IN SEARCH OF EDUCATIONAL STRATEGY FOR UKRAINE

Victor Ognevyuk
Doctor of Sciences in Philosophy, Professor
Full member (Academician) of the National Academy of Educational Sciences of Ukraine
Rector of Borys Grinchenko Kyiv University, Ukraine
rector@kubg.edu.ua
+380442721902
ORCID ID 000-0002-8671-3348

ABSTRACT

The article deals with the world rating of Ukrainian educational sphere according to The Global Competitiveness Report and UNESCO Science Report. It shows comparative indices of Ukraine in contrast to the other countries of these world ratings according to the "Quality of primary education", "Penetration of primary education", "Penetration of secondary education", "Quality of secondary education", "Quality of education in Sciences", "Quality of school management", "School access to the internet" and others. The article also defines strategic directions of reforming Ukrainian education system to improve its position in the world international ratings.

Keywords: *education; international ratings; competitiveness.*

INTRODUCTION

Each country, which strives for sustainable and innovative development, regards quality education as the precondition and the engine of positive changes. For Ukraine, which stepped onto the path of economic, political and social transformations, securing priority for education development is seen as the main condition of its cultural progress. Developing a new educational strategy should stem from an unprejudiced analysis of the contemporary state of the educational sphere. The aim of this article is to define the potential of Ukrainian educational system in the context of its transition to innovative development.

In view of the above-mentioned it is primarily important to refer to the research results of estimated international institutions, in particular to The Global Competitiveness Report conducted after the World Economic Forum in Geneva. The resistance and indolence of educational processes should be considered, along with a twelve-to-sixteen months delay in The Global Competitiveness Report as compared to the declared periods, thus, the 2008-2009 annual report operates on the statistic data of 2008, the 2012-2013 annual report takes the year of 2011 plus the first half of 2012.

In view of this principle, the officially published The Global Competitiveness Report 2014-2015 (The Global Competitiveness Report 2014-2015: p. 543), which accounts for 144 counties, is similarly based on the data lagging behind for one to one-and-half year.

RATING PLACES UKRAINIAN EDUCATION SPHERE IN ANALYTICAL REPORTS OF THE WORLD ECONOMIC FORUM IN GENEVA AND ENESCO SCIENCE REPORT

For a broad dynamic picture of the state of Ukrainian education we compare its rating in analytical reports of The World Economic Forum in Geneva dating back to 2008-2009.

So, the parameter "Quality of primary education", which is represented through 7-point scale coefficient with 1 being "the worst" and 7 being "the best", for several years running has been headed by Finland. The top five of the rating includes Belgium, Singapore, Switzerland and New Zeeland. Ukraine took the 40ieth position in the rating (Table 1) (The Global Competitiveness Report 2014-2015: p. 452). Ukraine's dynamics of ratings in this parameter is the following:

Table 1

The Global Competitiveness Report	Ukraine's position	Coefficient	Average coefficient for all countries	Countries rated
2008-2009	37	4,6	3,8	134
2009-2010	41	4,4	3,8	133
2010-2011	49	4,4	3,9	133
2011-2012	52	4,2	3,8	142
2012-2013	44	4,4	3,8	144
2013-2014	37	4,7	3,9	148
2014-2015	40	4,7	3,9	144

Compared to the above-mentioned situation the parameter "Penetration of primary education" gives a much more positive tendency (Table 2) (The Global Competitiveness Report, 2014: p. 453).

The unprecedented leap of Ukraine in 63 points at a time can be explained by application of more reliable statistic sources than in previous years. Thus, according to official inner statistic data, Ukraine provides primary education to virtually all children of the appropriate age.

The top position with one hundred percent of penetration is held by Singapore and Canada tightly followed by Japan and China yielding 99,9%. The list is closed by Nigeria (63,9%), Chad (63,1%) and Cote d'Ivoire (61,9%) considerably lagging behind (Table 2) (The Global Competitiveness Report, 2014: p. 453).

Table 2

The Global Competitiveness Report	Ukraine's position	Ratio (%)	Countries rated
2008-2009	84	90,2	130
2009-2010	91	89,4	131
2010-2011	102	88,9	136
2011-2012	105	88,6	142
2012-2013	90	90,7	141
2013-2014	94	91,7	145
2014-2015	31	97,9	144

An important and rather complex parameter is "Penetration of secondary education" in view of its calculation issues. It indicates basic and not completed secondary education. Unlike the accepted home formula, which considers all school-age children attending school minus the share of those who fall out of it for various reasons, UN encourages the international research community to apply a so-called brutto coefficient of penetration (GER). This coefficient includes repeated attempts of a child to get the given level of education (after suspension or enrollment to alternatively managed schools). Application of this much more intricate formula results in penetration ratings exceeding 100% in 36 countries out of 144 (Table 3) (The Global Competitiveness Report, 2014: p. 456).

Yet, Ukraine holds quite firm positions in this rating:

Table 3

The Global Competitiveness Report	Ukraine's position	Ratio (%)	Countries rated
2008-2009	50	93,4	134
2009-2010	44	94,2	133
2010-2011	44	94,4	139
2011-2012	48	94,5	142
2012-2013	49	95,6	144
2013-2014	54	94,0	147
2014-2015	41	97,8	144

It should be mentioned, that if the rating were based on the percentile of school-children gaining full secondary education, Ukraine would definitely top the list because it constitutionally requires each citizen to complete it in full.

According to the "Quality of educational system" Ukraine improved, however minimally, its position continuing to balance in the middle of the rating (Table 4) (The Global Competitiveness Report, 2014: p. 458).

The challenge is obvious, Ukraine is outplayed not only by recognizable strong leaders like Switzerland, Finland and Singapore but also by others, say Qatar, Cyprus, Barbados and Costa Rika (The Global Competitiveness Report, 2014: p. 458).

To create the preconditions for developing research and innovative progress of the country the level of education in Sciences is crucial. In 2007 Ukrainian students of 4th and 8th grades became part of the international research project for the quality of Science education (TIMSS), giving Ukraine the 25th position in Maths and the 19th position in Nature Studies. The results of 2011 were even higher, correspondingly 19th and 18th positions.

Table 4

The Global Competitiveness Report	Ukraine's position	Coefficient	Average coefficient for all countries	Countries rated
2008-2009	40	4,2	3,7	134
2009-2010	49	3,9	3,8	133
2010-2011	56	3,9	3,8	139
2011-2012	62	3,8	3,8	142
2012-2013	70	3,6	3,7	144
2013-2014	79	3,6	3,7	147
2014-2015	72	3,7	3,7	144

According to The Global Competitiveness Report in the "Quality of education in Sciences" parameter (with the familiar seven-point scale) the world leaders are Singapore and Finland scoring 6,3 with Belgium and Switzerland closely following (6,3 and 6,0 correspondingly) (The Global Competitiveness Report, 2014: p. 459). Ukraine had the following positions in The Global Competitiveness Report (Table 5).

Even if there is no significant break-through the rating positions of education for Sciences in Ukraine remains pretty high, leaving grounds for a forthcoming powerful progress.

According to the "Quality of school management" parameter (measured by the seven-point scale) Ukraine has the following dynamics (Table 6). And just a few countries to compare: Latvia – 52; Japan – 72; Poland – 84; Georgia – 98; Russia – 104) (The Global Competitiveness Report, 2014: p. 460).

Evidently, the situation cannot be improved without drastic measures in decentralizing education management, redistribution of authority in school governance in view of increasing their professionalism.

Table 5

The Global Competitiveness Report	Ukraine's position	Coefficient	Average coefficient for all countries	Countries rated
2008-2009	32	4,9	4,1	134
2009-2010	41	4,7	4,0	133
2010-2011	42	4,6	4,0	139
2011-2012	36	4,6	3,9	142
2012-2013	34	4,6	3,9	144
2013-2014	28	4,8	4,0	148
2014-2015	30	4,8	4,0	144

Table 6

The Global Competitiveness Report	Ukraine's position	Coefficient	Average coefficient for all countries	Countries rated
2008-2009	71	3,9	4,1	134
2009-2010	95	3,7	4,2	133
2010-2011	108	3,5	4,2	139
2011-2012	116	3,4	4,2	142
2012-2013	117	3,4	4,2	144
2013-2014	115	3,6	4,2	148
2014-2015	88	3,9	4,2	144

We consider that in decentralizing the education management the central bodies need to retain the effective strategic-making function whereas formation of state standards followed by clear expected outcomes of education should go to academic institutions; local authorities need to provide for proper conditions for children education and teachers' working environment, finally, the syllabi, methodologies and textbooks choices are to remain forever in the scope of a teacher's competence.

Modern educational strategy is impossible without information-communication technologies. The parameter "School access to internet" (defined by the seven-point scale) shows Ukraine on the following positions in The Global Competitiveness Report (Table 7) (The Global Competitiveness Report, 2014: p. 461).

Table 7

The Global Competitiveness Report	Ukraine's position	Coefficient	Average coefficient for all countries	Countries rated
2008-2009	69	3,4	3,6	134
2009-2010	70	3,5	3,8	133
2010-2011	68	3,8	4,1	139
2011-2012	70	4,1	4,2	142
2012-2013	62	4,4	4,1	144
2013-2014	70	4,3	4,2	148
2014-2015	67	4,3	4,3	144

In the massive research "UNESCO Science Report: Towards 2030", prepared by the UN every five years, the repeated statement about research is that it should aim at the planet's prosperity yet it grows from economic crises, social outbreaks, natural disasters and political conflicts (UNESCO Science Report: Towards 2030). The major outcomes of this Report come down to several issues.

First is the contribution to research. The numbers of researchers and research papers increase quicker than the growth of world economy. Thus, in 2013 around 7,8 mln researchers worked in the word, which is 20% more than in 2007 (UNESCO Science Report: Towards 2030: p. 14; 17). Most of researchers are concentrated in the EU countries, the USA and China. The world leader in the ratio of scholars per each 1 mln of population are Finland (around 7,5k), Denmark (around 6,8k), Singapore (around 6,5k). Outsiders giving less than one thousand are Turkey, Romania, Kazakhstan, Brazil, Uruguay, Columbia, Mexico, South Africa and Kuwait. Ukraine ended up with the ratio around 1,4k in the company with Latvia, Poland, Italy, Malaysia, Malta, Bulgaria, Argentina, Costa Rika and Serbia (UNESCO Science Report: Towards 2030: p. 13).

Second, stimulation of GDP growth and increase of living standards of any country depends on the development of research, technology and innovation. The Report states that in the context of applying research-based innovations for economic growth Ukraine "is currently less blessed than in the happy eighties, yet still remains compatible (with its 0,7-0,8% of GDP) to the countries with average levels of growth and less ambitious aims" (UNESCO Science Report: Towards 2030: p. 30).

Third, a country's success in implementation of its research and innovation policies depends on how governments synchronize the development of education, fundamental research and technology with stimulation of private investments into research and innovation.

The Report remarks that investments in research increase annually. From 2007 to 2013 it grew by 30,7% whereas global GDP for this period increased by 20%. Specifically quick growth of their share in these investments is demonstrated by the countries of South-East Asia, Brazil, India, Turkey. Almost a third of world research expenditure goes to the USA, a fifth goes equally to China and EU and a tenth to Japan.

There is a clear tendency for correlation between private investments in research and education. Thus, private business sponsored 1.15% of world GDP in 2011 into research and its implementation. In Canada, Italy, Great Britain, France and Austria private investments compensated for most or almost all state expenditure on research.

Globalization involves research and education as well. Internet is rapidly changing the shape of studies and inquiry along with the whole world for that matter. Research becomes more and more global and open, penetrating freely the formal borders of countries. Due to the mass accessibility of on-line courses formed by consortia of major universities a so-called open education is spreading quickly. Yet, in the context of students' academic mobility and internationalization of higher education the role of a university is equally increasing. The fact that each second international student studies in the USA is an evidence of the country's accessibility for education and living, along with the quality of North-American college education.

Overall, the Report correctly reflects both strong and weak sides of Ukraine (being included into the Black Sea Region section and compared to Armenia, Azerbaidzhan, Belarus, Moldova and Turkey) in view of its educational level and potential for research (UNESCO Science Report: Towards 2030: p. 313-323). It also indicates the pitfalls preventing the onset of innovational revolution. The drawbacks of the Ukrainian model for research, according to the Report, begin with the domination of state support of research over private capital investments; only a small portion of international capital is invested into research; almost half of the state support goes to different research academies, starting with the National Academy of Science. The state is trying to involve the private sector into research sponsorship with poor success, primarily explained by the state's inability to stick to its own commitments in financial aspects of research projects.

Ukraine is also lagging behind in the number of research publications and their impact. The numbers for quoting for Ukraine is the lowest in the Black Sea region. Ukraine's most drastic gaps in the publication field are world-and-foreign languages research articles in social and computer sciences and also in agriculture (considering especially that Ukraine is the world's third grain exporter).

The Report states that the human resources policy of the government in Ukraine is inertial and neglects international internship of researchers in foreign institutions, even in spite of some specialized stipends for scholars. Another remark emphasizes the huge number of retirement-aged researchers, with an average Doctor of Science being over 61 and PhD-titled scholars over 53. The average age of researchers increases by one year in each three years (UNESCO Science Report: Towards 2030: p. 336-338).

Most of Ukrainian research institutions concentrate on traditional industries and neglect the IT sector. A serious complication to perspectives is the fact, that research-and-science policy is mostly controlled by the central bodies, the Cabinet and ministries, whereas local authorities have limited instruments of influence and outreach to the institutions they host. Yet, local authorities could introduce financial immunities, or contribute to the support of the research institutions by lending land and property, also increase the capitalization opportunities for innovative research, depending on their resources, needs and power. Instead, a university is traditionally perceived as an odd additional stich in the national research sector, limited to educational function and not allowing students' contribution to be of worthy value.

In general, Ukraine has all preconditions for a powerful start. Potentially high chances for integration of Ukraine into the world global education is an important factor of success in innovations, trade, human resources and workforce development. World economy, being knowledge-based, requires highly educated specialists from Ukraine, who are potentially capable of improving the existing political, business and intellectual elite, and also can hold leading positions among the others. Internationalization of education and research institutions of Ukraine not only yields a substantial income (according to the Ministry of Education and Science, Ukraine annually gets around $500 mln or 13.5 bln UAH from international students) (Foreign students poured into the Ukrainian economy about 500 million per year [Electronic resource]), but also allows present an future generations of Ukrainians to form an entrepreneurial competitive outlook, thus contributing to the "diplomacy of knowledge".

Until now most of Ukrainian universities have demonstrated a quite utilitarian attitude to international students' training, mainly regarding them as a source of increasing their special purposes funds, in other words, accumulating for current expenditure. Yet, from the point of view of national interests, this segment has a much richer potential due to the networking graduates of Ukrainian universities, who, after they return home from their colleges, may stimulate and encourage foreign partnership, investments, diplomatic relations through our supporters. Following the example of other countries, Ukraine can also benefit indirectly from the expenditure of visiting students thus stimulating its economy and securing jobs for thousands of Ukrainian workforce.

In addition, taking into account that every region of Ukraine has renowned universities, these benefits will impact not only the capital but disperse throughout the country and add to stimulating decentralization reforms. So, we need new policies for developing local universities in Ukrainian towns like Bila Tserkva, Hluhiv, Drohobych, Ismail, Nizhyn, Sloviansk, because they create a strong positive cultural and intellectual environment and can become leading stimuli of the region's development.

To implement a new development strategy Ukraine needs radical changes in education. The corner stones for reforms in education should be demonopolization of state (no to be mistaken for unaccountability), providing legislative grounds for opening educational institutions of different proprietary status, allowing potential mixture of private, municipal and state capital for joint contribution to educational projects' funding. One of the most important steps of the state in educational sphere is eliminating excessive administrative control of educational institutions, along with limitations for gaining funds and income and their further usage for institutional development at the school's disposal.

The next important step of Ukraine's new strategy has to be a shift of educational paradigm, leading from accumulating knowledge of human historical experience to activity-based learning, when educational process is designed as an organized students' activity to develop vital competencies and knowledge for their daily application, leaving theoretical generalizations up to the person to derive on one's own, instead of cramming ready-made strangers' definitions. The value of such generalizations becomes interminable, being the basis for life rather than a topic for a seminar or grading in classes. This approach opens opportunities for emerging of a creative, intellectually developed person with innovative thinking, who is guided by core values. We should stop perceiving schools as a limited

location for dated stereotypes and start building an alternative institution as an open educational environment, which combines opportunities for individual learning trajectory with developing team working skills and achieving individual and group success. The living space has to become ultimate learning environment with objects of reality, such as nature, domestic items, technology and other structures, performing the role of didactic material.

Overall success of educational reform has to be measured by the degree of interest to it form students. Children, born in the times of progressive mobility, cannot be taught at desks, rigidly fixed by arms and legs. This format tires them too soon. Mobility of educational process with its flexibility and versatility, heuristic and creative character will become a foundation of success and cause optimism.

Mobility-based education requires a mobile teacher, properly motivated to work creatively and with interest. The country will not make any noticeable progress if a fresh MA graduate, taking the job of a young teacher, is monthly rewarded for 18 hours-per-week of labor only 1927 UAH, which equals $0.66 per hour by today's currency rate. Reforming compensation system in contemporary Ukrainian education and research can become a significant factor for renewal of the above-mentioned areas and, moreover, of the whole society. This calls for reassessment of all existing workers in education, as well as reorganization of the whole network of all educational and research institutions, but this optimization will result in positive redistribution of funds in favor of a person. However, before starting all these reforms it is necessary to form an attractive stimulating package for those creative and motivated people who are ready to join the pedagogical community, otherwise we replace existing 66-cent teachers with equally qualified for old standards professionals.

CONCLUSIONS

Judging by the choice of European values Ukraine is currently pursuing, in the hard times of economic crisis the country has to add spiritually intellectual revolution to the existing digital shift, focusing its development most on the human priorities and the human drive to live and work in full harmony with nature, society and universe. If we make education and research the cornerstone of our state policy we will synchronize our life with the world leading nations and progress in the context of this revolution, if not, we will end up on the curb. Consequently, we have to make it.

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