LOOK ACADEMIC PUBLISHERS
OPEN ACCESS

INTERNATIONAL JOURNAL OF ENVIRONMENTAL & SCIENCE EDUCATION
2016, VOL. 11, NO. 18, 11097-11117

Non-formal Education as a Factor in Civilizational Development of Educational Space Subject in the Cross-Border Region

Dulma T. Dugarova,[a] Svetlana E. Starostina,[a] Sergey D. Namsarayev,[b] Nina Zh. Dagbaeva,[b] Innokentiy A. Malanov[b]

[a] Transbaikal State University, Chita, RUSSIA, [b] Buryat State University, Ulan-Ude, RUSSIA

ABSTRACT

The research is aimed at determining the organizational and pedagogical conditions of non-formal education implementation as a factor in civilizational development of subjects, joint international projects performers, in the educational space of the cross-border region. New integration projects forming the need for effective models implementation of advanced and interdisciplinary training of highly qualified personnel determine the civilizational development areas of the education sector and the labor market subjects the non-formal education will constitute the basis for. Non-formal education provides a wide range of cooperation for various social partners, both educational institutions and public, commercial, industrial organizations. For the development of this cooperation teachers have a wide array of educational technologies: specialized competence centers, multifunctional applied competence centers, expert and methodological qualification certification assessment centers, year-round training range, training platforms, summer specialized schools which are widely used in current practice.

KEYWORDS

civilizational approach, the cross-border area, educational space, non-formal education, the labor market, non-formal education process organization technology.

ARTICLE HISTORY

Received 29 July 2016
Revised 28 September 2016
Accepted 31 October 2016

Introduction

As a result of the objective international harmonization of educational systems educational space transformation is carried out in accordance with changes in the economic and social policies that determine the value and the function of education and govern new social relations. Various social and civil groups, producers, employers, and other representatives of the society are included in the development of normative, regulatory and programmatic

CORRESPONDENCE Svetlana E. Starostina ✉ Email: sestarost@mail.ru

frameworks. Mechanisms of including non-formal education in the cross-border educational space are the main result of this cooperation.

Current socio-economic situation in the world reveals a number of problems and challenges of changing work patterns, the activity management systems upgrade, new forms of social and labor relations, the relationship between modern education systems and new forms of technological progress; defines social public policies in education, and a variety of educational spaces. These processes take place in spite of differences and diversity among nations and countries.

The basis for new approaches to solving social policy problems lies in reassessment of socio-economic values and, consequently, political goals. In view of this, the theory of the common good, the quality of life, social standards, equity, participatory management and other theories affecting the field of education as a social institution have become popular.

While before the concept of 'social mandate' considered specialists training for the labor market, the impact of vocational education was analyzed from the standpoint of employment of graduates and their compliance with the qualification profile, but it has now become insufficient. Social mandate in education has become a broad social concept determined by a variety of relationships in education, social partnership models implementation in education affecting the planning and implementation processes of interaction between the education and the labor areas.

Social purposes of education are as important as the economic ones; there appears a tendency to new forms of international partnership, which leads to a transmission of the existent experience in education; there is an education and labor market communication models convergence.

In general, new social theories of 'human and social capital' become a practical tool and get their development not only in theory but also in terms of practical education development, expanding the boundaries up to educational space, which defines *social capital* as the relationship network used as tools to produce goods and services. The term 'social capital' in the late XX century gets a new meaning and is defined as *'the network of relationships'* (Cushing, 2001; Florida, 2016).

Educational activities in the regional space develop within one of the five paradigms. Cultural studies consider the development of education as a cultural form and cultural value. Their authors are interested, first of all, in the general laws of education development as a sphere of cultural life (Benin and Zhukova, 2009; Tyurneva, 2012). Pedagogical studies are focused on new education technologies, training and development brought by integration into the educational process of certain countries (Bezdudnaya, 2008; Emelyanov, 2009). Sociological studies are focused on public opinion regarding reforms or on the social consequences of the changes (Dobrenkova, 2007). Research in the framework of the economic paradigm tends to quantify and distinctly model educational institutions and education systems management processes (Sotnikova and Kozlova, 2010). Researchers of international relations approach the trans-national, inter-state and supranational management of educational processes as a form of political co-operation identifying the common educational space formation effects for governments and international organizations

(Smokotin, 2010). A special place is occupied by a large multi-disciplinary research, where multiparadigmality principle is implemented and various aspects of the common educational space development are covered (Shirin, 2012).

Civilizational approach involves examining the totality of all forms of human life in their historical development and continuity, including the people (or peoples' groups) as a socio-cultural community with the features of their statehood, with their own rules of cohabitation, customs; social, family, educational, household and other features. Civilizational characteristic of educational space is encoded in the axiological performance of culture through the mentality commonly understood as a way of life perception, attitude to the era, the nature of problem solving.

Based on research by V.V. Rozanov, N.A. Berdyaev, S.L. Frank, as well as M. Barga, G.B. Kornetov and other representatives of civilizational approach, it is possible to single out a substantial group of education civilizational characteristics, which act as the axiological component (Nelson, 2014). These include material subject environment, intellectual and informational culture field, the system of spiritual and moral values, the culture bearers and consumers layer (existence of the intelligentsia, 'the reading public', socially active multitude). All these axiological characteristics which are nothing but the axiological educational component are directly or indirectly related to education, and this, in turn, proves the need for civilizational approach to be used while characterizing the subject and the object of educational space.

The advantage of civilizational approach is its comprehensive nature which allows applying it to any country in any historical epoch, which opens the possibility of comparative (inter-state and inter-ethnic) approach, enabling the assessment of human values (axiological components), human habitat development, ecology, culture, etc. (Seitkazy et al., 2015)

This approach allows us to consider a particular region as a kind of local civilization with all of its inherent characteristics, which opens up opportunities for integrated regional studies based mainly on local fact sheets.

The studies on the implementation of civilizational approach to the study of the problems of education underrepresent the works on understanding educational space in the cross-border region.

The entry of Russia into the world community, into the international educational space, changes taking place as a result and their cumulative effect on all the aspects of public life have actualized the problem of continuing education, i.e. Life Long Learning. This is confirmed by the modernization processes taking place in the global system of education which require a substantial revision of the traditional educational paradigms now proving to be untenable in terms of ensuring the development of any civilized society, and actualize the problem of finding new theoretical and methodological bases for continuing education.

In the International Dictionary of adult and continuing education by P. Jarvis the term 'non-formal education' is used in the field of continuing education abroad for 'education process organized beyond the formal education system, often to meet the cognitive needs of a particular group of people' (Jarvis, 1999). Shigeru Aoyagi, UNESCO representative, treats non-formal education as any kind of organized and systematic activity (Shigeru, 2005). Forms of work and non-formal

education topics vary and are based on the same principles, among which are 'learning to meet the needs', 'connection with practice,' 'flexible syllabi, schedule and the choice of venue'. That is its essential difference from formal education. Mavrin Grandstaff, exploring the category of 'non-formal education', means the possibility of its consideration from the standpoint of contextual or functional approach (Grandstaff, 1978).

The review of literature and the summary of current understanding of lifelong learning show the existence of the following contradictions between:

- the need for continuing education in the educational space of the cross-border region in the implementation of joint international projects by the performers for their successful career and unrealized opportunities in regard of non-formal education having a great didactic reserve;
- lack of strategic guidance, methodological basis of continuous adult education under current conditions and unrealized possibilities of civilizational approach in the development of education and labor subjects;
- recognizing the importance of the 'lifelong learning' principle and the lack of proper didactic guidance for non-formal education able to provide substantial assistance in implementing the above principle;
- the need to support the additional vocational training system development in the conditions of rapidly developing economic and industrial cooperation between border states and the lack of the didactic aspect development of continuing adult education in the educational space of the cross-border region to create a special infrastructure in it to improve the skills of international project performers.

The above contradictions cause **the problem of research** which lies in the need to search for scientific, methodical and practical bases to improve the skills of adults, joint international project performers (Russia, Mongolia, China) in the educational space of the cross-border region.

Objective: To determine organizational and pedagogical conditions for the non-formal education implementation as the civilizational development factor of subjects, joint international project performers in the educational space of the cross-border region.

Research objectives: 1) To analyze the regional educational space development genesis in the process of historical development of the region in the light of civilizational approach; 2) Identify features of educational space as the professional activity subject development civilizational area in the conditions of the relationship between the education and the labor areas in the cross-border region. 3) Determine mechanisms of including non-formal education in the educational area of the cross-border region to train joint international project performers.

Systematic approach **was selected as the methodological basis of the study**, which allows considering non-formal education as a system within a larger system of advanced training (formal education), civilizational approach as the methodological basis of the non-formal adult education theory, defining basic principles of the education; comparative approach which allows providing a more

complete non-formal education description through defining and developing comparison criteria for the two types of adult education; paradigmatic approach in the frame of the humanistic paradigm that provides a science-based range of means and methods, non-formal education organization technologies; socio-cultural approach which enables to consider an attitude to a learner within non-formal education as a subject of culture capable of cultural and personal self-development taking into account the changing socio-cultural conditions, as well as an attitude to education as a cultural process in which dialog interaction between the participants while organizing cognitive activities (activity approach) for the civilizational development of educational space subjects in the cross-border region takes place.

The regional educational space development genesis analysis in the process of historical development of the region in the context of civilizational approach

The civilizational paradigm of education becomes a comprehensive base that adequately reflects the new socio-educational reality with the priority issue of education transitivity in the context of contemporary globalistic problems. Education transitivity in this context means compatibility of the essentials, i.e. civilizational grounds with all the subsequent education parameters in their relationship with each other, that is, civilizational and socio-cultural, and consistently with anthropological, humanistic, informational, innovative, synergetic ones (Nelson, 2014).

The education transitive potentiality civilizational paradigm involves contradictions existent in education in the modern world, creating a theoretical and methodological bases for the formation of new views on the already well-known philosophical categories enabling to see a new education phenomenon as a fundamental unity of civilizational and cultural components (Celly, 2008).

The research on implementing civilizational approach to education problems studies does not sufficiently represent works on understanding the regional educational space from the standpoint of civilizational approach.

This has led to a subjective activity formation in education bearers, aimed at identifying target attitudes whose being undeveloped in pedagogical science impeded the substantiation of various strategies for education development sought after by education subjects in the regional conditions.

What is determining for our research is the works by V.V. Nalimov (1989) substantiating the probabilistically oriented philosophy of E.P. Belozertsev (2004) on education as a historical and socio-cultural phenomenon due to the possibility of going beyond the classical reality as well as O.A. Leonova (2006) on the eventive essence of educational space.

We find important works by a number of scientists, which highlight the conditions and methods of educational space territorial structure optimization (M.P. Guryanova, V.A. Zhamin, A.V. Yegorova, A.A. Tantsev, Yu.K. Chernova, Sh.Z. Shugaibov and others), works on forecasting, modeling and developing educational systems (V.P. Bespal'ko, I.V. Beztuzhev-Lada, B.S. Gershunsky, etc.).

Methodological and theoretical foundations for regional educational space formation and development research problem are humanistic and existential

ideas of philosophy. The theory of meaning as a subject developing personality characteristics, the concept of social roles as a system of regulatory expectations and requirements dictated by the society have been selected as a theoretical and psychological research base (SEP, 2003/2016).

As holistic approach integrating the above approaches in the study of regional educational space formation and development problems as a historical and pedagogical phenomenon there appears civilizational approach making it possible to elaborate the education phenomenon development planning concept under discussion (Targowski, 2011).

The analysis of the key definitions understanding approaches shows that in modern pedagogical literature the term 'educational space' is ambiguous. In educational studies a few shades of meaning are represented, constituting the social, cultural, spiritual space. In our study, educational space refers to the educational activity subjects interaction socio-cultural reality (their occurrence) aimed at ensuring self-determination, socialization and enculturation of a person in the conditions of civilizational development uncertainty. With this understanding of educational space, the educational activities will result, from our point of view, in a new quality of a man and society, multi-dimensional personality and their attributes (Rye, 2014).

One of the defining trends in modern Russia is regional differentiation which led to the emergence of a new phenomenon of 'regional educational space' in modern pedagogy.

Nowadays, the search of conceptual approaches to the study of educational space development peculiarities is inextricably linked, in particular, with solving the educational traditions self-determination and self-identification problem that emerged and developed in a variety of socio-cultural conditions, awareness of their place, role and perspectives in the worldwide historical and pedagogical process. This fully contributes to raising the question of its essential unity, the concrete historical diversity and the direction of global education space development. A productive answer to this question can only be obtained in case if the economic, social, political and spiritual determinants of the pedagogical phenomena evolution are most fully accounted for, considered in the context of a dialogue between various eras and cultures inclusive of disciplines a man and society study (Mundi and Ghali, 2009).

Civilizational approach allows giving a holistic interpretation of historical and pedagogical process, with a man standing in the center, educating and being educated, acquiring the culture created by previous generations, and transforming themselves and the culture in the course of this acquisition.

Anthropocentricity and cultural congruence of civilizational approach set the take on the historical and pedagogical process facing the person's essential powers realization problem in concrete historical diversity of social life forms. Based on the available in social science interpretation of 'civilization' category, one can build a hierarchy of mutually complementary concepts: human civilization, stage civilization, great civilizations, local civilizations, the global civilization, which contribute to the coherent essential unity development theoretical interpretation, socio-cultural diversity of concrete forms of existence and educational space development direction (Targowski, 2011).

Distinguishing these basic for our research concerns for the regional educational space development allowed us to consider deep and systemic processes and phenomena that determine the characteristics and regularities of the education phenomenon genesis under study.

While studying the educational space formation features in the region, we relied on the society civilizational development periodization conventional in historical science, which identifies three major periods: traditional, industrial, post-industrial ones. This approach allows saving a unified general scientific field of humanitarian studies in accordance with one of the trends in the modern science development lying in scientific knowledge integration, which gives the possibility of a deep system analysis and interpretation of scientific data resulting from the study.

The traditional period of civilizational development has been divided by us into two interrelated phases: the domination of nomadic life and the one associated with the transition to sedentary life.

At the stage of nomadic civilization, the lifestyle of indigenous people in the region was underpinned by natural and climatic, economic, social and ethno-cultural factors. Nomadism is a lifestyle of the peoples who do not reside permanently in one location, but move cyclically or periodically. It is based on temporary venues, the stability of which depends on the food resources available and their exploitation technology. Nomadic cattle farmers whose living base is livestock breeding, migrate onsite in search of pasture for livestock (Yangutov, 2012).

The lifestyle and the method of economic management influenced the choice of faith and particularities of the material and spiritual culture development. One of the earliest religious forms of indigenous population in ethnic Buryatia (Evenks and Buryats) is a special system of specific beliefs and practices based on spiritualization and deification of objects and natural phenomena. Those views were formed in the minds of younger generation in everyday life when performing special rituals by the older. Children from an early age got accustomed not to harm the natural environment, to take the necessary minimum from it to survive in difficult climatic conditions.

Nomadic economic autonomy is largely based on the military-nomadic way of life. This feature required children to grow self-sufficiency, independence in performance of their duties, ability to endure loneliness when children, having barely learned to be in the saddle, were out pasturing far away from home. Adults taught teens to be independent from life circumstances and fostered the awareness necessary to survive extreme conditions, so a nomad could live for a long time in the desert without food and shelter (Yangutov, 2012).

Educational space in the conditions of a nomadic civilization, when regarded as an event in the social and cultural reality of kin and family relations, was organic to the nomadic lifestyle and aimed at mastering basic living abilities.

After Buryats joined the Russian State, nomadic cattle farmers were included in the settled agricultural lifestyle range of influence. Cattle breeding is no longer the only economic activity; the Buryats get engaged in agriculture, hunting, fishing, blacksmithing along with it. During this time period domestic

crafts are developing based on livestock products and wood processing; handicrafts and trade are taken further.

Historically, education in Buryatia has developed owing to the display of initiative by private individuals who provided individual training and opened private schools; Christian, Orthodox and Buddhist denominations that founded mission and datsan schools; the state government opening first secular schools. This period is characterized by outreach activity of the Orthodox Church that was opening mission schools where teaching was aimed rather at introducing people to the Orthodox religion than at their education, so they were not popular with the Buryat population.

It was Buddhist schools that enjoyed more trust and unconditional popularity in the Buryats. Buddhism entered the territory of present-day Buryatia from Tibet through Mongolia in the late XVII - early XVIII century as a result of historically established ethnic and cultural, social and economic ties between the Buryat and the Mongolian peoples. Buddhism gave a powerful impetus to the social and cultural development of the Buryat people, becoming a kind of bridge linking Buryatia with the cultural tradition of the East: India, Tibet, Mongolia, and China. One of the traditions developed in Buryatia was Buddhist education.

In Buryat Buddhist monasteries some secular, 'external' sciences were taught as well. Besides logic, a lot of attention was given to medicine and astrology. The most popular schools were tsannita Buddhist philosophical schools (called Choyra). In the late XVIII - early XIX century state parish and district schools were opened in the region. A special place among public institutions was held by military Russian-Mongolian school. Education at school was at a good level, it gave education to a number of parish school teachers; the first Buryat scientist Dorzhi Banzarov graduated from it.

Thus, the educational space of Buryatia in that period enjoyed variety and was represented by a number of social institutions from family to public agencies which mainly provided for the initial level of education.

The industrial period in historical science is considered to be the period of rapid industrial production development in Buryatia. Anticipation of this phase was the creation of private enterprises for extraction and processing of raw materials, and the Siberian railway construction gave rise to the industrial development of the natural subsurface of the region.

The statehood of Buryat people in the 20s of XIX century coincided with the formation of the Buryat written language accompanied by a frequent change of its graphic bases that had a negative impact on the work of schools demanding more effort and material costs for teachers retraining, educational materials development and publication; it impeded children's learning the writing basics as well.

At the end of XX century the Republic of Buryatia possesses a great scientific and technical resource forming the basis for its intellectual potential. At that time a powerful system of vocational training and fundamental science was created, in particular, Buryat Scientific Center of the Siberian Branch of the Russian Academy of Sciences. This allowed for preparation of highly qualified specialists and academic staff for the regional economy.

The present stage of social development is regarded as postindustrial in the philosophical science. Western values of contemporary post-industrial development in the early XXI century related to the ideas of free self-realization and self-identity of a person, their independence, critical and creative thinking do not fit into the eastern traditions and consciousness stereotypes. They are alien to the pedagogy of eastern nations, to which a human is the main value in the spiritual and the material world.

The prosperity of civilization in the new millennium is conditioned by the human resource quality, the level of humanistic relations development in the educational environment. Therefore, education traditionally related to the field of culture takes on socio-economic importance, which is further enhanced by involvement of educational institutions in the market relations. Inclusive globalization processes are characteristic of its present state. This new quality emerges from the interaction of globalization with other development trends of the modern world, such as integration, internationalization, informatization, humanization.

Regional educational space at the post-industrial stage of civilizational development has required conceptual understanding of intensive innovation education processes.

The peculiarity of regional educational space is determined by the fact that its comprehension by the personality multidimensionality subjects and the Meta-I properties takes place in a close eventive commonness, as updated or created by them educational events include ideals and ways to overcome tensions of life.

The ontological, axiological and praxeological unity of regional educational space is created by the regional lifestyle containing human life path particularities, values and conflict areas of human life activity reflecting in education. Regional lifestyle in this respect is revealed as the cultural context and is displayed in education as a specific regional order (Yangutov, 2012).

Educational space as a professional activity subject development civilizational area under the conditions of interrelation between the education and the labor market in the cross-border region

Social need for understanding the special state of the education system, its probabilistic development and consequently the social mandate of pedagogical science to scientifically substantiate new phenomena of pedagogical reality, that reflects the interrelation between the education and the labor market fields in the cross-border region educational space as a civilizational development area for the labor and the education subject.

One of the main objectives and priorities of each state is training highly qualified specialists and developing human resources, the implementation of which is a guarantee of stable economic development of the country and its integration into the global economy.

Since the 90s of XX century so far there has been a steady development of international harmonization of higher education and vocational training. The ongoing harmonization of higher education and vocational training systems in the European dimension confirms the growing importance of international harmonization in the international context. The development of international

university rankings, extensive coverage of their results in the media also indicate the emergence of a new global space of higher education and vocational training transforming the practices of modern institutions of vocational training, students and the decisions of those who are in charge of the education sector development (Vincent-Lankrin, 2010; Salmi, 2009; Marginson and van der Wende, 2009).

In today's international political situation Russia is more and more confidently turning to the East. Cooperation with the countries of Asia and the Asia-Pacific region acquires strategic importance for the economy of our country. China, Russia and Mongolia, as friendly neighbors whose relations are based on equality, mutual respect and mutual benefit, are establishing close cooperation; they actively implement a medium-term roadmap for trilateral cooperation which has already produced significant results in trade and economic, humanitarian, transport, tourist areas and in the field of education.

Internationalization of vocational training at the cooperation of the cross-border countries is as relevant as ever now when such grandiose projects as the 'Power of Siberia', 'New Silk Road', 'One Belt, One Road' are being erected (Analytics, 2015; Kokarev, 2015).

The 'Power of Siberia' project is surely one of the most ambitious projects of the Russian Federation since the construction of the BAM and other construction projects of the century. As with any project situated at the intersection of economics and politics, the 'Power of Siberia' has both benefits and drawbacks.

The following can be attributed to the benefits of the project: gas infrastructure development in the Far East; thousands of new jobs, and thereby the need for highly qualified professionals capable to cope with the latest equipment; economic benefits (delivery of Russian natural gas to China via the main gas pipeline 'Power of Siberia'); Russian geo-economic advantage over Europe which is ceasing to be the unique biggest buyer of Russian gas.

Alongside with the 'Power of Siberia', 'Great Silk Road' is another ambitious project - the new Chinese mega-project, the idea behind it being to restore the economic and cultural ties along the historic Great Silk Road. (Analytics, 2015). A vast space lies amidst Russia, China and Mongolia which is, according to the Chinese party, ideal for the development of cooperation. Sino-Mongolian-Russian economic corridor 'One Belt, One Road' is a conjugation of Chinese construction project 'Silk Road', the Russian strategy 'Eurasian path' and the Mongolian initiative 'Steppe Route'. Creation of a new transport and economic corridor will bring the level of cooperation and interaction among the three states to a new stage, and will become a powerful impetus for the development of Eurasia.

The benefit of the project 'One Belt, one Road' for Russia is undeniable, the country should become a major transit country for enormous amount of goods and commodities between Asia and Europe (Kokarev, 2015).

The need to properly implement the program to build the economic corridor China-Mongolia-Russia promotes cooperation not only in the construction of communication lines, transport infrastructure, production capacities, investment, trade and economy, but also in the humanitarian field, particularly in education, preparing highly trained personnel through joint effort.

The traditional model with the paradigm of receiving 'education for the whole life' admits little productive due to its non-compliance with the social

dynamics and the requirements to an individual in terms of mobility, necessary skills development, relevant activities. Today, one of the main components of the social development model is the continuing education model with the paradigm of 'lifelong learning' where the discourse on continuing education is closely connected with non-formal education (Mc Burnie and Ziguras, 2009; Altbach et al., 2009).

In the world practice, there is no opposition of formal and non-formal education while interference of the state in education does not occur (up to the 60s of XX century). There can be even observed prospects of combination, convergence and mutual influence of different types of education: public, private, religious, etc. In 1967, during the international conference in Williamsburg non-formal education became a part of the international discourse on education policy. Ideas were formulated, which served the basis for drawing a conclusion on the situation of 'world educational crisis'. Concerns over unsuitable curricula were expressed; the educational and the economic growth were pointed out not to always match, and many countries were experiencing political and economic difficulties in financing formal education. There was a conclusion that the formal education systems were too slow to adapt to the emerging socio-economic changes, the development progress was hampered not only by their own conservatism, but also by the inertia of the societies themselves (Roytblat, 2015; Begaliev, 2013).

The differences referred to by the authors were mainly of administrative nature. Currently, formal education is associated with schools and educational institutions; non-formal education is associated with community groups and other organizations; and informal one covers what is left, for example, interaction with friends, family and colleagues at work.

Attention is drawn to the large number and variety of initiatives related to non-formal education. First of all, this difference manifests itself in understanding, interpretation and particularities of program implementation in developed and developing countries. The variety of programs is also based on the syllabus aspect: pre-school education for young children, 'catch up' programs for students who quit education; solution for the problems of illiteracy and basic education for adults and youth; political education; and various types of training activities related to the development initiative, including agricultural knowledge and medical training programs.

The search of conceptual foundations for cross-border education is inextricably linked with the study of self-determination, self-identity of vocational training educational modernization, education subjects' awareness of their place, role and prospects in the worldwide historical and pedagogical process.

An objective comparative study in terms of international experience in the educational space design provides a comparative educational research based on the analysis of vocational education and training policy by representatives of the partner countries in accordance with international documents and materials serving as comparative educational research analysis parameters.

Russia joined the WTO in 2012, Mongolia in 1997, and China in 2001. In practice, this means there is equality of opportunity to provide educational services in Russia and Mongolia. The development of education in Mongolia after joining the WTO can be characterized as a period of internationalization of higher

education in Mongolia, developing ways, means, mechanisms for the implementation of a new, student-centered, humanitarian ideology in accordance with the General Agreement on Trade in Services (GATS) and Agreement on trade-related aspects relating to intellectual property rights (TRIPS) which are parts of the legal frame of the World Trade Organization (WTO).

Mongolian State University of Science and Technology (MGNUT), based on a study of practice in the university systems of the US, Germany, Japan and other countries, took the initiative to reform the university education of Mongolia. As a basis for the reform transition to the credit system was introduced, which is typical of universities in most developed democratic countries. D. Badarch, the rector of the University, began the MGNUT reform through which he introduced a partial, very reasonable tuition fee for most students, and educational grants and loans for the low-income students; a pass-through multilevel system of degrees assigned to the graduates (Bachelor's - Master's - Doctorate); credit units as a measure of the complexity of educational programs and workload of teachers; progressive score-rating assessment system of students' achievements; individually oriented organization of the educational process which implies the rejection of the thread-group training conventional for universities of the former Soviet Union; market mechanisms for financing the structural units of the university, and many other things. Already by 2001 the educational process in MGUNT had been completely rearranged, the number of students enrolled at the university increased from 7.5 to 17 million despite the fact that the ratio 'students/teachers' at the university increased from 8-10 to 17-18. Teachers' salaries increased to a large extent. Work and study at the university became prestigious again. MGUNT Bachelor's and Master's diplomas recognized abroad allowed sending and shortly preparing for the university Masters and Doctors at universities in the USA, Europe, India, South-East Asia.

Institutional and document analysis of the public-private partnership implementation in general and further education, international harmonization of educational programs of additional formal, informal, non-formal education characterizes the modern trends of civilizational development of an additional education for children and adults in Mongolia.

The development of education as a cultural form and cultural value appears a priority area of educational space civilizational area in Mongolia. Ensuring the development of amateur folk art and preservation of intangible cultural heritage of the Mongolian people is directed at the implementation of 'Convention for the Safeguarding of the Intangible Cultural Heritage' adopted by the General Conference of the United Nations Educational, Scientific and Cultural Organization (October 2003) and is carried out in the form of non-formal and informal education.

The development of amateur folk art of the Mongols in present-day conditions as informal education takes place in the family, in the workplace, in the community. Informal learning is not considered within the framework of ISCED 2011 for the evaluation of participation in education. Informal learning is defined as a form of education that is purposefully planned, but not institutionalized. Pedagogical maintenance of amateur folk art development of the Mongols in present-day conditions as additional informal adult education,

according to ISCED 2011, is institutionalized, purposefully planned and implemented by the 'Palace of Culture' Uurhaychin" organization, Erdenet city. This enables provision of educational services which are complementary to formal education, both for children and adults. Education in the framework of this Non-formal Education Program is carried out to ensure the public right of access to education for people of all ages; it is aimed at the development of life and work skills, at social and spiritual development; it leads to further upgrade for the skills that either meet or do not meet the qualifications of formal education. The Program is being implemented under a public-private partnership 'Erdenet' within the framework of additional formal education for children and youth and additional non-formal education for adults (Begaliev, 2013).

In light of China entering the international market of educational services, in accordance with signing various agreements there is a need for substantial modification of interaction systems between the state and non-governmental institutions evaluating education quality assurance in educational space, and is based on the interest of all educational services market actors in such cooperation (Dong, 2008).

Educational audit holds a special place among the self-development tools of a pedagogical relation subject, since the audit gives them an opportunity to assess their competitive capabilities and to come up with a strategy for further development.

In China the government deals with accreditation bodies in various capacities which can be seen today, observing a fairly large variety of activities. These are such areas as certification of qualifications, rating, institutional and program accreditation, educational audit.

State support for the social mechanisms development inevitably leads to the interaction of the state and public professional education quality assessment systems based on the use of procedures and indicators of public and professional education quality assessment in the accreditation procedures and accounting evaluation results in deciding about the state accreditation. Therefore, it is especially important to develop models and mechanisms of interaction between the state and the public professional education quality assessment systems.

In higher education, China has consistently formed an organizational order where the China's higher education quality ensuring system based on specially designed management models (QMS) gains recognition. This order is formed and maintained at the expense of three institutional areas: 1) the system of education quality assessment; 2) the system of accreditation; 3) the system of higher education quality audit. Increased interaction between the state and the public professional quality assessment systems of higher education, the selection of dominant universities of Project 211 and Project 985 leads to the use of benchmarking in evaluation and accreditation as a method of comparing the best practices in education quality assurance. In the public and social system of quality assurance in higher education two basic categories are to be identified where there is an understanding of the quality topic in higher education, i.e. 'demand' and 'correspondence'. The former is a reflection of China's higher education development strategy logic, whereas the latter describes the need for active interaction between the state and the public professional quality assurance

systems of higher education engaged in external quality control of education, as well as monitoring the implementation of the quality management principles.

Mechanisms of including non-formal education in the educational area of the cross-border region to improve the skills of joint international projects performers

Including non-formal education in the educational environment in the cross-border region is to meet the industrial partners' needs in terms of general and advanced training of highly qualified workers, technical and engineering staff to cover the needs of the labor market and employers' demands; with a specialist, confidently holding the already existing niche market and taking a spiritual effort for forming and incorporating a new mode of action, who is a person able to step beyond the scope of the capabilities they have already learned, while maintaining the identity and principles of what and how should be done.

Mechanisms of including non-formal education in the educational area of the cross-border region for further training of joint international projects performers (Russia, China, Mongolia):

• Vocational training infrastructure in the form of non-formal education:

- Multifunctional Applied Competence Center;
- Specialized Competence Center;
- Presentation Area;
- Training Platform for preparation and conduct of the championship, in-house competitions for professional skills of workers and engineers, training the championship staff according to the procedure of Championship World Skills in cross-cutting (integration) competencies;
- A Year-Round Training Range.

• System project 'Training workers and technical personnel in mining in accordance with the international standards of World Skills, CDIO, ENQA through the introduction of international best practices.'

• A project on the new system of youth early professional orientation in accordance with the Junior Skills standard.

• A new educational program of non-formal vocational education and training 'Lean Production'.

• Methodical software products and legal documentation for additional professional programs of further training for technical and academic staff of higher education institutions:

- On the program 'Self-assessment of professional activities according to the international World Skills, CDIO, ENQA standards as a necessary and sufficient condition to improve the competitiveness of workers, engineering staff, and academic staff in the global labor market';
- On the program 'Proactive response to the development of cross-cutting competencies of engineering and technical staff in mining', on the practical part of the program at the workplace of a year-round training complex and the presentation area for enterprise employees preparing to the championship at World Skills (Atom Skills) standards and as a part of the specialized competence center, multifunctional applied competence center.

Table 1. Technologies of organizing the non-formal education process promoting students' civilizational development.

No	*Type of technology*	*Main objective of the technology*	*Content-related procedural component of communicative activity*
1	Quest technology	Objective: forming students' information culture as a part of general culture	Educational web-quest, a problem task with role-play element that require using information resources of the Internet. Web Quest is a website teacher's work with performing a particular learning task. Such web-quests are developed for maximum integration of the Internet in the educational process. A feature of educational web-quests is that a part or all of the information for individual or group teachers' work is located at a number of websites.
2	Co-management technology	Objective: socialization through a variety of activity types, developing responsibility, training communication skills with partners and colleagues	The technique involves: expanding educational activity space by forming a community of teachers, students and their parents; Outlining areas of joint management activities; Identifying the forms and types of joint activities that promote socialization of an individual; Forming the initiative group of teachers.
3	Coding learning technology	Objective: learning to process information	The phase of translating a text into a symbolic language - the translation into the language of signs and symbols may be done semantically or graphically. Since the translation of a text to a symbolic language is not needed per se but to get new information, the following requirements are taken into account in the translation process: abstractness, conciseness, synthesis and unification, clear abstraction of elements with the primary meaning.
4	Simulation training technology	Objective: developing modeling skills	Abstractness. Succinctness. Generalization and unification. Clear abstraction of elements with the primary meaning. Constructing a model. Working with the model. Working with the model can be done in two directions: a) completing the scheme b) modification of the scheme. Correlation of the results obtained on the model with the reality (with texts).
5	Problem case learning technology	Objective: Developing creativity while solving unknown problems	Outlining the key issue, asking questions and finding ways to address these issues.
6	The technology of objective assessment of students' knowledge	Objective: practicing teachers' skills to give objective grades to students	The technology of objective assessment is based on two provisions: - Checklists offered to students are formulated correctly; - When estimating the responses, the criteria equally clear to both the teacher and the student are used. Wording the assignment from the standpoint of logic and information correctness. To do so: determining what we would like to hear in the student's response (i.e., formulating a correct

			answer); formulating the question on the basis of the correct answer. A question is a part of its answer, so a well-formed question usually includes two semantic parts: the known one (present in the question and may be present in the answer), and the unknown one (requested in the question and is to sound in the answer).
7	Technology of forming the ability to compare objects and concepts	Objective: development of generic skills (comparison)	Holding theoretical classes on the basics of logical culture, reflecting the following aspects: characterizing a feature of a concept or a subject; the dependence of feature relevance on the context; the sense of comparison procedure; defining criteria for comparing everyday objects and concepts based on work with a group of concepts; a definition; a table; with the scheme; and carrying out a comparison procedure.
8	Technology of distinguishing the essential features of objects, phenomena and concepts	Objective: developing in students the logical culture in forming the ability to distinguish essential features	Holding a theoretical class based on of the culture of thinking reflecting the following aspects: - Distinguishing features, - Selecting the essential ones out of the features, - Selecting the minor ones out of these features, - Formulating a conclusion on the basis of the essential features.
9	Conflict Management Technology	Objective: learning effective conflict resolution	- - Action - dragging a conflict - - Avoidance, retreat, escape - - The 'win-win' strategy - - Power, the 'win-lose' strategy - - Efficient conflict resolution - - A compromise - - Inner conflict analysis - - Objective spatial separation
10	Controlling technology	Objective: developing managerial skills contributing to effective leadership, regulation, governance, control in the longer term	- Controlling is an in-house system of integrated information support for planning and control. Controlling is a complex organization management system aimed at coordinating the interaction of management systems and monitoring their effectiveness. Controlling is a major information supplier for enterprise management. Controlling is one of the management functions in charge of the collection, processing and analysis of information in order to improve the efficiency of an enterprise. The essence of controlling is managing the future to ensure long-term functioning of the enterprise and its business units.
11	Incrementalism technology.	Objective: developing the collective decision-making skill in solving problems	The core of incrementalism is that the supervisor articulates a solution to the problem in general terms, outlining the ultimate goal of efforts and some intermediate steps of its pursuing, leaving open the possibility of a wide maneuver in the selection of methods and tools

			of local ways and approaches to achieve the goal. Assuming also effort focus area correction and reserving the possibility of fairly ample adjustment of the path towards this goal. The professor of political science at Yale University Ch. Linbloma is considered to be the founder of the incrementalism method, in whose works methodological principles of this technology concept were formulated in the 1960s of XX century.
12	Technology 'Playback - Theater'	Objective: developing social skills	Social educational technology organized by a moderator, based on the analysis of real-life stories together with the subjects experiencing the issues under discussion (or similar ones).
13	Reflexive activity technology	Objective: developing reflexive activity as a possibility to understand ways and practices to work with training materials, search for the most rational activity organization types	This kind of reflexive activity is acceptable at the stage of reviewing home assignments, defense of project design works. Applying this type of reflection at the end of a class makes it possible to evaluate the activity of each student at different stages of the class, using, for example, the 'ladder of success' method. The effectiveness of the solution to a training objective (a problem situation) can be drawn up as a graphic organizer. At each stage of a class the self-assessment technique is applied to reflect on one's own activity in terms of correctness of task completion, the following symbols are used: '!' - All right, '*' - there are errors, but I have corrected them, '?' - I find it difficult to perform the task so far. The objective is to develop the skills to organize and evaluate one's own activity. Activity reflection allows comprehending the methods and techniques of work with material finding the most efficient ways.
14	Frame-based technology	Objective: forming the information culture, information processing skills	The essence of the frame-based technology is semantic information compression comprising a combination of two processes: information compression per se and a linguistic expression of the compressed information in the form of signs and symbols. In a frame-based presentation of teaching materials a visual structural base, a frame, is built up. The frame has empty windows (slots), which are then filled with specific content. The frame is constant (invariable part), and the slot content changes (variable part).

Discussion

As a result of international harmonization of educational systems, the educational spaces transformation is carried out in accordance with the changes in social policy which determine the value and the function of education and regulate new social relations. Various social and civil groups, producers, employers, and other representatives of the society get involved in the development of normative, regulatory and programmatic documents that

determine the development of education and its modernization. In this regard, questions arise:

1. How can these structures be engaged in the formation and implementation of social mandate for education?

2. How to ensure the participation and social activities of these institutions and organizations in education?

The solution to this new socio-educational reality, education transitivity under the condition of the contemporary globalistic issue is connected with the civilizational paradigm of education. Transitivity of education in the educational space is characterized by its civilizational bases (socio-cultural, anthropological, informational, synergistic, educational, international ones).

New integration projects form the need for effective implementation of interdisciplinary training advanced models for highly qualified personnel who determine the civilizational areas of the education and the labor market subjects' development. The problem of educating young professionals able to create new technical devices and technological processes as from the idea on to the knowledge-intensive industries, to promote the inventions to consumers, to evaluate the technology market horizon and to take into account its economic performance, is vital.

Solving these problems is directly related to creating models of local growth points for the education and the labor subjects, which will include new forms and methods of teaching based on integration of education and production, which served the starting point for selecting the following categories of education: formal, informal and non-formal.

Active promotion of non-formal education ideas has been carried out by global organizations, such as UNESCO and the UN. Since 2005, UNESCO has paid special attention to the role and resources of non-formal education in work with children and youth from low-income and disadvantaged families and segments of the population.

In 2011, in Paris, during the 36th session of the UNESCO General Conference a resolution was adopted, where international standards of education were revised. Based on this document, education is recognized as non-formal if it is 'institutionalized, goal-oriented and planned by a person or an organization that provides educational services' (UNESCO's 36th General Conference, 2011). At present, its being complementary or alternative to formal education is positioned as the essential characteristic of non-formal education. Forms of non-formal education may include short-term courses, seminars, trainings, workshops, etc.

Conclusion

The mechanisms of including non-formal education in the cross-border educational space under the trilateral cooperation of Russia, China, and Mongolia to establish a cross-border economic cooperation zone, the junction of industrial interests are the key results obtained in course of the work.

Institutional and program-technological bases of non-formal education process organized by high-tech companies, innovative companies, industry consortia, and other partners are:

1. Reasonable and developed infrastructure for non-formal education (Specialized Competence Center, Multifunctional Applied Competence Center, Expert-Methodical Center for Qualification Certification Assessment, Year-Round Training Range, Presentation Area, Training Platform);

2. Special system projects for general and further training of international projects performers in accordance with the international standards of World Skills, CDIO, ENQA;

3. Sector-specific educational programs for non-formal education;

4. The non-formal education process organization technology promoting civilizational development of students.

Disclosure statement

No potential conflict of interest was reported by the authors.

Notes on contributors

Dulma T. Dugarova, PhD in Pedagogy, Professor of Transbaikal State University, Director of the Institute of education Development Management

Svetlana E. Starostina, PhD in Pedagogy, Associate Professor of Transbaikal State University, Vice-Rector for Academic Affairs

Sergey D. Namsarayev, PhD in Pedagogy, Professor, Buryat State University, Visiting Professor

Nina Zh. Dagbaeva, PhD in Pedagogy, Professor, Buryat State University, Director of Pedagogic Institute

Innokentiy A. Malanov, PhD in Pedagogy, Associate Professor, Buryat State University, Head of General Pedagogy Department of Pedagogic Institute

Acknowledgement

The work has been performed as a project part of the state assignment in the scientific activity field of the Ministry of Education of the Russian Federation No27.2479.2014K on the subject 'Management of modular vocational training programs development for the leading economic sectors of the Trans-Baikal Region on the basis of public-private partnership.'

References

Altbach, P., Resiberg, L., Rumbley, L. (2009). Trends in Global Higher Education: Tracking an Academic Revolution. Executive Summary. Paris: UNESCO. http://www.unesco.org/fileadmin/MULTIMEDIA/HQ/ED/ED/pdf/WCHE_2009/1745_trend_final-rep_ES_FP_090617a.pdf

Analytics. (2015). China paves iron 'Silk Road' to the leadership. http://www.nakanune.ru/articles/110851#sthash.vCvCuIql.dpuf [in Russian].

Begaliev, I.S. (2013). Central Asia: trends in the socio-political development and Eurasian integration. *Social and Humanitarian Knowledge,* 3, 332-338 [in Russian].

Belozertsev E.P. (2004). *Education: a historical and socio-cultural phenomenon*. Course of lectures. St. Petersburg: R. Aslanov's Publishing House "Yuridicheskii tsenr Press".

Benin, V.L., Zhukova, E.D. (2009). Cultural traditions and contemporary problems of interaction between educational environments of Europe and Russia. *Education and Science. Proceedings of the Ural Branch of the Russian Academy of Education,* 7, 67-80. [in Russian].

Bezdudnaya, A.G. (2008). Common approaches to the development of educational programs in a single educational space. *Production Organizer*, 4, 82-86 [in Russian].

Celly, A. (Ed.) (2008). *Towards A New Paradigm in Higher Education*. Delhi: Kalpaz Publications C-30, Satyawati Nagar, 207 p.

Cushing R. (2001). *Creative Capital, Diversity and Urban Growth*. Unpublished Manuscript, Austin. - Texas.

Dobrenkova, E.V. (2007). Problems of Russia's accession to the Bologna process. *Sociological Studies*, 6, 102-105 [in Russian].

Dong X. (2008). Development of Transnational Education in PR China. Presentation at APEC Capacity Building Seminar on Transnational Education Services. Manilla, Philippines, pp.24–26.

Emelyanov, S.N. (2009). Problems of improving the higher education quality in terms of integration with the European educational space. *Bulletin of Vladimir Law Institute,* 1, 4-6 [in Russian].

Florida, R. *The Rise of The Creative Class and How It's Transforming Work, Leisure, Community and Everyday Life*. Transl. into Russian by N.Yatsyuk. Moscow: Mann, Ivanov i Ferber Publ., 2016. [in Russian].

Grandstaff, M. (1978). Non-formal education as a concept. *Prospects* 8(2): 177-182. doi:10.1007/BF02220395 http://link.springer.com/article/10.1007/BF02220395.

Jarvis, P. (2002). *International Dictionary of Adult and Continuing Education*. 2nd ed. Routledge.

Kokarev, K.A. (2015). 'Silk Road': Russia, China and Mongolia can become a single economic space. Russian Institute of Strategic Research. http://riss.ru/smi/11512/.

Leonova, O.A. (2006). Educational space as a pedagogical reality. Alma Mater (Bulletin of Higher School), 1, 36-40.

Marginson, S., van der Wende, M. (2009). The New Global Landscape of Nations and Institutions. In: Higher Education to 2030. Vol. 2. Globalisation, pp. 17-62. Paris: OECD Publishing, DOI: 10.1787/9789264075375-3-en

McBurnie, G., Ziguras, C. (2009). Trends and Future Scenarios in Programme and Institution Mobility Across Borders. In: *Higher Education to 2030*. Vol. 2. Globalisation, pp. 89-108. Paris: OECD Publishing, DOI: 10.1787/9789264075375-5-en

Mundy, K., Ghali, M. (2009.) International and transnational policy actors in education: A review of the research. In: Sykes, G., Schneider, B., Plank, D., Ford, T. G. (Eds.). *Handbook on Educational Policy Research*. Abingdon: Routledge, pp. 717-735. DOI: 10.4324/9780203880968.

Nalimov, V.V. Spontaneous Mind: The Probabilistic Theory of Meaning and the Meaningful Architectonics of Personality. Moscow: Prometey, Lenin Moscow State Pedagogic Institute, 1989.

Nelson R. (2014). Civilizational Paradigm Change: The Modern /Industrial Case. *Eruditio, e-Journal of the World Academy of Art & Science*. 1(5) – September–October, http://eruditio.worldacademy.org/issue-5/article/civilizational-paradigm-change.

Roytblat, O.V. (2015). *Non-formal education theory development in the further teachers' training system*. PhD thesis. Tobolsk, [in Russian].

Rye, S.A. (2014). The educational space of global online higher education. *Geoforum*. 51, 6-14. http://dx.doi.org/10.1016/j.geoforum.2013.09.011

Salmi, J. (2009). *The Challenge of Establishing World-Class Universities*. Washington DC: World Bank.

Seitkazy P.B., Kalkeyeva K.R., Aimagambetova R.K., Kassymbekova N.S., Askarovich T.A., Jexembayeva G.S. (2015). Civilizational and Cultural Approaches to the Constructing of the Education Content in Kazakhstan. Review of European Studies; 7(6), 100-107. DOI: http://dx.doi.org/10.5539/res.v7n6p100

SEP. (2003/2016). Stanford Encyclopedia of Philosophy. Hans-Georg Gadamer http://plato.stanford.edu/entries/gadamer/.

Shigeru A. (2006). Non-formal education. In: BPI/EPP/2006/PI/2/REV. Bureau of Public Information BPI/Infosheet/55 http://unesdoc.unesco.org/images/0014/001497/149701e.pdf

Shirin, S.S. (2012). Managing common educational space in Europe. *Modern Studies of Social Problems (electronic scientific journal).* 2 (10), http://sisp.nkras.ru/e-ru/issues/2012/2/shirin.pdf [in Russian].

Smokotin, V.M. (2010). The Bologna process and strengthening the multilingualism and multiculturalism position as the guiding principles of European language policy. *Bulletin of Tomsk State University*, 336, 66-71 [in Russian].

Sotnikova, S.I., Kozlova O.P. (2010). Strategic approach to higher school teachers competitiveness management in the innovation economy. *News of Irkutsk State Economic Academy,* 2, 90-93 [in Russian].

Targowski A. (2011). The Civilization Approach to Education in the XXI -st Century. *Comparative Civilizations Review*. 65, 73-104. http://connection.ebscohost.com/c/articles/69849535/civilization-approach-education-21st-century

Tyurneva, T.V. (2011). Towards Defining Culture Timeframe in the Context of the European Educational of the Postmodern Perios. *Bulletin of Irkutsk State Linguistic Institute.* 1(13), 60-68, http://cyberleninka.ru/article/n/k-probleme-vydeleniya-vremeni-kultury-v-kontekste-evropeyskogo-obrazovatelnogo-prostranstva-v-epohu-postmoderna [in Russian].

UNESCO's 36th General Conference. Paris, 25 October – 10 November 2011. http://www.unesco.org/new/en/general-conference-36th/.

Vincent-Lankrin, S. Cross-border Higher Education: Trends and Perspectives. *Bulletin of International Organizations*, 2010. No 3 (29), 86-109 [in Russian]. http://ecsocman.hse.ru/data/2011/05/06/1268033027/6.pdf

Yangutov, L.E. (Ed.) (2012). *Buddhism in the socio-economic processes in Buryatia and Central Asia*. Ulan-Ude: Buryatian State University Press.