Lifelong Learning in Russia: History, Concepts & Practices

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Abstract
The present paper provides a brief historical review of lifelong learning development in the Russian Federation, identifying key developments and texts from the nineteenth century onwards. Further, the main approaches to understanding and implementing of lifelong learning are reviewed, along with the basic models of lifelong education provision in Russian universities in the context of a globalized economy and the Bologna process. The development of research in Higher Education, as well as of networks of education institutions and industrial enterprises are highlighted as an important component of the lifelong learning system evolution in Russia. The paper also briefly reviews a case study of a research and education network, depicting that the main parameters of the networking activities that promote lifelong learning pertain to the exchange of information, collaborative expertise, and provision of open educational programs.

Key words: lifelong learning, continuous education, non-formal education, formal education, vocational education, history, Higher Education, networks, Russia

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INTRODUCTION
The historical analysis of relevant literature concerning the Union of Soviet Socialist Republics (USSR) indicates that practically until the 1970s the field of lifelong learning was not a subject of thorough theoretical and methodological research. Nevertheless the ideas of human-centered education and training, of creating the "true human being", as propagandized by V.G. Belinskiy, K. Ushinskiy and N. Pirogov in the XIXth century, largely influenced the Russian education system, which has gradually evolved to be more focused on the challenges of lifelong learning, emphasizing that life demands constant development of human abilities only to be achieved when learning becomes an intrinsic need.

In effect, we can trace three basic tenets in relevant literature concerning the emergence of lifelong learning. Firstly, a number of Russian authors, namely A. Darinsky and G.A. Jagodin, have pointed out that the concept of lifelong learning can be originally traced in the works of ancient Chinese and Indian scholars, while later on it was reflected in the ideas of J. Comenius, F. Voltaire, and J.J. Rousseau. It should be also noted that in the works of A. Darinsky and G. Yagodin there is reference to the necessity of "studying every five years if individuals do not want to lag behind" (Darinsky, 1972; Yagodin, 1986). Proponents of the second tenet assume that the emergence of the concept of lifelong learning is closely interconnected with the realities of the modern era, characterized by active development processes in all

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spheres of socioeconomic life (Osipov, 1989). Finally, representatives of the third tenet consider that although the concept of lifelong learning exists for quite a long time, the practices around it have rather recently gained attention. Among the Russian scientists who adhere to this view are A. Vladislavlev (1978), G. Zinchenko (1991) and V.G. Onushkin (1989).

In the following sections we will therefore conduct a brief historical review of lifelong learning development in Russia.

BRIEF HISTORY OF LIFELONG LEARNING

The first Russian educationalist to develop a theory of adult education, as an integral part of lifelong learning, was P.V. Vakhterov (1896-1924). He presumed that only under an integrated lifelong learning provision by Sunday schools, knowledge update courses and public libraries there could be ensured a wide range of educational activities for all individuals. His ideas were explicitly expressed in the brochure "Sunday rural schools and reception courses" (Vakhterov, 1896a), as well as in the book "Out-of-school education" (Vakhterov, 1896b).

The movement for adult education back in those years was self-regulated. By the beginning of the XXth century around 80 Sunday schools and more than 500 evening courses for workers had been established, thanks to active public support. Sunday schools became an alternative to state schools, where education was provided in accordance with wider public needs. Furthermore, Sunday schools substantially contributed to the development of a humanistic approach to lifelong learning and to the promotion of "teacher-student" relations. However, in 1862 they were closed down by a governmental decree, due to "pestilential doctrines, outrageous ideas, slanted interpretation of proprietary right and atheism, which were transmitted under the guise of literacy" (Vershlovsk, 2007).

V.I. Charnorusky (1865-1941), a renowned Russian educator of the time, extensively investigated the interrelations between the government, local authorities, civil society organizations and private sector initiatives in adult education. He presumed that the government should further promote education by legislative means, as well as by providing greater flexibility to private sector initiatives. This, he posited, could largely contribute to the democratization of public life, fostering a "solid foundation for complete free and wide development" of public education (Charnorusky, 1909).

Hence, what should be particularly noted is the significant role played by private entrepreneurs in promoting lifelong learning in Russia. It was indeed their charitable contribution that enabled the implementation of Sunday and evening male and female classes, free libraries and reading rooms back in the XIXth century, while in 1908 the first public university was established in Moscow sponsored by the Exchequer. The institutionalization and the widening of adult education (libraries, clubs, associations) provided individuals with an opportunity to take the first steps towards personalized lifelong learning schemata, mainly for personal development and self-consciousness enhancement, transforming their perceptions both of themselves and of the world around them. Actually, adult education did not coincide with vocational training at that time.

The beginning of the Soviet period was marked with a wide-scaled provision of adult education initiatives. Mass literacy was achieved by means of out-of-school education, such as public universities, workers’ faculties, recreation centers etc. Yet, the attitude towards the role and functions of adult education were not homogeneous. Shortly thereafter the concept of adult education, which before the revolution used to encompass the humanistic ideals of the Enlightenment, was displaced by the Bolsheviks’ viewpoint. Consequently, the term "out-of-school education" was altered to contain political awareness-building. The state and leading party control of out-of-school education led to the debilitation of social agents and the loss of educational independency. The harsh ideologization of education led to the degradation of its humanistic dimensions, transforming it into a tool for tackling social and economic challenges.
Nevertheless, the interest in adult education concerning literacy programs was not diminished. On the contrary, in 1931, Thorndike’s et al. (1928) work was translated into Russian, while the first Russian didactic manuals summarizing existing experience in adult education made their appearance (Golant et al., 1930). Adult education as social, political and cultural knowledge obtained therefore pedagogical status under a complex interdisciplinary approach grounded on the premise that an adult should be taught “adultly”. Also, in 1947, the association "Znanie" was established upon an initiative of scholars, continuing the tradition of pre-revolutionary education of intelligentsia. Notwithstanding that the activity of the association was strongly ideological, it also addressed professional and leisure needs of citizens.

However, it was during the scientific and technical revolution of the sixties and seventies that a massive investment in knowledge took place in the Soviet Russia. The new social and economic situation highly influenced adult education, as well. From 1960 to 1970 the number of workers involved in different kinds of secondary vocational education increased from 9.8 to 18.7 million. Moreover, a network of advanced training institutes affiliated to universities and enterprises was developed, while public universities also gained popularity in the mid-seventies – with more than 10 million people enrolled (Vershlovski, 2007).

At the same time, a wide public discussion on lifelong learning was initiated. Experts and scientists from different fields, such as heads of enterprises, sociologists, philosophers, psychologists and teachers took part in the debates on the prominent role of lifelong learning in the social and economic development of the Soviet Union. They emphasized that education not only prepares individuals to adjust to the changing conditions of labor, but it also shapes social culture and personal attitudes. Hence, the concept of lifelong learning was forwarded to accommodate the necessity of mass advanced and/or compensatory-adaptive education and training. To this end, several structural adjustments in the adult education system emerged; the provision of educational programs in traditional educational institutions was replaced by the implementation of specialized institutes in order to provide professional retraining with due regard to social changes and psychological individualities. It is thus evident that these new realities left little room for a comprehensive humanistic development of lifelong learning.

Furthermore, the serious social and economic developments in the eighties and nineties generated new challenges for the lifelong learning system. The defined as "new industrial" (D. Bell), "technocratic" (D. Galbreith), "high technology and informatics" (O. Toffler) society, growing rapidly along the material achievements of contemporary civilization, gave rise to a number of social, political and ethical problems which to a certain extent pertain to modern Russia, as well. The loss of control over social processes and the inability to implement long-term strategies because of the penetration of global financial markets to all aspects of human activity, led to reconsidering the aims and functions of lifelong learning. Just like before, the true purpose of lifelong learning was to assist human adaptation to the altering socio-economic conditions. However, the distinct challenges of late modernity made scholars and politicians reinterpret the demands addressed both to individuals and to education. While the scientific and technical revolution urged human resources to pursue their professional functionality and advancement through lifelong education and training courses, the post-industrial society intensified as well the impetus of human adaptation to ethnically and linguistically varied surroundings.

Consequently, the boundaries of adult education overcame the professional sphere, establishing new trends for lifelong learning, which was not restricted any more to the labor force, but addressed the whole population, including senior citizens and retirees. The participation of seniors in lifelong learning has actually provided them with additional possibilities in coping with social isolation and keeping active throughout retirement. These developments have been reflected in the Russian lifelong education system through the establishment of the Public school for senior citizens in St. Petersburg in 1998, as well as through the provision of multiple educational programs on legal matters, healthcare, foreign language learning in different regions of the Russian Federation (Litvinova, 1999).

Yet, alongside the above programs, there has also been a substantial increase in the number of
innovation-oriented enterprises, catering for the training of their employees in line with the needs of contemporary production, taking place in specialized institutes of advanced education and training affiliated to universities. This has led to the emergence of new forms of enterprises known as "learning organizations" which have been mushrooming around the country. Learning organizations promote organizational learning in order to be able to reciprocate with the environment and enable their employees’ continuous personal and professional advancement. The first Russian learning organizations referred to as ‘corporate universities’ appeared in the affiliated enterprises of "British American Tobacco", "Mars, Motorola" and "Coca-Cola". Later on, the implementation of corporate universities became widely-spread and was embraced by almost all large companies, such as “Norilsk Nickel”, "Magnitogorsk Iron & Steel Works", "Rosgosstrakh," "MTS", "Vympelkom", "Wimm-Bill-Dann Foods", "VTB Bank". Nowadays, there exist more than 30 corporate institutes in Russia.

It is thus evident that the global social and cultural changes have led to the emergence of a totally new approach to lifelong learning. Freedom and responsibility are the two key terms on which contemporary education systems are based, whilst the lifelong learning concept has provided the context for the interconnection of formal, informal and non-formal education.

**EVOLUTION OF THE LIFELONG LEARNING CONCEPT**

Research in Russia around the concept of lifelong learning and its contemporary apprehension was intensified in the sixties, based upon the results of previous research both in the country and internationally. The starting point of lifelong learning research was the works of British scholars in the first quarter of the XXth century, drawing on the compensatory character of adult learning and on its contribution to knowledge update. Later on, in the late fifties lifelong learning was perceived to organically combine vocational and general education, whilst including self-education as well (Hartung 1966; Kidd, 1966).

The humanistic dimension in the interpretations of the time were evident in relevant literature, focusing on lifelong learning for the development of the human being, for which optimal conditions throughout a person’s lifetime should be fostered (Correa 1973; Darinskii 1972; Durko 1982; Elliott 1969; Legrand 1970; Shukla 1971; Sukhodolski 1972). Hence, research of this period was mainly phenomenological, drawing on the evolution of the lifelong learning concept, the need to develop a unified concept, and on the impetus to form a new holistic educational system. An integral component in the development of the lifelong learning theory was the holistic concept of «Global Vision», according to which all structural parts of the human civilization are interconnected and interdependent. Yet, it is the human being that lies in the heart of all processes in the world.

P.H. Coombs (1968) was the first scholar internationally to refer to the existence of an educational global crisis, which lay in the gap between the established education systems and the rapidly changing conditions in society. Thus, in the 1970s there were the first attempts to provide a generalized description and definition of lifelong learning. In 1972 the report of the Faure Commission was presented to UNESCO, which incorporated the basic concepts about the structure of adult education, the vertical and horizontal integration of all learning forms, self-education, and the versatile development of personality. It is actually in the UNESCO reports that the term "lifelong learning" was firstly mentioned (Shukla, 1971). Henceforth, the objectives, attributes, ways and conditions of the implementation of lifelong learning became the subject-matter of methodological inquiries. During this period R.H. Dave (Dave, 1973) delivered a list of characteristic attributes of lifelong learning:

- education and learning do not end with a diploma, but are processes that last for a lifetime;
- lifelong learning begins within the family;
- lifelong learning as a system evolves in response to the demands and requests of society;
- lifelong learning aspires to continuity and integration at each stage of human life;
- lifelong learning is characterized by flexibility and diversity of contents, tools, methods and training time;
- lifelong learning serves as an organizing principle of all education.

At the same time, in the USSR, in the context of rebooting the ruined national economies, there emerged a strong mandate for tackling the lack of education among young people who had left school during the Second World War. According to Jozeph Zajda:

“During the 1950s adult education had a very concrete meaning, referring to evening school (vechernye shkoly) and correspondence schools (zaocnye shkoly). The term became more obscure with the emergence of the concept of “continuing education” (nepreryvnoe obrazovanie) in the 1960s and 1970s.”

(Zajda, 2008).

In 1969, an Evening Research Institute, as well as correspondence secondary education were founded within the framework of the Academy of Pedagogical Studies. The main goal of the Institute was to develop a theoretical basis for the education of the working youth. In 1970 the Institute was transformed into a Research Institute for general adult education. The head of the institute, Darinskii A.V., focused on the development of pedagogy alongside professional training via the combination of research and practical activity and not through a "cabinet approach" (Darinskii, 1972). This comprehensive methodological approach prescribed the necessity of analysis of the labor force and working conditions, of their dynamics and perspective. The research agenda provided for the interconnection of pedagogical studies with sociology and psychology, so as to investigate the education of adults in the wider psycho-social context (Vershlovski, 2007). This integrated research agenda delved into the pedagogical and didactic problems encountered in adult learning, as well as in the organizational challenges in out-of-school education (Bushli, 1962; Darinskii, 1970). In this regard, L.N. Lesokhina developed a framework for the update and actualization of moral values in the process of adult education, according to which problematic teaching should be reoriented to address a wide range of issues affecting deep personal aspects. Problem identification was interrelated to subject-specific goals and contents, enabling adult educators to set the problems encountered against specific contexts, as well as to transform their views and approaches through interactive discussion (Lesokhina, 1976).

The above theoretical assumptions and empirical research created the context for perceiving lifelong learning as a multi-factorial field, affected by social, psychological, organizational, pedagogical, methodological, and technical factors (Darinskii, 1975). Researchers in the field acknowledged the necessity to investigate the diversity and heterogeneity of these factors and to determine their influence on lifelong learning, giving rise to a number of new studies on the psychology and sociology of adult education, as well as on acmeology. However, until today there has neither been a comprehensive historical and theoretical analysis of the lifelong learning phenomenon, nor an overall definition of lifelong learning. Some researchers considered continuity as the overarching principle of "lifelong learning", defining it as the organization of educational practice providing systematic knowledge and skills update which does not end with the beginning of a professional career, while A.P. Vladislavlev (1978) and A.V. Darinskii (1972) perceived lifelong learning as the system of educational establishments providing education and training to citizens. It is thus apparent that in the sixties and seventies adult education became the focal point of research in Russia. Yet, definitions are still under scrutiny, with the term "pedagogics for adults" being the most widespread.

In the eighties, the attention in developed countries was concentrated on the process of implementing the concept of lifelong learning in real life, an endeavor which was reflected in relevant literature. The features distinguishing research at this time were pluralism and an attempt to capture the innovations in the field of education, as well as to align with the diverse public needs and problems encountered in all aspects of contemporary life (Busshoff, 1981; Hilton, 1981). During that time, multiple

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2 The science studying laws and mechanisms of development of the person during its maturity
projects were launched in Russia aiming to elaborate on the concept of lifelong learning, which started to be considered as the most important resource of public and personal development. New phenomena, such as the collapse of the Soviet Union, the fall of the Iron Curtain, the Perestroyka, active development of the market, decentralization of management in educational institutes, low levels of literacy and the commercialization of education, actually turned lifelong learning into an essential means in transforming society, economy and individuals.

As highlighted by G. Zinchenko (1991), the critical point in the development of the lifetime learning concept in Russia was 1979, when a symposium on "Psychological-pedagogical challenges of lifelong learning" was held in Moscow. By 1989 the concept of lifelong learning was well-established under the guiding principle that learning throughout life is integral to human growth. Lifelong learning was perceived to be comprehensive in extent, individualized in time, speed and orientation, providing to everyone the chance to follow individual pathways to education and learning (The concept of lifelong education, 1989).

It ought to be noted again that in the Russian scientific context there has not been reached an agreement on the definition of lifelong learning. As mentioned above, some scholars consider continuity as the overarching principle of lifelong learning, while others perceive lifelong learning as a system of educational establishments. F.R. Filippov (1982) investigated lifelong learning as a need for personal development, outlining that lifelong learning does not come down just to increasing general and professional knowledge level, but embraces such issues as the promotion of culture among working class in a most general sense, the enrichment of citizens’ political and cultural horizons, along with the contribution to economic development. B.S. Gershunsky (1987) presumed that lifelong learning should be considered as the aggregation of methods, ways, means and forms of obtaining, enhancing and extending main education, social maturity and professional integrity, developing an aesthetic attitude and enriching human culture, either through self-education or in educational establishments of any form. A.A. Verbitsky (1986), on the other hand, focused on the understanding of the continuity principle, while he emphasized that lifelong learning tends to be limited to the education of employees on a periodic basis. To evade this restriction, he suggested that the term "qualification" should be extended to pertain not only to the obtained diplomas and degrees, but also to the level of integrity and expertise, and to the ability to solve specific professional and social problems. He further advocated the need for self-education which relies on the development of a positive cognitive attitude and motivation to learn (Verbitsky, 2012).

The above efforts for the development of a deeper understanding and an integrated approach to the concept of lifelong learning were mainly based on the comparative analysis of data from a wide range of research and practices in the educational sphere. According to S.G. Vershilovsckiy (2007), contemporary conceptualizations of lifelong learning have been mainly grounded on:
- research on the different kinds and forms of education as means of social protection of different groups of the population: handicapped, unemployed, women, senior citizens, immigrants and refugees;
- results of experimental work on innovative multifunctional adult education centers - AEC;
- studying of socio-economic and cultural problems around lifelong learning;
- sociological, psychological, pedagogical aspects of higher education, as a branch of lifelong learning;
- international literature reviews on lifelong learning;
- analysis of teaching methodologies for adults and particularities of the role of the adult educator;
- special aspects of humanitarian studies for adults.

At the same time, four main types of social change have been determined - local, regional, national, global - which lead to the transformation of contents and structure of educational provision. Furthermore, the study of several socio-economic issues has revealed the complex nature of research on adult learning and urged the development of lifelong learning schemata adjusted to the Russian reality.
This socio-economic analysis has actually enabled researchers to reconsider and overview the role of lifelong learning. From a process of updating knowledge, it has been transformed into a process of "lifelong qualification" building, whilst researchers have realized that lifelong learning research cannot be conducted strictly within the framework of pedagogics; it requires an interdisciplinary approach with involvement of scientists from different disciplines, such as sociology, economics, philosophy and psychology. This has enabled a wider conceptualization of lifelong learning, while it has surfaced the contradictions encompassed in the concept.

For instance, one of the main aims of lifelong learning has been the development of functional literacy3 by all individuals. However, research has indicated that in reality not all people are able to develop their functional literacy. According to Lesokhina L.N. (1976), the lower one’s educational level is, the less he or she may be actively be engaged in lifelong learning, as a "self-defense" reaction, whereby adhering to the traditional culture, stability and integrity of moral and ideological stereotypes. Also, there has been an explicit demand for student-centered approaches to develop both professional expertise (ability to solve professional problems on the basis of obtained knowledge) and communicative expertise (cooperation beyond the professional sphere). This calls for methodologies that do not rely on sheer transmission of knowledge and skills but on the creation of such situations that may promote self-education and self-analysis, so that learning can bring about changes in personal experience, transformation of motives and goals, and critical perception of one’s expertise, demanding continuous efforts for personal development (Dobrinskaya, 2000).

Consequently, by the end of the XXth century, research in Russia had introduced new andragogical approaches to education, fitted to the characteristics of adults as subjects of the educational process. Nevertheless, it is rather premature to claim that the field of lifelong learning has been exhaustively investigated both methodologically and theoretically, while its objectives need to be more profoundly specified. One of the considerable disadvantages of the concept, often resulting in limited effectiveness of the educational interventions, is the fact that the educational characteristics and patterns revolving around lifelong learning have been vaguely specified; i.e. contribution to humanism and democracy, learning for personal development, flexibility and transparency in educational provision, integration of educational structures and stages, etc.; yet, the methods, conditions and attributes of their implementation have not been clearly determined.

CURRENT STATE OF LIFELONG LEARNING

The major developments in lifelong learning in the early 21st century were largely defined by Russia’s accession to the Bologna process in 2003, as well as by the trends in the socio-economic progress of the country. Russia’s participation in the Bologna process has been a catalyst for the modernization and reform of the Russian education system and also for the enhancement of its export potential. In general, the interaction with European universities in the framework of creating a common scientific-educational space has greatly contributed to maximizing the potential of innovation development in the country (Grudzinski, 2009).

On these grounds, the recent outcome of the implementation of the state policy to reform the system of education in the country has been the enforcement of the Federal law "On education in Russian Federation" (N 273-FZ, adopted by the State Duma, December 21, 2012), integrating both general provision and the provision governing the individual subsystems of education (preschool, general, secondary, vocational, higher). The first of the priorities put forward is the integration of the Russian education system in the global educational market; the second one is its variability on the basis of the adopted Federal educational standards; the third priority calls for the modernization of the education

3 The ability to solve arising problems in different spheres on the basis of practicable knowledge
system, taking into account the accumulated innovations in the educational sphere. In the explanatory note to the bill it is emphasized that this document is aimed at the creation of those legal conditions which will enable the renewal and development of the Russian education system in accordance with the modern needs of people, society and the state, the needs of an innovative economy development, and the international obligations of the Russian Federation, while at the same time it aims at ensuring stability and continuity in the development of the education system and its legislative framework (Demidov, 2012).

M. V. Zhukova (2015), in her review of the regulatory framework for reforming the Russian education system, has noted that the documents of normative and programmatic nature are of great importance in determining the ideology and priorities of state policy. Yet, the effectiveness and success of the implementation of the state policy in education is largely determined by the understanding of its positive orientation, as well as by the support and active participation of wide layers of society: professional communities and citizens as the main consumers of educational services, heads of educational institutions, and regional education authorities. However, the implementation of the state policy for reforming the system of education in Russia presents significant flaws and contradictions. Firstly, the uncertainty of the legal status of legal documents is quite problematic itself, as these documents are rather declarative; there are no specific deadlines for their realization and responsibilities for the implementation of fixed measures for individual bodies and local governments. Actually, the correlation of the content of the National doctrine, Concepts, State programs, Federal target programs, projects and national initiatives implemented, as well as the priority of their execution, are completely unclear. Furthermore, there is a serious issue in cases when the implementation period of the programmatic document has not been completed and the assessment of its results has not been conducted, and yet this document is replaced by another setting new goals and objectives. The actual problem is the insufficient legal and methodological development of strategic educational planning at all levels of the hierarchy. The dominant issue pertains to the assessment of the effectiveness of the state programs implemented, requiring the elimination of flaws in the existing formal assessment institutions, as well as the improvement of the mechanisms of evaluation (Zhukova, 2015).

Despite however the existing problems, the attempt to modernize education has led to significant changes in the structure and nature of the education system. It has become more open, accessible, massive and student oriented. During the first years of the 21st century the number of universities has significantly increased. In 2012 there were 1046 universities, out of which 58% were public and 42% were private. Since 2009-2010, the trend of increasing the number of universities (with the parallel decline in the number of preschool and general education establishments) was subverted. In 2013-2014 the number of higher educational establishments was reduced to 969. The main types of higher education institutions in Russia include universities, academies and institutes; it should be noted that in 2012, 69.8% of the student population were enrolled in universities.

The analysis of the educational provision of higher education institutions in the Russian Federation shows that lifelong learning initiatives are implemented via various types of activities (educational, scientific) and different organizational forms: work-based learning, professional development, scientific societies, graduate and postgraduate courses, doctorate degrees, etc. (Dorozhkin et al., 2014; Kondratyeva, 1989; Solodova, 2014; Testov, 2012; Zagvazinsky, 2012, 2013). In addition to the traditional forms of training – intramural and extramural – there have also appeared some new approaches: part-time (3-4 days a week in the evening) and distance education patterns for the students receiving second higher education (3.5 years).

It is noteworthy that the number of full-time students in higher education has been reduced over the last decade from 3104 thousand in 2002-2003 to 2721 thousand in 2012-2013. Also the number of students studying in part-time schemata has decreased from 346 thousand to 230 thousand. However, the number of students, receiving distance higher education, has increased by 27%. – from 2400 thousand to 3052 thousand. The growth of distance part-time higher education has actually extended the
enrollment of students, allowing them to get a higher education degree remotely, continuing thus to work and without being compelled to move. However, it is assumed that the distance education programs provided are largely characterized by lower quality (Nikolaev, 2014).

According to the Ministry of education and science of the Russian Federation, nowadays every second school graduate is guaranteed a chance to go to a university; during recent years, against the background of demographic decline, these chances have become even greater. For instance, today 75% of high school graduates are enrolled in universities in contrast to the 25% in the mid to late 20th century. The particularly high competition in certain institutions is mainly associated with their high reputation rather than with a shortage of places. In total, in 2012, the proportion of the population who had completed secondary, post-secondary, vocational, higher and postgraduate education, is considered to have been one of the highest in the world, equaling 5% and outreaching all OECD countries. However, the amount of expenses on the maintenance of educational institutions has remained relatively low, which has brought a significant negative impact on the quality of the education provided.

The system of lifelong learning in contemporary Russia thus consists of various structures of retraining and skill improvement, in the framework of which the trainee may pursue both his/her professional and personal development (Dorozhkin et al., 2014; Kondratyeva, 1989; Solodova, 2014; Testov, 2012; Zagvjazinsky, 2012, 2013). The challenges comprised in the provision of lifelong learning opportunities for all citizens are as follows:
- training, retraining and reorientation of employees with consideration of the altering, fluctuating and increasing demands of the labor market for knowledge, skills, abilities and professional expertise;
- democratization of society;
- optimizing of working conditions;
- equal opportunities for empowerment.

It can be therefore assumed that in recent years there has been a positive trend in the involvement of adults in learning, while the system of continuing education has experienced significant changes. The active integration of formal, non-formal and informal components of the educational provision has greatly contributed to this process. An increasingly important role in the processes of lifelong learning is played by both non-formal (courses, training, short programs that can be offered at any stage of education and/or professional career) and informal (spontaneous learning occurring at any place) education, which is realized in the context of self-education in a rich cultural and educational environment (Zmeev, 1999). Albeit formal education is completed by the issuance of a recognized certificate or diploma, non-formal education, whether taking place in educational establishments or public organizations, clubs and hobby groups, or during individual lessons with a tutor or coach, is usually not accompanied by the delivery of certification. As V.V. Maslova (2014) outlines, non-formal education is not accompanied by a certificate entitling the graduate to be engaged in some professional activity. Usually, such education is connected with amateur classes, with the desire to broaden ones’ understandings, knowledge and skills either for professional or personal reasons. As far as informal education is concerned, Russian researchers tend to consider it as a socially-oriented, dynamic, open, mobile element of the system of professional and/or personal development that may be largely responsive to the needs of adults. It may actually act as an independent and/or additional form to formal education, catering for compensatory educational provision (Roiblatt, 2013).

Below there are provided some examples of implementation of non-formal and informal educational projects in various educational fields in Russia.

Non-formal & informal learning projects
As example of non-formal education can be considered a set of programs addressed to teachers with the
aim to contribute to the improvement of their professional skills. They are delivered in vocational development institutions or in the form of annual competitions: teacher of the year, best school of Russia, best in-service trainer, educational festivals, teachers' pedagogical reading, innovative pedagogical marathons, educational retraining, a modern school leader, corporate training, etc. (Kopnov, 2015). It is noteworthy that these initiatives are completed with the issuance of relevant certificates, in connection with the implementation of a new policy concerning teachers' portfolios (Makarenya et al., 2011). In this respect, there is an example of an in-formal learning program that should be also outlined. It concerns an innovative Russian system of certification, based on software products "1C: Enterprise" (2013), motivating trainees to learn as this may increase their attractiveness in the labor market due to the issuance of a certificate that validates their learning.

The first University for non-formal education in Russia has been implemented under the project "Biryusa 2015". The University aims to help young people develop relevant competencies for leading successful lives at present and in the future. Under conditions that simulate production, students are taught leadership skills by being in the role of leaders of medium businesses and using the principles of the world championship on business management, “Global Management Challenge” (2015). Furthermore, Togliatti State University (TSU) became the winner of the first competition in the world of massive open online courses (MOOCs), receiving the EdCrunch Award 2015. The University won the competition in "additional informal education", presenting a course intended for teaching staff at all levels of education who wish to improve their general user ICT competence and media literacy (Miheeva, 2015). The idea and the final course program were determined by the UNESCO recommendation on the "Structure of ICT competence of teachers". During studying the students may improve their computer skills, learn to work with software tools, online resources and tools for creating educational and didactic materials, acquire the ability to apply digital photography, video shooting and audio recordings in educational activities, etc. The program has been running since July 2014. About 2,000 trainees have participated during this time, while 114 of them passed the final examination (Tomsk State University).

In March 2015, the program «in-service trainer» in WorldSkills Russia was implemented in the Ural Federal District with the aim to introduce new and effective teaching tools and technologies that may enhance the training level of in-service trainers, actively engaging trainees in professional work. The project also involved the comprehensive assessment of the scope of secondary vocational education and training (VET) and comparative analysis of professional skills contests in the Russian regions with the aim to identify existing organizational and competitive challenges (Kopnov, 2015).

At the same period, "the week of informal education" was held in Irkutsk, and over two thousand people took part in its various events: lectures, workshops, educational hours, educational seminars, promotions, creative workshops, and concert programs – in total more than 250 events were held on different venues of the city. Work at the sites revealed the immense potential of learning for people of all ages and social status. Participants learned how to gain new skills and knowledge, to improve their cultural level and to spend their leisure creatively. For instance, they attended master classes in craft and needlework, in dog training and in animal care, in yoga and healthy lifestyle, in international communication, in environmental games, in Alpine skiing, in intellectual games. "The Week of informal education" was firstly held in 2013 as part of the educational non-profit project "Irkutsk is a learning city". The project ever since has aimed at promoting educational activities for the residents of the regional center, at the identification of new educational resources, at the involvement of citizens in new forms of education and at improving the quality of life for inhabitants. Two years of project implementation counts about 1.5 thousand of workshops, lectures, training sessions, which were attended by over 18 thousand people (IrkutskMedia.ru).

The so-called open universities can also serve as examples of non-formal education in Russia. In 2012, there were 14 open universities in Moscow, St. Petersburg and other cities. The prototype of the modern Russian open university is the Moscow City People's University named after A.L. Shanyavsky,
It was accessible to everyone, as to enter it one did not need any certificates or documents, except his/her identity card. The mere purpose of the University was to enable "men and women, Russians and non-Russians – anyone who wants to learn" to obtain knowledge (Five Corners). Yet, not all of the 14 open universities today are accessible to all citizens. The closest in essence to the first open university are the Perm Open University and Petrozavodsk Open University, delivering lectures on different topics for different audiences. The example of these universities was also followed by the Moscow State University (MSU), Pirogov Russian National Research Medical University (RNRMU), Russian State Vocational Pedagogical University (RSVPU) and many others which implement a cultural and educational project named "University Saturdays" for city residents. Finally, an innovative type of open university appeared in 2013 in Izhevsk, whereby citizens established the Association for City Development (ARGO), which is a platform for civil interaction between key urban communities in order to promote the city’s attractiveness and improve the quality of life of citizens. One of the main directions of the ARGO activity is the implementation of educational programs aimed at the development of social capital. In addition to the public lectures, the organizers involve residents, Russian and international experts in the implementation of joint socially significant projects that may enhance social interaction.

In light of the cases presented above, it can be thus claimed that non-formal and informal education in Russia is becoming more and more widespread and popular within the context of the lifelong learning development.

MODERN UNDERSTANDINGS OF LIFELONG LEARNING

It is widely accepted that the level of professional expertise on one hand and the level of individual development on the other, determine the degree of economical and social development in a country. Hence, education needs to follow the rapid change in contemporary technologies, while it should also cater for compensatory-adaptive patterns of learning within the framework of lifelong learning (Tatarkin, 2012). In accordance with the UNESCO International Institute for Education, the main principles of lifelong learning nowadays pertain to humanistic and democratic education, integrity of formal and informal educational institutions both of traditional and contemporary types, flexibility of curriculums, alternative approaches to the organization of the educational process, special focus on the education of women, youth and incapacitated people, independency and self-orientation of education, connection of learning to the personal, professional and social interests of individuals.

Under conditions of dynamic socioeconomic transformations in Russia, the development of a flexible lifelong learning system is thus an utmost priority for ensuring innovative development and enhancing the competitiveness of the state. In contemporary settings, lifelong learning actually needs to address three forms of continuity: continuity in personal development, continuity in educational processes and continuity in educational institutes (Kondratyeva, 1989). Furthermore, the principles underpinning the organization of the educational process call for uniformity of educational programs, multilevelness and openness of educational provision, transition to a learning outcomes model, diversity of teaching methods, mastering of new pedagogical technologies supported by information and telecommunication resources, active participation of trainees, and personalization of education.

Within this context we may distinguish four basic models of lifelong learning provision in educational establishments in Russia (Dorozhkin et al. 2014):
- a career boosting model, comprising supplementary professional programs and vocational guidance;
- a professional development model, providing a wide range of professional programs for working adults;
- a remedial education model, providing opportunities to adults to complete all levels of education up to higher education;
an interdisciplinary model based on networking and interaction among educational establishments and industrial enterprises.

In the following section there is provided a case study of a research and education network of educational institutions and industrial enterprises aimed to promote lifelong learning development in Russia.

EXPERIENCE OF A RESEARCH AND EDUCATION NETWORK

In the context of implementation of the Federal Statute № 273 “On education in the RF” providing the normative framework for the regulation of the education sector, the establishment of research and education networks has gradually become one of the important mechanisms of lifelong learning development in Russia. The design of such networks is aimed at enhancing the ability of educational institutions of different types to solve any problems emerging by providing education to a wide range of trainees. These “lifelong learning systems” can be defined as a complex of educational institutions and industrial enterprises interested in human potential enhancement, capable of satisfying the lifelong educational needs and demands of the population. At the same time, as open systems, they can interact actively with the socioeconomic environment in which they operate.

On these grounds, a research and education network of educational institutions and industrial enterprises was developed at the facilities of the Institute of Education Management (Davydova, 2013; Fedorov et al., 2014). The main tasks performed under this research and education network are the following:

- control of information flows;
- continuous professional development of educators through online learning;
- practical assistance to participants in support of innovation processes;
- promotion of the use of innovative pedagogical technologies;
- increase of employees’ motivation to participate in lifelong learning.

Developing such research and education networks may have multiple advantages in several spheres, namely economic (reduced training expenses); pedagogical (education becomes more appealing, technologically advanced and individualized); ergonomic (educators and moderators may distribute the classroom time on a convenient schedule, a flexible schedule allows to improve skills without interrupting work); informational (increases the availability of modern software tools and new educational technologies); communicational (increases the number of interested participants and promotes active interaction). Indeed, the network brings together professional groups, teachers, organizations and enterprises, releasing, thus, new resources for the development of interaction among participants. The main elements of the network interaction pertain to information exchange, networking expertise and provision of open educational programs.

Research and education networks operate as virtual organizations, providing optimal conditions for the development of lifelong learning. Any virtual organization has a dual nature of capital: physical and intellectual. However, its specificity is determined by the intangible assets available (knowledge and information technology), which allow the transfer of activities in the virtual (electronic, informational) space. In effect, in the post-industrial economy the free exchange of results of scientific research is regarded as the main factor of increasing innovation, enhancing competitiveness and shortening the time of development of innovative projects (Fedorov et al. 2014).

Fig. 1 depicts the scheme of interaction of participants of a virtual research and education network. The moderator, in this case RSVPU, is responsible for the maintenance and implementation of cooperation. The tasks of the moderator are related to the study of the resources and competences of members in the network, identifying strengths and weaknesses, planning and developing new services and promoting features that increasingly bring closer the educational community and the members of the
Fig. 1. Scheme of interaction of participants of the research and education network portal

Network administrators of the organizations participating in the network community actually act as accelerators in the organizational process. They help to form a strategic partnership, to organize the tasks within the educational system and to identify new opportunities of activity. Furthermore, their duty is to promote the networking concept and cooperation, to organize activities for various groups in different fields and to establish links with the industry. In 2011 the project described in this paper was awarded the Grand Prix of the all-Russian professional competition "Innovation in Education" (Moscow).

Ultimately, the above example demonstrates the formation of a new paradigm of higher education institutions in relation to man and society, as well as a change in the nature of interaction between academia and society on the basis of ensuring continuity of education, of promoting the professional and personal development of personnel, and of creating a rich learning environment enabling people to learn throughout life. It could be thus assumed that the guiding principles for enabling higher education institutions to:

<table>
<thead>
<tr>
<th>Awareness interaction</th>
<th>The exchange of results of scientific research</th>
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<tr>
<td>Control and corrective actions</td>
<td>Data reading and entry</td>
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education institutions to substantially promote lifelong learning are as follows.

1) Providing for holistic approaches in a wide range of educational initiatives seeking to develop the whole personality: compensatory education (programs aiming to update outdated knowledge, abilities and skills), adaptive education (development of effective training programs taking into account the realities of scientific and technical progress and the requirements of the labor market), developmental education (taking into consideration individual characteristics and aiming at developing creativity, initiative, etc.) (see Kuznetsova, 2004).

2) Offering educational opportunities suited to the individual, taking into account his or her potential, psychological characteristics, interests and demands (see Dremina et al, 2015).

3) Organizing creative professional activities addressed to adult educators and faculty members of educational institutions.

4) Promoting interconnection, interaction and networking in the implementation of lifelong learning.

5) Conducting systematic assessment of lifelong learning outcomes.

CONCLUSIONS

It is evident from the above analysis that lifelong learning remains a priority issue among the contemporary scientific and technological developments and the political, socio-economic and cultural changes taking place both globally and in Russia. In effect, the concept and practices revolving around lifelong learning have been the subject of profound reflection and extensive research by philosophers, sociologists, educators, economists and other scientists. Alongside the process of global integration, the Russian lifelong learning system serves a dual role: actively adopt innovative experiences from different countries, while also contribute to the development of a world educational order by contributing its experimental and theoretical groundwork. Currently three main approaches to lifelong learning can be distinguished in the Russian education system:

- a traditional approach, in the context of which lifelong learning is regarded as a means to make up for knowledge and skills updates in response to technological advancement, as well as in order to combat functional illiteracy;
- a lifelong and lifewide learning approach, proponents of which consider learning as integral to the human nature;
- a comprehensive development approach, under which the full development of the individual is pursued, addressing his or her biological, social, cultural and spiritual needs and potential.

In this context, the modern trends in the delivery of lifelong learning interventions in Russia include the transition from lectures to individualized learning; from academic content to learning in the workplace; from conventional learning to problem-based education and team-based learning; from full-time study to distance education.

In general, we can posit that the education systems in almost all developed countries around the world by the beginning of the 21st century have undergone intense reforms to incorporate lifelong learning schemata. However, due to different worldviews, ideological approaches, historical experiences, and pedagogical traditions, reforms in each country largely differ in character, depth, and pace of transformations. Hence, the effectiveness of the development of an integrated lifelong learning system in Russia largely depends on the degree of openness in its interaction and sharing of experience with other national systems.

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