

RRI 2016
International Conference «Responsible Research and Innovation»

**COMMON TRENDS OF GLOBAL EDUCATION:
EDUCATIONAL METHODS IN USA AND RUSSIA**

Irina V. Brylina (a)*, Farida S. Khakimova (a), Vladimir I. Brylin (a), Pavel V. Kuznetsov (b)

* Corresponding author

(a) National Research Tomsk Polytechnic University, 30 Lenin Avenue, Tomsk, 634050, Russia, e-mail: ibrylina@yandex.ru, +79609728753

(b) Institute of Strength Physics and Materials of Siberian Branch of Russian Academy of Science, 2/4, Akademicheskii Ave., Tomsk, 634055, Russia, e-mail: kuznetsovpv@mail.ru, +79660965057

Abstract

This article touches upon the issues of changes in the educational system in the knowledge society. The main purpose of this research is the study of new teaching methods, with due regard to the needs of society and human potential. For this purpose, educational methods of the US and Russia were analyzed and compared, their advantages and disadvantages were estimated, and common trends in the development of education were identified. It is stated that during the formation of innovative methods of education for future generations, it is necessary to take into account ethical standards of each ethnic group, culture and traditions of specific country, as well as psycho-physical standards of students. It is justified that the idea of the creation of unified teaching methods for the entire planet population is impossible due to geographic, ethnic, political, and economic differences of every country. However, according to research results of popular techniques, it is possible to develop a model of the most appropriate educational method for the vast majority of countries with due consideration of constant development of science as the main influence factor on methods of education. It is concluded that the general trends of global education are individualization and humanization. They lead to the formation of flexible, critical, creative and effective thinking of students in terms of variability and uncertainty of social reality.

© 2017 Published by Future Academy www.FutureAcademy.org.uk

Keywords: Global education, educational methods, educational models, individualization and humanization of education, critical thinking.

1. Introduction

Nowadays, a variety of definitions of the concept of global education can be found. It may be explained by the difference of ways and the variety of approaches which form the concept of global education in a great number of international documents related to this issue.



This is an Open Access article distributed under the terms of the Creative Commons Attribution-Noncommercial 4.0 Unported License, permitting all non-commercial use, distribution, and reproduction in any medium, provided the original work is properly cited.

According to The Maastricht Global Education Declaration (2002) “Global education is the education that opens people’s eyes and minds to the realities of the globalized world and awakens them to bring about a world of greater justice, equity and Human Rights for all. Global education is understood to encompass Development Education, Human Rights Education, Education for Sustainability, Education for Peace and Conflict Prevention and Intercultural Education; being the global dimension of Education for Citizenship”.

The world is changing rapidly, while education is more conservative. Certain groups of researchers consider this as positive features of the continuity of generations, the stability of life activities. Others believe that the educational system is "outmoded", unable to keep up with the latest developments (Altbach, & Knight, 2007; Varghese, 2009; Altbach, 2000).

On the one hand, the modernization of education is an indisputable priority of civilization in order to keep up with the new trends of globalization. On the other hand, the modernization of the educational system comes into conflict with the ethical standards of education, which are based on the transfer of best practices and expertise of previous generations.

Anyway, the main task of modernization of education is the quality assurance of education. The solution to this problem depends on many factors, such as: educational content, teaching methods, educational process conditions, etc. Education is becoming more personalized, focused not on the transfer of knowledge, but on the development of the ability to navigate in the world around and to provide a student with the ability to choose the place and the time of education, as well as academic subjects. Once the online education is foundational, face to face education starts to outmode (Sorokina, 2009).

Investigation of online education disadvantages resulted in the detection of such problems as: the problem of social adaptation, the problem of values transfer, social experience and ethical standards. This knowledge cannot be acquired by a student without the help of a mentor who may play the role of a living illustration. As a result, the problems of communication arise as well.

Nowadays, these problems have already arisen. The replacement of traditional forms of spiritual culture by social structures, aimed at production and consumption, planning and management of a lifestyle in the light of technical and economic possibilities of a society, has as a consequence the distortion of inner spiritual human nature. The growth of mental disorders, depressions, which go viral among young people, represent a serious threat to society. The current attempts to combat this problem, like environmental programs, can only slow the process down. It is necessary to correct and treat not only the nature and a human, but also the very scientific and technological civilization. The overload of nature, along with dehumanization of life force to evaluate the scientific rationality as something irrational; as technology as the creation of science currently leads not to improvement, but to deterioration of the quality of life (Schelsky, 1967).

In addition to mental disorders, caused by the use of new technologies, there are also psychological diseases caused by information overload. The rapid development and innovation introduction contributes to a sharp increase in the accumulation of information, fast acquisition of which is often beyond human capabilities. Hence, an informational overload of students appears as a result.

2. Methods

The main objective of this study is investigation of new teaching methods, with due regard to the needs of society and human potential. For this purpose, let us consider the methods of education in the United States of America and Russia, to evaluate their advantages and disadvantages, and to identify common trends in the development of education.

During the course of the research the comparative analysis of the systems of general and professional education in the USA and the Russian Federation was held in order to have better understanding of the development of a person with due regard not only to age peculiarities but also to national, cultural and historical aspects. These systems contain advanced generalized practices of student training. Moreover, these systems contributed to the achievement of high living standards. The peculiarities of basic and professional education systems of USA and Russia are listed below.

3. Results

3.1 General description of US education system

More and more people speak in favor of government's call for lifelong learning rather than learning for life.

In recent years, the amount of theoretical and applied research on issues related to the formation of cognitive capacities has significantly increased. As the research authors take the fact that traditional teaching does not provide students with opportunity for mental activity as a premise, particular attention is drawn to the works focused on teachers and useful tips on how to teach students of all ages to think (Lefrancois, 1999). So, one of the learning models of mental actions was developed by K. Chusk, another model is devoted to metacognition (in Russia, it is used as problem-based education). Unfortunately, adults - teachers and parents - often do not encourage curiosity, the desire to understand the essence of the world, which is the basis of metacognition and a prerequisite for the development of mental abilities. In such manner, the possibility of personal mindset formation is eliminated.

Traditional programs do not teach children philosophy or philosophical terms. Usually they consist of short stories, after reading and discussion of which children learn how to find the connection between cause and effect, to evaluate alternative ways of studying the subject, and to use different methods of reasoning in search of answers to questions which are interesting for them.

With the personalization of education, American teachers develop a personalized form of independent work according to training abilities of students and education purposes, including, the use of personal computers. They create a personalized program with an option of forms and methods of education and, especially, of the tempo option of the course. The ideas and initiatives of students are strongly supported. On the basis of a systematic analysis presented in the study of A. Zakharova, it can be stated that one of the popular principles of individualization in pedagogics of US is the principle of enrichment (the replenishment of universal program), involving 2 types: horizontal (knowledge expanding) and vertical (knowledge deepening). So students can work on the program, appropriate to their individual interests and professional intentions (Zakharova, 1995).

Alternatively to most Russian universities, where a curriculum is strictly defined for all students of a special profession, American universities do not follow a single obligatory training program.

Defining the basic requirements for a bachelor's degree, a university offers students an option of a large number of elective courses from different areas of expertise, including a course on constitutional state, international standards of human rights, etc., which contributes to comprehensive development of student's personality.

Consideration of the basic conceptual ideas of individualization of higher education can be attributed to the development of US in three leading directions.

- *Behaviorist orientation by B. Skinner* (Skinner, 1978; Toktarova & Mamatov, 2015).

The subject of the study is the external expression of human behavior. In this system, the same course material is taught in a different way, and its study is organized taking into account the individual characteristics of students.

- *Humanistic Orientation by A. Maslow*, (Maslow, 1998; Voronin, 2014), *C. Rogers* (Rogers, 1961; Mikhalkin, 2015).

Personality is considered as an integral expression of creative self-realization, characterized by the freedom of self-expression, creativity and aspiration to the personal growth. Under the influence of the ideas of humanistic psychology, the groups of "open learning" appeared in the system of education US universities. In such groups, students are free to define their research interests and to express different points of view in a dialogue with the teachers as well as to critically analyze scientific positions.

- *Cognitive direction* (school of J. Piaget, ideas of K Lewin, Gestalt psychology).

This direction is connected with the development of cybernetic direction in learning theory and cognitive theory of sociology and psychology of management, such as the theory of social justice of H. Tejfel.

In such a manner, having considered the main direction of education individualization in the United States of America, it becomes possible to note focused orientation of the entire higher education system on student's individuality, the variety of forms, the means and methods of individualization of education.

The current trend of individualization of education points to humanization of education, and leads to refashioning of higher education system and to the development of the following basic principles aimed at creating conditions for the development of student's individuality as a competent expert and independent citizen of a democratic society:

- The principle of deliberate perspective ("do yourself"), according to which every person has the opportunity to actively participate in his or her own education. Knowledge will automatically become high-demand rather than imposed by the rigid framework of the curriculum, the motivation of education and the effectiveness of acquisition of knowledge will increase;
- The principle of flexibility of higher education, according to which the content of teaching and the ways of knowledge and professional skills acquisition meet the needs or the level of individual ambitions. In this case, the system of multi-level higher education is justified by means of the possibility of specialization change or learning several trades during education at the university;
- The principle of responsiveness of the higher education system, connected with the ability to respond quickly to changes in the economy, information systems, etc.;

- The principle of individual education, the realization of which results in co-creation between a teacher and a student, contributes to quality improvement of information perception and the development of professional skills.

In recent times, the "Theory of Inventive Problem Solving" (TIPS) was actively used. This technology is recognized by many companies in the USA as the most effective one. There is a significant experience of application of TIPS gained by many companies (P & G, Ford, Motorola, and others.). The application of TIPS is effective if the process of problems solution is maximally connected with the organization of work of each employee, team or department. The method of organization of team work - the organizational engineering, better coordinates the application of TIPS with an overall strategy of innovation in the company (Altshuller, 1999).

3.2 General description of Russian education system

In Russia, the traditional system of education was used until recently. The purpose of this system was the formation of an all-round person, unity of education, politeness and general erudition.

The traditional system of education has its advantages: it is time-proved, it is used by many countries, it gives specific and accurate knowledge in a particular area, and it develops discipline, exactingness and responsibility. This system has existed for many decades and quite good experts were prepared with the help of it (Brylina, et al., 2016).

But at the same time, despite being one of the most globally common, it has a number of significant disadvantages: it was ideology-driven, separated from the entire strata of Russian and global culture. For decades, it had been focusing on the upbringing of a standard person. It imposed the standard stereotypes of thinking; it did not contribute to the development of imagination. The graduates of this education system were entirely dependent on society and the knowledge that they possessed, they were unable to think independently, to reflect and to imagine.

The traditional system imposed the sum of knowledge and skills, regardless of whether they were needed or not. There was no motivation in teaching, and learning model was presented by the subject - object relations, where the role of a subject was played by a teacher and a pupil served as an object. This type of relationship is based on the transfer and replication of past experience, not actualized in accordance with student's personality and social development.

The main aim of developing in Russia in the XXI century education is to prepare students for independent acquisition of knowledge, search for truth, as well as independence in everyday life. The basis of such education is productive activity of students. Here, a teacher plays the role of a facilitator of the search process, not just a "transmitter", the translator of knowledge and truth. He organizes the process which activates memory, imagination, developing different forms of thinking (formal logic, dialectical, clip thinking) (Moiseenko et al., 2016).

The idea of distinguished Russian psychologist S.L. Rubinstein about the process of development of human consciousness through the resolution of cognitive problems is the core of problem-based education. Therefore, problem-based education is revealed through the formulation and resolution of problematic issues, challenges and situations. It:

- stimulates the expression of activity, initiative, independence and creativity of students;

- develops intuition and thinking;
- teaches how to solve various scientific and practical problems, share the experience of creative solution of theoretical and practical problems.

The difficulty in organization of problem-based education is associated with long preparation time, the possibility of its independent solution by any student, the lack of a stable result in problems solution (Makhmutov, 1975).

Also the technique of advanced education is used, where competence is formed by means of social education, consulting and psycho-social support in the process of carrier orientation, training and retraining, and also on the basis of state support of innovative educational technologies, educational projects and structures. New approaches to the processes of adaptive potential formation of young people are evidenced in advanced education.

The most important aspect of such type of education consists in discovering and developing of natural human potential to the advanced basic state of formation and oneself as a person, and the environment of one's life.

4. Conclusion

The article investigates and compares the issues of modernization of educational methods in the United States of America and Russia. It is shown that the general trends of global education are presented by individualization and humanization. Global education determines the necessity of the development of abilities to use knowledge in an innovative mode; the abilities and opportunities of their augmentation by means of self-education. These abilities lead to the formation of flexible and effective thinking under the conditions of mobility and uncertainty of social reality, as it is impossible to ensure the development of an independent person, without critically and creatively thinking.

References

- Altbach, P.G. (2000). The Crisis in Multinational Higher Education. *International Higher Education*. 21. 3-5.
- Altbach, P.G. and Knight, J. (2007). The Internationalization of Higher Education: Motivations and Relatives. *Journal of Studies in International Education*. 11 (3/4). 290-305.
- Altshuller, G. (1999). The Innovation Algorithm. TRIZ, systematic innovation and technical creativity / Translated, ed. by L. Shulyak and S.Rodman. Worcester: Technical Innovation center, Inc, 315.
- Brylina, I.V., Turchevskaya, B.K., Bogoryad, N.V., Brylin, V.I. & Chaplinskaya, Y.I. (2016). Critical Thinking as a Cognitive Educational Technology. *SHS Web of Conferences*. Vol. 28.
- Lefrancois, G.R. (1999). Psychology for Teaching. Wadsworth Publishing: Belmont, California.
- Makhmutov, M.I. (1975). Problem-based education: basic theoretical issues. Moscow: Education.
- Maslow, A. (1998). *Toward a Psychology of Being*. ISBN: 978-0-471-29309-5
- Mikhalkin, V. S. (2015). The integration and complementarity of general scientific knowledge and religious worldview aspect of higher education. *Integration of Education*, 19(3), 108-114.
- Moiseenko, A. V., Brylina, I. V., Kornienko, A. A., Berestneva, O. G. & Kabanova, N. N. (2016). Visual language as a mean of communication in the field of information technology. *IISA 2015 - 6th International Conference on Information, Intelligence, Systems and Applications*. <http://dx.doi.org/10.1109/IISA.2015.7388015>
- Rogers, C. (1961). *On becoming a person*. Boston: Houghton Mifflin Company.

- Schelsky, H. (1967). *Schule und Erziehung in der industriellen Gesellschaft* (School and education in the industrial society). Würzburg: Werkbund.
- Skinner, B. (1978). *Reflections on behaviorism and society*. N. Y. Prentice Hall.
- Sorokina, N. D. (2009). *Management of innovations in higher education* (sociological analysis). Moscow: Canon +, Rehabilitation.
- The Maastricht Global Education Declaration (2002) Retrieved from https://www.coe.int/t/dg4/nscentre/GE/GE/Maastricht_Global_Education_Declaration_EN.pdf.
- Toktarova, V. & Mamatov, D. (2015). Implementation of the adaptive learning model based on learning styles *Theory & Practice of Social Development*, 8, 231-236.
- Varghese, N. V. (2009). Cross-border Higher Education and National Systems of Education. *Education Across Borders: Politics, Policy and Legislative Action*, ed. by J. Fegan and M. H. Field, Heidelberg: Springer. 33-48.
- Voronin, S. V. (2014). Comparative analysis of theoretical views of Maslow and Erich Fromm as representatives of humanistic science to the phenomenon of love. *Izvestiya Sochi State University*, 29(1), 271-274.
- Zakharova, A. P. (1995). Formation and development of system of scientific and pedagogical personnel preparation in the United States of America.: Abstract A.P. Zakharova. Moscow State University.