

EDUCATION DEVELOPMENT PROBLEMS IN THE POST-SOVIET SPACE

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Abstract

The current global crisis can only be achieved through a more educated society. The EC's innovation strategy is the expansion of the capacity of human resources in innovative activity; and the creation of knowledge and its practical application has an important role in knowledge management. The implementation of this strategy in the former-Soviet space is complex and has significant deficiencies. Production and dissemination of knowledge is characteristic of the former-Soviet countries, and is less focused on its practical use for a variety of reasons, among which the most important problems of mentality and language barriers still remain. The elimination of the abovementioned is available by means of creation of the right educational policy and knowledge management system. The most successful companies "understand" that the rejection of knowledge management would be an expensive cost for them. The paper analyzes the development of modern state education and shows the connection between education and development of knowledge management. The author also investigated basic education development problems and cause-effective relationship based on knowledge management and conceptual model of knowledge management is presented. In the final part of the paper the author gives education-related recommendations for problem solution in the former-Soviet space.

Keywords: Education marketing, Knowledge management, Knowledge map

Introduction:

A certain aspect of sustainable development has its important role in the main challenges of the third millennium, including the question of education on its central place. On advanced stage of civilization, both developed and developing countries pay more attention to the establishment and development of a knowledge-based society. Therefore, the vast majority of research falls on knowledge development problems. The main demand of civilization is the creation of a unified world, based on innovative knowledge.

Creation of proper educational policies and its realization is available to ensure the abovementioned for specific countries. For this purposes, at the end of 90s, educational reforms began in the space of the former Soviet Union.

In 1999, an agreement about the education space -"Bologna Declaration" was signed. Among the 29 signatories of the declaration, 10 countries were added in 2004 and in 2005 their number increased to 45, where Georgia, Azerbaijan, Ukraine and Moldavia had already been among the signatories of the declaration.

Bit abovementioned is only the fixation of the fact, after which the successful realization of its contents is to be secured. In reality, after joining the Bologna process, things in Georgia developed very quickly. Reforms in the education system began immediately, what was reflected on the implementation of Unified National Examinations for admission to institutions of higher education. The notification was followed by a complete reform of the education system.

In 1998-2000, the high school turned quickly and with great enthusiasm into a three-stage study (Bachelor, Master and Doctoral level). But no one knew exactly what and how to teach, and many were in search of approaches and methods to see which of them would be relevant to our reality.

In this case the biggest mistake was to carry out activities without research and analysis of the environment. Nowadays, all agree that in case of the five-year study we got more trained specialists in high schools than we have today with Master's diploma. It is absolutely true, because the idea of two level teaching is good, but the question is when?

Based on what? Or how many of these specialists are required and in which field of public life? There was no survey carried out concerning the graduates and employed to be required and even no real data. Several meetings were held at international level to create a common European space for education and ensure sustainable educational system. The modest list of it looks like this: "Bologna Declaration"- 1999, Lisbon 2000 strategy in the field of education, Prague Communiqué- 2001, Berlin Communiqué-2003, Bergen Communiqué-2005, London Communiqué in 2007 and new communiqué in Leuven 2009. Each of them agrees with the basic requirements of the European education space where it is important to implement the system of comparable academic degrees, to carry out research-oriented teaching process and to ensure the existence of undergraduate and post-graduate education system; also to implement European Credit system; quality assurance of cooperation; the development of educational programs, cooperation of educational institutions; to provide mobility; to create integrated programs of teaching and research; continuous education system and its perfection. Update knowledge and the development of the Lisbon strategy will remain a priority in 2020. The current global crisis can only be achieved through more educated society. This is a very well understood in Europe. The EC's innovation strategy is the expansion of the capacity of human resources in innovative activity; the creation of knowledge and its practical use, which has an important role in knowledge management.

The implementation of this strategy in the post-Soviet space is complex and has significant deficiencies. Gaining and dissemination of knowledge is very characteristic for the post Soviet countries. They are less oriented on its practical use. There are varieties of reasons for it, among which the most important problem-mentality and language barriers-still remain. The elimination of the above-mentioned is available with the help of creation of the right educational policy and the system management of knowledge.

In the former Soviet countries science and education reached a high level, but this potential was absolutely useless for Post-Socialist Countries' economy. Such opinion is submitted to the World Bank experts' report, which was published under the title "Public Financial Support for commercial Innovation",⁷³ where the problems of research and commercialization of the independent countries separated from the former Soviet Union, are analyzed. According to the survey – 15% of gross domestic product(GDP) is spent on scientific research and innovation, in Russia-1.2%, in Ukraine 0,8% in Estonia,-0.7 Lithuania and Belarus, 0,4% in Latvia, 0,3% in Azerbaijan, 0.2% in Georgia, Armenia and Kyrgyzstan; In European and Central Asian countries for scientific and technological findings are spending 0,9% of GDP and the humanity is spending 2.3% of the planet's GDP on scientific research, for comparison-U.S" puts"2% of GDP for scientific research, Israel-5.1% of GDP and Finland 3.6%.

In Europe and central Asia, mainly the State assumes the costs for the development of science and technology, one-third of mentioned costs come from the private sector.

⁷³ World Development Report 2004 <http://www-wds.worldbank.org>

In some countries (Japan, USA, Sweden, Finland, Ireland, Germany), where money is actively put into science and innovation, the share of business sector in funding reaches 65-70%-while the states pays the rest.

The number of scientists in Europe and Central Asia still remain (despite the current financial problems in this area) on their high-level, from the former Soviet Union – on average, two thousand researchers or employees are coming to one million people who are related to the development and introduction of new technologies. According to countries the World Bank publishes the following data: Russia – 3,4 thousand researchers to one million people, Georgia – 2,4 thousand; Ukraine – 1,8 thousand, Estonia – 2,3 thousand, Belarus and Lithuania – 1,9 thousand, Armenia – 1,6 thousand, Latvia – 1,5 thousand, Azerbaijan – 1,3 thousand, Kyrgyzstan – 0,5 thousand; Moldova – 0,2 per thousand, for the EU countries, the parameter reaches 2,5 thousand – to one million. In this respect, a world leader country in Finland: 7.5 thousand researchers to one million inhabitants; then comes Japan – 5 thousand, and Germany – 3,2 thousand. As the statistics show, performed works by scholars and their views do not suffice to even higher levels of economic growth.

Without commercialization of research results, research and education funds are spent in vain. Despite the innovations of life – the need, even in economically successful countries, the growth of expenses becomes problematic. The latter is caused by two main reasons, one: any new idea or product that makes the most impact on society and the economy, in addition, the inventors, often cannot take profits and others gain it, therefore suppressed “research” stimulus remains suppressed; and not only scientists lose interest in the creation of new ideas, but also people or institutions who fund the scientific researchers at an early stage. The second factor: manifestation of “information asymmetry” – inventors (to the author) are much more aware of their own invention and its potential use than the financier who has the financial resources to ensure the idea. It is very difficult for scientists to submit their project to adequate dignity and prove that idea on an industrial realization – will bring profits. This is because scientists and investors speak in different languages what makes funding problematic.

In the USA, scientific researches in the early stages are funded by the government (budgetary funds on average, 34% of financial resources invested in projects – total and “venture” capital (it is 34%) and 25% - the entrepreneurs invest in projects and hope for big profits in future).

From the designated countries of the former Soviet Union, the situation in comparison of the U.S. is radically different: entrepreneurs usually do not invest commercializing scientific opinion, and the states do not have adequate resources or, if they have any, they do not know how to act in this field (from the view point of commercializing scientific ideas).

The level of education of any state reflects the economy and four components “knowledge economy” – determines a successful formation of states.

According to a new methodology, knowledge-based economy indicators are of great importance. One of the defining approach of state development indicators is given in the World Bank K4D (K Knowledge for Development – Knowledge Development) program.

In addition to professionals, scientists in industry, we need the right type of people available to transfer intangible assets (Licenses, Trademarks, scientific solutions, patents, know-how, human capital, knowledge) into material. Intangible assets of industrially developed countries determine the value of large companies. In former Commonwealth of Independent States, scientific research and commercialization of innovative business face two major obstacles (we do not use alternative ways of commercializing research results); these are NASDAC – like stock market and venture capital (the so called “venture” capital) companies with no presence.

Recent studies showed that tangible assets are only visible with a small part of the corporate property or market value. The obvious representation is sufficient to note that total market capitalization of 500 leading the company with “Standard and Poor’s 500” index rated

companies in the market, and the ratio between the carrying amount of the 5,3 and for some high-tech firms this ration (the ratio between the carrying amount and the companies' market) was more than 10.

Nowadays, “invisible” assets in expense of intellectual capital bring the biggest profit (in developed countries), that is why many companies (in developed countries) invest education and do not require immediate return on such investment as they are convinced that due to such actions (investment) increasing market requirements will be satisfied.

The most successful companies recognizing the knowledge of capital, “understand” that the rejection of knowledge management would be an expensive cost for them.

This growing part of nowadays product cost is the part knowledge share put in it and the value of the same knowledge in product cost is growing more and more. Knowledge development is closely related to practical use of knowledge. As far as the main source of knowledge transfer is the field of education, we conducted our research in terms of knowledge use and development in educational institutions and business structures. The transfer of knowledge in organizations is done by means of communication, the ranking of which according to existing reality can be as follows: Personal communication, group communication, knowledge management and corporate sources, or communication via IT technology.

The research found that three of the knowledge transfer processes are not carried out properly. The reasons for this mainly is monopolization of information in higher educational institutions, or in other words the problems of solo or group communication in the majority of educational institutions. The analysis showed that in 57% research objects – no news, innovative approaches and new knowledge – information about knowledge are timely and completely transmitted. Information on the middle and lower levels of governance is going to come late or not at all, resulting in the formation and dissemination of knowledge improperly. The analysis shows that from 100 percent of knowledge dissemination about 34% falls on delayed provided information about knowledge; 21% belongs to incorrectly (vague) delivered information, 35% - for provided incomplete information; and 10% is for the information which is unknown for the applicant.

Results from the study showed a picture of the causes which are largely dominated by a variety of inappropriate and outdated management approaches. These causes were cited by 57% of research objects including the so-called public and private institutions of higher education. The obstacles of knowledge dissemination and use in state institutions of higher education are expressed by 27% because of IT technologies, and in private sector its share 15% is still observed. Might sound sad or not, the survey revealed that in the majority of educational institutions the practice of “hidden knowledge” still exists. The supporters of this approach allow them to maintain their positions for a long time that makes the structure more monopolized ensuring their life cycle.

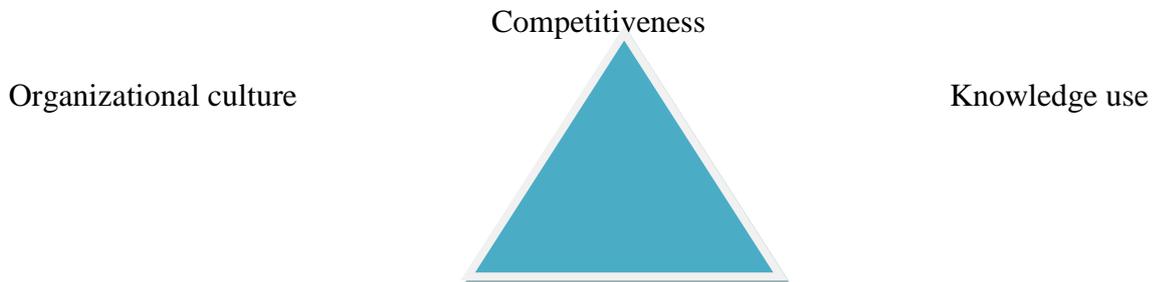
In terms of knowledge dissemination and use, financial management problems are obvious when universities, financial management of Universities due to lack of financial resources could not or do not fund the use of knowledge activities in the structure.

Radically different is the picture of business structures, among which, by our banking institutions, were selected industrial enterprises, insurance companies, and retail facilities. There in terms of knowledge in practice a wide range of innovative work is being conducted. In the bank structures using private, group and IT technologies, the level of communication is high. The inhibiting reason for knowledge dissemination use is mainly caused by the gaps while rotation (21%), and because of the use of low qualification staff (which creates the problems associated with the perception) the obstacle for knowledge use falls 11%. As for industrial corporations and insurance companies, the process of dissemination and use of knowledge is intensively conducted. However, the deficiencies in corporate databases are

more obvious. From financial point of view, this target group is sponsoring the dissemination and use of knowledge in the range of their interest sphere.

The situation is much more difficult in trade objects where 62% of respondents are not aware of knowledge management concept; 21% - (mid-level management) heard about it, but did not actually possess the technology; 15% - (upper-level management) does not see the need for this stage; 2% - was attributable to the trading centers, like: network Carrefour and goodwill, and upper-level management believes that the knowledge management in their companies are in their embryonic process and they consider short-term operating period in Georgia market the cause of it. The analysis showed that a large part agencies surveyed do not consider the intellectual resource to be a section of strategic perspective which already belongs to the past (is the part of yesterday). Intellectual resources should be considered to be the main factor of competitiveness and insurance of stable financial resources. Starting point for any companies should be a constant concern for upgrading and development. The companies should actively make their effort to apply the knowledge use and dissemination; to job creation and implementation of marketing research; to creation innovative groups and activities as they work on developing new and growing intellectual resources. To do that, first you need to create a high organizational culture. The latter is not only the development of the organization’s code of ethics and behavioral norms. Under the definition of organization culture we mean determination of the chain of values of competitive strategy and its purposeful implementation which resulted in a highly competitive priority setting and financial results.

All of the abovementioned allow us to say that education is achieved through the development of knowledge management. The latter results are highly dependent on organizational culture, which gives ability of practical knowledge use and allows to increasing competitiveness. Thus, knowledge management, a conceptual model can be represented as follows:



Picture 1. Knowledge management conceptual model

Knowledge development, application, and their socio-economic implications of a clear example of the world-famous techno parks and techno zones are clear examples on knowledge development and use and their social-economic consequences. Here knowledge management, knowledge development and use elements are nicely combined.

By the definition of International Association of Technological Parks developed in 2002, “Technological Park is managed by specialists whose main objective is to improve the well-being of local communities through the development of an innovative culture. It promotes the development of innovative business and scientific institutions. To achieve these goals, the technological park properly allocates human resources and knowledge to universities, scientific – research institutes, companies and markets”.

39 000 people are employed in research triangle, North Carolina, the majority of them (97,3%) work in scientific- research organizations. This is due to the fact that the University qualified personnel and young scientists are attracted in techno parks. Investments in Techno Park annually increased and nowadays it reached 2 billion dollars.

In 90s, Park in Zurich included 190 companies, in which 1,400 people were employed. Establishment of the park caused the creation of hundreds of new jobs.

Romania's techno parks are joint ventures of local and central government, higher education and research institutions and other interested organizations. In 1996, in Latvia "Latvian Techno Parks' Association" was officially established, the main objective of which was to establish close links between science and business structures.

Conclusion:

As it has already been mentioned, the problems of education development are closely related to knowledge management. It is recommended to achieve high results with knowledge management by means of "the knowledge map" which is specific for each structure. By means of "knowledge map" we determine the value of new knowledge, create channels for knowledge transmission, and implement the relevant information technologies and programs. A "knowledge map" appears to be a kind of geographical model for organization, on which are given all necessary processes for the use and management of knowledge, including the restrictions and costs.

The existence of such mapping facilitates the control of the business – processes, the introduction of innovations while creating new products in the marketing research - provides scientific- experimental-construction work on elimination coping and reducing costs.

The knowledge map model provides information on the issues on which business processes should be managing the knowledge resources with which we have a connection at this time. The model can also create a specific (detailed) maps separately as business processes, as wells as knowledge resources for implementation.

After creation of knowledge map, start knowledge management activities, which are presented in the form of some blocks:

- Business prospects;
- Managements perspectives;
- Operating activities prospects.

The first block consists of corporate knowledge management strategy. In this case, attention should be paid to the active use of new knowledge for creating new product.

The second block of knowledge management includes the questions of knowledge management policy, knowledge creation, acquisition, transfer and management of use, monitoring of management processes.

The third block is oriented to practical (operational) activities, including the creation of knowledge, access to knowledge and analytical work; intellectual capital formation activities, including the acquisition of knowledge through the information of human resources; scientific knowledge, or similar programs in the system, the knowledge of expert networks, working groups and consultations.

The issue of knowledge management is closely related to the motivation of employees which does not include only tangible forms of stimulation.

Here work trips, internships, various kinds of promotional activities are important.

Under the conditions of global competition, it is necessary to develop techno zones, techno-policies, scientific-industrial and other corporate bodies in the regional context. In the first stage of expediency:

- To create a nationwide techno parks and techno zones;
- To create Armenia-Georgian scientific corporation;
- To create Georgia-Russian scientific-industrial corporation;
- To integrate Educational Institutions into the Baltic States techno park.

In this way, the starting point of experience will contribute to the post-Soviet states to earn competitive scientific resources and become a global integrated (education and research) member agencies. In this way overcome the financial, marketing and management problems that are not possible for individual countries and agencies to solve in a short period of time

will be overcome which ultimately leads to the development of education on regional and global level.

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