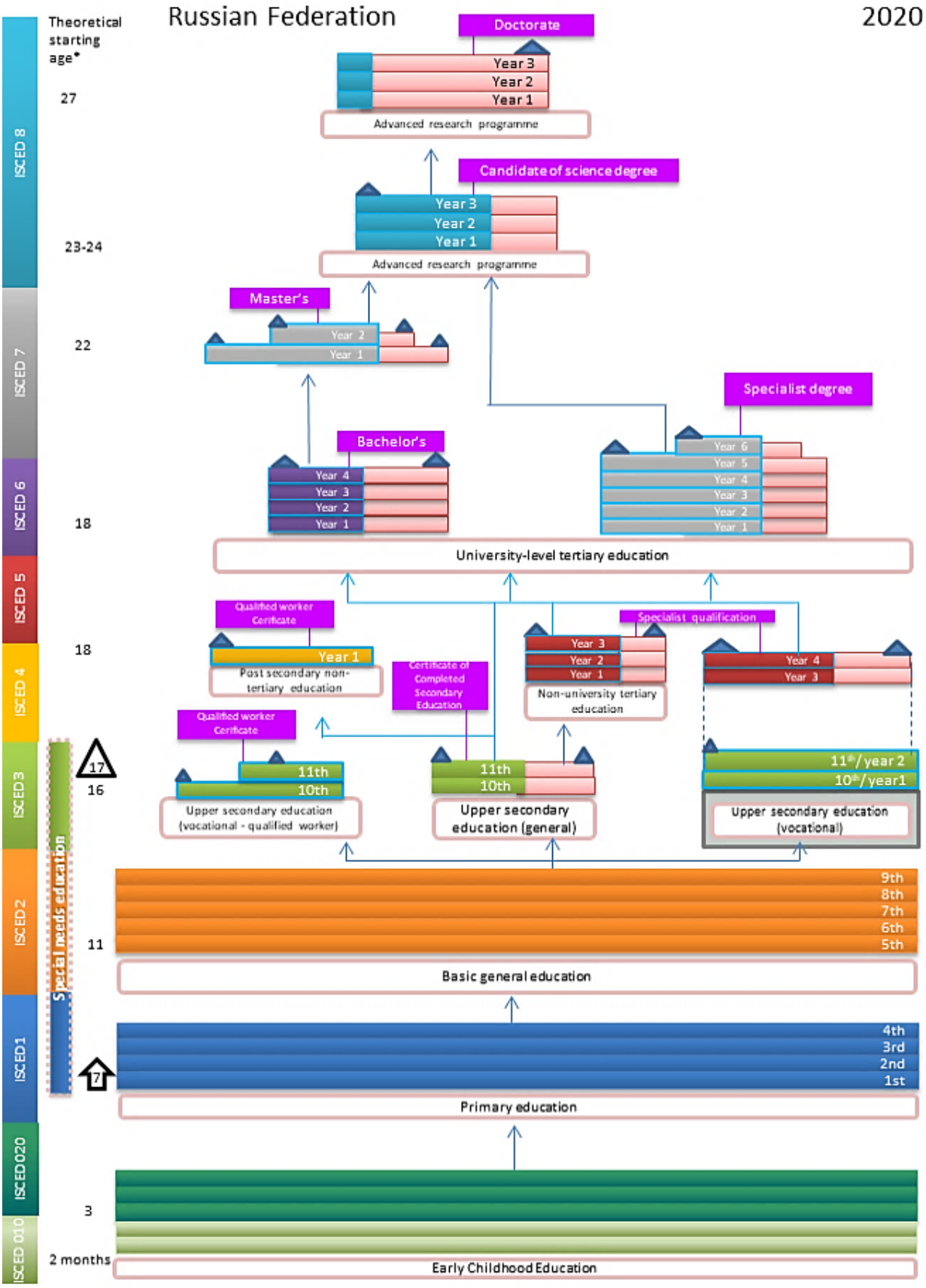

Figure 3. *Education system in Russia (OECD, 2020)*

As a result of the declining birth rates, the total number of students registered in the educational system of Russia has decreased significantly during the previous few decades. Between 2000 and 2013, the number of students declined by more than 32%, from 20 million to 14 million students (see Figure 2). After a period of stagnation, enrollments have begun to climb again in recent years, hitting 14.6 million students in 2016. The rise in birth rates that began in the 2000s has been the driving force behind this development. The enrollment and graduation rates are also high. The enrollment percentage for primary school students was 95.2% in 2014. %94 of individuals aged below 65 are graduates of post-secondary education. Young individuals' literacy rate had been found as 99.7% since 2002. The majority of Russian institutions provide a comprehensive general education until post-secondary. Some institutions, on the other hand, offer solely primary education in rural areas. Evening schools formerly described as "schools for working youth" provide upper-secondary education to people who have finished mandatory schooling. Individuals need to be at least 15 years old to attend these schools.

Other kinds of educational institutions include lyceums, gymnasiums, schools for the distinguished and talented, and general schools. Although all of these institutions teach the broad academic national curriculum, some of them specialize in certain subjects and are more exclusive. For example, a wide range of specialized programs is available at Lyceums, including chemistry, math, and philosophy. Many of these institutions are linked with universities and provide courses in several areas. The gymnasium, on the other hand, focuses predominantly on social sciences which involve learning more than one language as part of the curriculum. The schools for the distinguished and clever students are linked with institutions encouraging fine arts such as singing, opera, theatre, while there exist schools for brilliant students that concentrate on the sciences. High-quality instruction is provided in lyceums, gymnasiums, and other specialized schools; in fact, these institutions are widely regarded as some of the top secondary schools across the nation. In 2016, the Ministry of Education published its annual school ranks, which include 160 lyceums and 175 gymnasiums among the schools. It is common for schools to have a competitive admission process, which might include entry tests. Approximately 16% of students are now enrolled in specialized schools, and the accessibility of these institutions is particularly restricted in the country's rural regions.

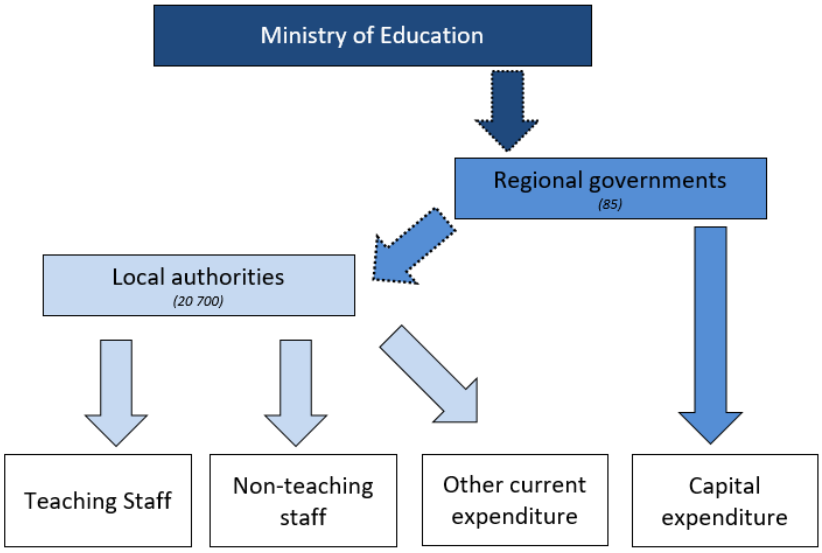

Figure 4. *Public funding for the government educational institutions (OECD, 2019)*

3. Higher Education in Russia

Higher education in Russia consists of more than 600 state institutions that provide academic education for over 7 million students from approximately 200 nations. The universities are comprised of a diverse range of fields from medicine to economics and engineering. The Russian Federation's education is governed by the RF Constitution (1993) and the RF Law on Education (approved in 2012 and implemented in 2013). The regulations are also shaped by the "Development of Education 2018-2025" put forward by the RF. The education vision of the country is primarily based on three guidelines: universal access, high quality, individual growth. Higher Education (HE) is ruled on three levels: federal, regional, and local. The Ministry of Science and Higher Education sets the standards and policies for the development of HE. These are executed by regional government officials who have considerable independence in implementing the rules. Institutions have a head officer, called 'Rector' who is in charge of academic and administrative issues. They are appointed every five years. Each university in Russia falls into one of the following categories:

- National Research Universities,
- Flagship Public Regional Universities
- Federal Universities
- Other publicly funded Universities
- Private Universities

In 2008, a project as part of a ten-year strategic plan aiming at establishing a national research university was launched. National research universities (NRU) are chosen

based on the results of a comprehensive examination and the prior growth dynamics. During the analysis of selection, many criteria were considered. Although the screening process was rigorous, applications from several institutions were received for the contest. Following the thorough analysis for two years, 29 new universities were founded in 2010. When comparing federal universities and national research universities, the distinction is that a federal university focuses on intellectual and human resource attributes of the country's advancement, whereas a national research university concentrates on the growth in high technology, information sharing, and mentoring next-generation scholars for higher education. Each NRU is, thus, responsible for implementing the program requirements to foster the essential areas that match the characteristics of the university. The government declared some fields regarded as a priority and paved the way for these universities to specialize.

The Russian Federation embraced the Bologna Protocol in 2003. Russia aimed to become more integrated and participate in the creation and standardization of European Education. As a consequence, higher education in the country has been transformed since then. First, the country began to implement multi-layered higher education in different fields with bachelor and master. The credit system of Europe was put into practice across the nation. Additionally, graduates are awarded a Diploma that is consistent with the transcript protocol of the Europe Union. The ultimate goal was to achieve key standards of the Bologna process in all the higher education institutions until the end of 2020.

As of 2011, the two-linear higher education levels (Bachelor and Master) consistent with the Bologna standards have become required, except in certain sectors where professional degrees are granted. Russia has just established third-cycle course programs as the doctoral degree, which is regarded as a distinct cycle according to the Education Law. As of 2013, study programs have been in line with the new set of occupational requirements that have been developed and have been systematically implemented since then. In 2015, innovative methodological advice by the National Qualifications Council was developed and accepted by the officials in HE. At all levels, there exist obligatory and optional courses. While half of the bachelor programs are obligatory, it is two-thirds of all courses in master programs. The participants are assessed based on the Unified State Test, which is also known as the entrance test to HE.

The National Technology Initiative was debated in the Federal Assembly, held in 2014, and President Vladimir Putin proposed a national technology movement by considering the long-term objectives of the country. They believed that Russia could only survive by investing the high technology in all areas of life. This could secure

the national defence, health and well-being, and growth. This initiative aims to fund innovative solutions integrated with sophisticated technological infrastructure with the help of stakeholders in a wide range of sectors. The leading universities also support the projects with their scientific know-how. They struggle to create a network that generates critical projects in addressing the needs of the different fields.

Russia has achieved great progress in the growth and improvement of higher education. The country aims to improve universities such that they can compete with others across the world. The ultimate goal is to see 5 Russian institutions among the best universities. "Education Development for the 2018-2025" program attempts to ensure that the education is of good quality and accessible by every citizen, includes up-to-date programs, and addresses the demands of the people and objectives of the market. It is expected that new regulations and plans could reduce the demand for the important areas of the country.

The BRICS (an organization of Brazil, Russia, India, China, South Africa) ranking, which has been published yearly since 2013, attempts to identify the strongest organizations in the BRICS nations' fast-growing economy. The leading universities of the Russian Federation appear at the top among the universities of the BRICS report released in 2019. Lomonosov Moscow State University (MSU) retains the top position among Russia's leading universities, dropping one step to sixth in the BRICS rankings in 2019. Additionally, the institution is placed 74th in the most current international university rankings. Furthermore, MSU was recognized among the world's top universities in 28 of the 48 categories. MSU's centre building is the highest educational structure across the world. The institution also has one of Russia's biggest library organizations with about ten million volumes. In 2019, Saint-Petersburg State University (SPbU) had climbed to 11th position in the BRICS rankings, passing Novosibirsk State University for second place among Russia's best institutions. SPbU, which was also rated 225th in the world, is the country's most ancient educational institution established by Peter the Great in 1724. Novosibirsk State University (NSU) was listed 12th in the BRICS rankings and 244th around the globe, with the highest score for the foreign student's indicator. The table below provides the top 10 universities of Russia in the BRICS.

Table 1. *The Top 10 Universities of Russia in BRICS Ranking*

BRICS Ranking	World Ranking	University	Location	Overall Score
6	74	Lomonosov Moscow State University	Moscow	**90.6**
11	225	Saint Petersburg State University	Saint Petersburg	**84.2**
12	228	Novosibirsk State University	Novosibirsk	**83.8**
19	250	Tomsk State University	Tomsk	**77.5**
21	282	Moscow Institute of Physics and Technology	Dolgoprudny	**76.9**
30	314	National Research Nuclear University	Moscow	**71.8**
33	282	Bauman Moscow State Technical University	Moscow	**70.2**
37	298	Higher School of Economics University	Moscow	**69.4**
39	401	National Research Tomsk Polytechnic University	Tomsk	**67.4**
44	348	Moscow State Institute of International Relations University	Moscow	**65.4**

Figure 5. *Leading Universities in Russia*

4. Distance Education in Russia: A Historical Overview

A vast majority of terms including correspondence education, distance education, online learning, remote learning or e-learning has been used in the literature to define the teaching and learning process that does not occur in a conventional classroom environment with the physical presence of instructors giving lectures or organizing the procedures (Singh & Thurman, 2019). This is truly due to the technological advances in mediating the instruction, indicating each innovation brings about new features that enhance in and out-clas practices. The overlapping terms, however, does denote the notion that learning and teaching are delivered at a distance usually through web-based mediums. The current paper, therefore, makes use of different terms in line with historical review to refer to the delivery mode that includes synchronous or asynchronous in case of physical distances.

Correspondence education was the earliest type of distance education in pre-revolutionary Russia. Karl Muzing, a notable Russian scientist, physicist, and instructor, established the first classrooms and vocational schools for adults in Moscow and St. Petersburg in 1870. This initiated the history of open and correspondence education. The Imperial Russian Society backed this project, and it also contributed to the establishment of special adult education institutions known as workers' programs. The public university of Moscow City that was established in 1908 in order to educate peasants, became the country's first institution that offered

correspondence education. Those belonging to poor socioeconomic groups were seeking higher education, and these schools allowed them to learn while working (Moiseeva & Visser, 2005).

Adult education in the Russian Federation became widespread in the 1940s and 1960s with the establishment of "Literacy Committees," as well as the creation of Sunday schools and the Encyclopaedia (1967-78). Until the end of 1911, around 27,500 Zemstvo schools had been founded across Russia. After the 1950s, private publishing houses and schools began to set up remote classes with printed worksheets and books. The initiatives of Germany in developing correspondence schools based on printed materials also influenced Russia. In the meantime, the government was struggling to establish evening schools. The country had been going through rapid integration of correspondence and evening schooling into public education (Zukerman, 1990).

Soon after the revolution in the early 1900s, members of the Communist party declared a manifesto to fund the educational system to encourage self-education of so-called proletariat low-level citizens such as peasants or those working with wages. They aimed to improve the educational standards of these people. A committee that was responsible for the successful implementation of building correspondence education and promoting self-education was founded by the government members. These initial efforts paved the way for the existence of different educational institutions such as labour faculty that aimed to prepare the proletariat for higher education. Some workers, however, were deprived of sufficient skills and intellectual background in completing these institutions. For this reason, preparatory faculties called Rabfaks were established in the institutions in order to offer express evening and correspondence lectures. It was seen that 40% of the attendees were able to complete their courses between 1925-26. Later in the 30s, the nationwide expanded public education caused Rabfaks to decrease. In the 20s, many broadcast universities that offer courses by means of radio were founded and consisted of lectures lasting between 20-30 hours. Following the auditory lecturing, students attended written face-to-face exams. The early remote education attempts in higher education were not as effective as universities that provide in-class instruction. These universities, thus, were not legally recognized as part of the general education system. There was also a rising trend in print-based distance education during the 1920s such that correspondence education was regarded as part of general education. A Central Institute for Correspondence Education, for example, was founded in 1927 to train individuals for enrolling in Communist institutions. This trend was supported by the

members of the Union of Soviet Socialist Republics (USSR). Their projects for economic growth call for a huge number of skilled workers and quality field experts. The education system was unable to address these needs, which led to a growth in correspondence education. That is why correspondence education gained popularity and led to the emergence of more institutions in the 30s. The formerly established distance education courses provided self-study in which there was no room for interaction with other participants, including institutions, instructors, and students. More recent courses, by contrast, paid more attention to quality distance education. In this respect, Nickolas de Wit, who was working at Harvard University as a Russian researcher said, "The three basic types of instruction programs offered by Soviet higher educational establishments are: regular day, or full-time study; part-time evening; and part-time extension-correspondence programs." (1961, p.229). Overall, these initiatives in providing opportunities for higher and public education are considered as a preliminary stage of distance education (Kourotchkina & Richter, 2012).

It is also worthwhile to mention that Russia used a system called "Externat" which means that students did not have to participate in courses: rather, they only attended exams. For a short time in 1951, this system was abolished; however, the revised version has emerged and still been in use today. The number of part-time participants enrolling in distance education rose by 4.5 times from 1940 to 1959. Students studying on-campus, on the other hand, doubled. There were approximately 2.5 million undergraduate students recorded in the academic year of 1960. 51.7% of the total number was studying in evening or correspondence programs.

Otto Peters, who is regarded as one of the founders of Fern Universität in Germany, published an article in 1967, entitled "Distance Education at Higher Education Institutions in the Soviet Union." He emphasized, "the high percentage of distance education students allows for the conclusion that higher education in the Soviet Union underwent structural changes, which are unprecedented in the history of higher education" (Peters, 1967, p.9). The exponential growth in distance education brought about concerns with regard to quality. In 1966, the Minister of Education underlined a set of problems in distance education. The necessary solutions in improving quality, however, did not satisfy the stakeholders. In this regard, The OECD (1999) published a report entitled "Tertiary Education and Research in the Russian Federation" which emphasized that the materials seemed to be inappropriate for self-study. It is further described, "There is little evidence of any

kind of instructional design, and in some cases, the material provided is barely readable because of poor quality reproduction. Much of the material does not enable independent study by the student" (p. 76).

As for the 1990s, Russian educational policy has undergone significant changes, including reforming the structure, increasing the autonomy of the school, redesigning the curriculum, and investing in educational technologies. This transformation was aided by the rapid expansion of communication technologies which expedited the integration of computers and internet into a classroom environment. Many platforms (e.g., RUNNet, MSUNet) and stakeholders (e.g., State and Federal Universities) contributed to the development of web-based distant education. Additionally, a huge amount of grants was provided to increase the use of information technologies. The non-profit organization for international education, for example, was founded in 1993 as part of a study on supporting innovation by means of adopting remote learning. This organization helped universities to establish distance learning centres. The majority of the projects were carried out in partnership with overseas institutions and mostly from the USA and UK. The British Open University, for example, partnered with the Institute of Management to build a network in developing online courses. Another example is that the Moscow Institute of Electronics founded a distance learning hub in 1993 with the cooperation of New York State University. Such partnerships between Russian and foreign institutions allowed to understand the existing capabilities and approaches of future educational technology integration. It also made a significant contribution to the interchange of educational experiences from other systems, and the technology foundation for distance learning.

Initial attempts to apply educational technology at the institutions occurred during the 90s. For this purpose, many projects were initiated in Russia such as electronic mailing at schools (Uvarov & Purssakova, 1992), IBM project in Russian education, and PilotNet project for telecommunication. These projects enhanced the cooperation and collaboration in education as well as overall quality. They further caused an increase in the research on distance education at Russian schools (Polat & Moiseeva, 1998). The primary leap in the development of quality distance learning, however, took place in 1993 with the statement by the Higher Education Council that web-based learning must be incorporated into the whole education system to deliver instruction online. Following this decision, university administrations shared a vision and mission plan for the integration based on empirical data and internationally widely accepted models.

In 1997, the Ministry of Education came up with an action plan with the help of scholars (Philippov & Tikhmiroc, 2000). The plan involved experimenting with three different concepts of distance education as follows: correspondence education, web-based education, and television broadcast education. It was aimed to build more than 500 learning centres and provide training to about 200.000 learners and 10.000 instructors. Educational software and multimedia learning environment were also planned to be created in line with the curriculum. As a result of this action plan, it was seen that 90 educational institutions integrated distance education into the mainstream while half of them found strong evidence during the tests. Moscow State University of Economy, for example, was regarded as one of the best models for the use of distance education.

The "Teleschool" project, which began in 2000, was tested with the use of television broadcast in distant learning for the high school level. The project focused on two types of education: independent learning that allows learners to obtain a legal credential of completion of secondary education, and optional education, which allows students who are educational television broadcast subscribers to access educational material through the use of electronic TV networks (homeschooling).

Figure 6. *Journal of Open Education (журнал открытого образования) (2009)*

For the time being, various trends may be used to define the present state of Russian distance education and provide a glimpse into the future. There are modifications in the remote education system's organizational structure. In order to eliminate the negative effects of the dramatic increase in the demography, institutions formed partnerships to reach more students and invested in distance education. Such collaborations (i.e., Open University of West Siberia) assist in reaching out to non-traditional learning environments. Most universities (i.e., Moscow State Open University, Open Orthodox University, Open and Distance Education Institutions of

South Ural State University) attempted to transform higher education with open education. They founded open and distance education institutions to actively organize the learning and teaching process. The members of these institutions developed in-service programs to train employees on how to utilize distance-learning technologies in the classroom. They provided technical assistance to individuals while they were learning online. Instructors were supplied with methodological and technological assistance in the construction of electronic instructional materials. In addition, there has been research conducted to improve distance education. The European Association of Distant Teaching Universities, for example, has accepted the Moscow State University for Economics, Statistics, and Informatics as a member, with around 100.000 students enrolled in distance education. MESI also employs one of the pioneering journals that have been publishing research studies on distance education since 2002 (see Figure 6). MESI has a world-class instructional technology infrastructure (teaching and campus administration platforms) that could be accessed from anywhere, including smartphones. MESI has built an online library with a variety of reading and learning materials. The wide spectrum of modern media (i.e., e-portfolio, virtual learning, web-based instruction) is used to encourage the educational process, ranging from print-based asynchronous communication to student support by means of social networks (i.e., wikis or blogs). MESI provides more than 700 online courses that are offered entirely online or in a hybrid format (Zawacki-Richter et al., 2015). Additionally, MESI implemented an incentive framework to support instructors to employ a range of internet-based communication technologies, requiring tutors to participate in online instruction. Educators who use recent instructional approaches on a regular basis might expect a wage raise of up to 30%.

5. Conclusion

The current paper investigated distance and open learning conditions in Russia as well as providing brief introduction into the education system. Despite linguistic barriers in finding the required information and literature, the article illustrates a portrayal of the nation's consideration regarding distance education. It could be inferred that distance education has always contributed immensely to the Russian educational system. A divergent image emerges due to varied types of remote learning system. This has been explained as either conventional correspondence education or contemporary distance learning integrating web-based multimedia. Although print-based distance education was deprived of well-established structure, design, and appropriate content, recent developments emerging when serious

thought was given to the quality and quantity of the resources lived up to high standards through partnerships with internationally leading universities in open and distance education. The government also supported initiatives and provided funds to reach the objectives in addressing 21st Century Education as part of new strategic plans (i.e., Development of Education 2018-2025).

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