

ROMANIAN EDUCATION FROM THE PERSPECTIVE OF INTERNATIONAL STANDARDS AND INDICATORS

Lucian RADU¹

Abstract: *This paper is meant to analyse the efficacy and efficiency of Romanian education, taking into account international standards, to compare it with the most competitive European and especially American systems to find out the discrepancies, to look for the main causes and to present a comparative approach in order to find common solutions to the common problems.*

Key words: *efficiency, international indicators, Economy, society of the future, international standards.*

1. Introduction

Besides the fact that educational problems cannot be solved in a valid universal manner, they must be studied through a specific research that transcends national limits and extends to some forms of education belonging to other countries. The study of educational forms, which appeared in other countries, arose from a permanent necessity of improving education systems, which often have to face common fundamental problems.

Regarding to the perspective of transatlantic relations, the American educational paradigm represents a notable model in the age of globalization and internationalisation of the labour market..

2. Hypothesis

Thus, a study has been conducted, beginning with the hypothesis according to which the American educational paradigm

represents a desirable model for the Romanian educational reform at a declarative level, even though the educators, students and their parents do not know enough neither about the specificity of this paradigm nor about the concrete context in which it operates. The study took place during February-June 2014, with the participation of 700 subjects from Braşov.

3. The structure of the investigated group of subjects

The group of subjects differentiates in the following areas:

- **Age:** 24.6% (172) are included in the category of age between 15-20 years, 25% (176)-in the one between 20-30 years, 41.7% (292)-in the one between 30-50 years, and the rest of 8.6% (60) - in the category of subjects who are over 50 years. It can be observed that the majority of the subjects belong to the category of age between 30-50 years; their

¹ Department of Foreign Languages, *Transilvania* University of Brasov, Romania.

relation with the education system is either direct (the subjects being pupils, university students or teaching staff), or indirect (as parents).

- **Social and occupational structure:**

- Pupils: 7.3% (51) belong to the national colleges and high schools from Braşov (Unirea National College, Grigore Antipa High school, Ioan Meşotă National College);

- 37,4% (262) University students belong to the following faculties from “Transilvania” University of Braşov, Faculty of Psychology and Education, Medicine, Nursing, Sociology and Economy.

- 22% (154) of the subjects represent the teaching staff in the secondary education from the whole county of Braşov and from “Transilvania” University.

- **Parents:** about 33,3% (233), they are mostly the parents of the pupils and university students who have been questioned.

- **Gender:** 77% (539) are females and 23% (161) are males.

4. Research Methodology

The instrument used in this study was the questionnaire. There have been different specific versions of the questionnaire for each social and occupational investigated category.

The pupils, university students, teachers and parents individually filled in the questionnaire. They were free to decide whether to participate in this study or not. There have been no constrains regarding the filling in the questionnaire.

5. Data and result analysis

Data analysis considered the subjects’ attitudes and knowledge implied by the questionnaires items, according to the following characteristics: age, gender, social and occupational categories. The questionnaires involved:

- generic questions concerning the qualitative level of Romanian education,

with which the majority of subjects have permanent contact and, consequently know it very well;

- generic questions related to the evaluation of American education;

- opinions concerning American education, a perception which, this time, is mostly indirect and connected with the information received via different channels: media, internet, readings.

5.1. The opinion concerning the qualitative level of Romanian and American education

Regarding to the perception concerning the qualitative level of Romanian education the highest percentages, which classify Romanian education as excellent come from parents 4.72% and from the category of age over 50 years old, 8.33%. These subjects usually studied during those periods when Romanian education was more rigorous and, not being implied actively in the school life, it is possible that they relate the education to their period of study. Romania inherited from the communist form of government a system with high standards, with a massive participation and a considerable focalisation upon science and technology [5].

The most important deficiencies were the lack of flexibility, the lack of support for innovation and personal initiative. Teachers believe in the excellence of Romanian education in the lowest proportion (1.29%); pupils and students consider it excellent in a higher percentage than teachers (1.59%) do. Parents are those who state to the greatest extent that Romanian education is a good one (57.93%). Regarding the age categories, the subjects aged between 30-50 years old appreciate in proportion of 55.47% that Romanian education has a good level of quality. It should not be neglected that the factors, which are actively implied in the school life, have a more reserved attitude

regarding to the high quality of education in Romania. The teachers (8.44%) are the first among those who believe that Romanian education is of poor quality. Pupils, in proportion of 6.70%, follow them.

Regarding to American education, those who consider it excellent are pupils and students 14.65%, followed by parents, 11.58%. Among those who appreciate American education as being good, parents occupy the first place, 60.51%. It is true that American education grants many rights to parents, even to decide upon curricula, that being the reason for which this socio-occupational category is attracted to that kind of education. The age category, which is mostly attracted to the excellent quality of American education, is the one between 15-20 years old. (12.79%, followed by the one between 20-30 years, 12.50%.) The perception referring to the excellence of the American educational system decreases with age. The category of age over 50 rates the American education as being good in proportion of 56.66%.

Analyzing the general tendency, the Romanian education is considered by a large proportion of the respondents as being an education of good quality (45.9%). With one percent lower are those who consider it as being average. The superior and inferior extremities are represented in smaller proportions, only 6.8% consider it a weak one and even fewer (2.6%) consider it excellent. A larger proportion considers American education excellent (11.6%). 51% consider it good and 24.6% average. Regarding to Romanian education the tendency of its quality is from average to good and for American education the tendency is from good to excellent.

5.2. Supporting arguments

To support the idea of the excellence of American education, we will present below a series of indisputable arguments.

The Jiao Tong classification includes the global ranking of the first 500 universities of the world; among the first fifty, thirty-seven are American universities, five are from Great Britain and only four from the rest of Europe. The Times recorded the fact that 20 of the Top 50 World universities are from the U.S., 8 from Great Britain and 5 from the rest of Europe. Taking into consideration the importance given by the American educational legislation to the performance in Mathematics and Sciences and also the fact that one of the classification criteria of the universities is represented by the frequently quoted scientific works in referential papers, it can be said that the U.S.A. is the country with the most numerous quoted scientific papers in Mathematics (61807 compared to France – 21098 - and Germany - 17528) [4]. Romania is not included in the ranking of the first 82 mostly quoted countries with scientific papers in Mathematics, according to the Essential Science indicators. Regarding the science field, the number of scientific articles published in Nature and Science, which represents another criterion of ranking universities, brings very high scores to the first 3 universities from Top 500: Harvard University 100, Stanford University 70 and Berkley University of California 72 [1].

According to G factor classification, among the 20 best universities in the world, 16 are American. No Romanian university has been included in the first 500 universities in the world. From the universities located in Eastern Europe, Poland has three in this ranking (Jagiellona University, Warsaw University and Wroclaw University) and Hungary two (Szegeed University and Eotvos Lorand University) [1]. Considering the fact that Romania adhered to the UE, and Romanian universities compete directly with the European ones, it is important to see their efficacy from the perspective of this

ranking. Using the same Shanghai methodology, Razvan Florian from the Cognitive and Neuronal Research Centre of Cluj-Napoca, in his study "Romanian Universities and the Shanghai classification", established the 4 best universities in our country: "Bucharest" University, "Babes-Bolyai" University of Cluj-Napoca, Polytechnics of Bucharest and "Alexandru Ioan Cuza" University of Iaşi [1].

The Eastern European Universities from the top 500 contributed in a certain rate to the Shanghai score. The study shows that if we take into consideration only the ISI indicator, their scores are approximately double than those of the most competitive Romanian universities [1]. They should increase 7-8 times their scientific production in order to be internationally competitive [6]. If we make a comparison between the number of scientific articles and the existing population, then the scientific performance of Romania is 11 times smaller than that of the OECD countries, 5 times smaller than the performance of Hungary and 2 times smaller than that of Bulgaria [6]. Besides the purely statistical character of the figures presented above, if we want to increase the quality of the Romanian higher education, taking into consideration the criteria presented above, a serious analysis will be necessary. So as to produce valuable scientific papers, apart from the competence of researchers, there is a real necessity to offer possibilities of participating to international scientific sessions and publishing papers in international journals under the same terms with those we are compared with.

Therefore, a comparison with the American universities should be excluded, because this comparison should be made with those universities with which we can compare on realistic terms.

The Shanghai classification does not only demonstrate a discrepancy between

Romanian higher education and the American one, but it also shows that the entire European higher education must make a considerable effort to reach the level set by American universities.

Thus, the Bologna Declaration adopted in 1999 had the role of bringing European universities to the same level, a level that the participating countries have accepted on their own will. The motivation supporting the declaration was that, by implementing the specific recommendations, UE would reduce the gap between Europe and the USA regarding the quality of education and excellence in research. In the Annual Report of Analysis and Prognosis for 2007 of the Romanian Academic Society, in the chapter about Human Resources entitled Lisbon, Bologna and the Romanian Factory of Mediocrity it is shown that the labour market, top research and education have not become sufficiently flexible in the UE. The best European researchers continue to immigrate in the USA. Meanwhile, Romanian researchers have succeeded in publishing in a 5 year period approximately 4000 papers and 5000 chapters in collective volumes and only 273 books in Romanian and 73 books in a foreign language.

These figures represent less than the average production of an American university per year [5]. Despite to all hardships, there are researchers who continue to do their job, publishing books and articles under very difficult circumstances due to the fact that the majority of researchers are very poorly paid. The foundation of a competitive environment in Romanian education has proved to be a very difficult task. The persistence in time of an isolated education and research has led to the emigration of the most creative young people from Romania, as it is shown in the report. The field of higher education is not the solution for graduates, excepting the wages of university professors, the salaries are under 300 Euro [5].

Regarding to the perception of the subjects on the qualitative level of Romanian education, this has been shown to display an increase in quality from average to good, in contradiction to the Annual Report of the Ministry of Education and Research, which presents its low level of quality. According to the achievements at the international evaluations, the quality of Romanian education is considered being average. The performance of the pupils regarding the learning process (TIMSS) is average, but low when referring to the acquisition of competences [7]. The international tests scores show that the quality of Romanian education system is an average one or below average in comparison with OECD. A former Romanian minister of education, Mircea Mică, declared: *“These scores reveal more about the internal functioning of the system than the exceptional achievements of our Olympic students do, which are due in a higher proportion to the personal qualities of the pupils than to the efficacy of the*

system” [4].

The report brings, for the first time in Romania, a detailed analysis based on indicators for education, elaborated according to the international systems (OECD, EUROSTAT): It is the time to see ourselves through these indicators through which we are seen by others and according to which we are compared with other countries [7].

Supporting the same idea, the Report of the Presidential Committee responsible for the Analysis and Elaboration of Policies in Education and Research characterizes Romanian education as being ineffective. The Romanian students' scores at the international evaluations: PISA, TIMSS and PIRLS, with the exception of the scores for reading achieved by the 4th grade students (PIRLS- 2001), are below the international average [6] (Table 1). Table 1 presents the international average performance, and Romania's performance is significantly lower than that of the average international performance.

Table 1
The Romanian students' results at international evaluations (2003)

Type of evaluation	PISA*			TIMSS**		PIRLS***
	Reading	Math	Science	Math	Science	
Romania	428	426	441	45	48	512
International average	500	500	500	48	52	500
Bulgaria	430	-	-	45	57	550
Hungary	480	488	496	57	62	543
Lithuania	-	-	-	50	58	543
Latvia	458	463	460	51	54	545

*PISA. International program for the students' evaluation OECD. Romania is 34th out of 42 countries that participated. (Source: OECD & UNESCO institute of statistics, 2003). Lithuania did not participate at PISA 2000. [5].

**TIMSS (Trends in international Mathematics and Science Study) evaluates the performances of the 8th grade students in Mathematics and Sciences. (Source: TIMSS, 2003) [5].

***PIRLS (Progress in international Reading Literacy Study) evaluates the performances in reading of the 4th graders. (Source: PIRLS, 2000) [5].

Moreover, Romanian education is considered irrelevant regarding the economy and the society of the future.

All studies show that the future will be

dominated by economies and knowledge-based societies. This being the case, through the Lisbon agenda, UE has established 5 indicators which show the proportion in

which a country can cope with the demands of a knowledge-based economy (Table 2).

The next table shows Romania's position according to the Lisbon indicators.

Romania's Position according to the Lisbon Indicators

Table 2

LISBON INDICATORS	ROMANIA	EU – PRESENT	EU TARGET
Premature dropouts from the educational system	23,6%	14,9%	Max. 10%
The proportion of persons who are 22 years old and have graduated at least high-school (secondary superior studies)	66,5%	77,3%	Min. 85%
The proportion of students who are 15 years old and are not able to reach at least the lowest level of performance (PISA)	41%	19,4%	15%
The proportion of graduates in Mathematics, Science and Technology	23%	24,1%	+10%
The adults' participation to lifelong education	1,6%	10,8%	12,5%

Source: The Romania of Education, Romania of Research Report [6].

According to the analysis of these data, it seems that the current Romanian education is not capable of reaching a competitive position in the knowledge based economy [7].

These results, below expectations, must also be correlated with a chronic low financing of the Romanian education. Romania spends on education proportionately less than any other E.U. country, though the increasing funds should be noted.

Although the European average of financing education represents 5.22% of GDP (Denmark reaching the highest percentage in 2002, 8%), and in the case of new member states it is 5.31% of GDP, [7], Romania has consistently allocated 4% for the financial support of education (Table 3).

Table 3

The Share of Public Expenditure for Education, as a Percentage of GDP (2000, 2001, 2002) Comparative Data

Year	2000	2001	2002	2003
	3.4	3.6	3.6	3.5
Year	2004*	2005*	2006*	
	3.5	3.9	4.9	

Source: Report on the Status of National Education System for 2006 [7].

In the years in which funds over 4% of GDP were reported, this was actually due to the inclusion in the education budget not only of guarantees that were not used for external credits, but also of resources which might have been obtained by the educational institutions and which were highly overestimated. Therefore, in reality, funds allocated to education have always been smaller than 4% of GDP. Only in 2007 education received for the first time in 16 years 5.2% of GDP, which means 19767.7 million Lei [7].

If we compare this financial support, which is the most significant that has ever been allocated to Romanian education, with the funds received by the American education, which since 2004 has received over 70 billion dollars and in 2006 it exceeded 80 billion dollars (Census Bureau), we can observe that there is a huge gap. Even if the quality of education does not rely only on the allocated funds, we have to underline the fact that the financial support plays a very important role in the quality of education.

Taking into account this low financial support, the level of education in Romania

can be perceived from another perspective. Its quality is higher than the estimation, according to the level of income per capita, as shown in a report of the World Bank: 'there is a correlation between the income per capita and achievements in education, and some countries, like Poland and Romania seem to have better results than expected considering the income per capita' [3]. There must be mentioned the fact that Romania 'is situated on the penultimate place in the European Union in a ranking of GDP per capita calculated at the parity of purchasing power for the year 2006. The value of the indicator represents only 38% of the average of the rest of 27 states', according to an Eurostat communiqué [2].

Taking into consideration the all conditions expressed above, we believe that the perception on Romanian education is not an erroneous one. However, Romanian education cannot be related to a GDP per capita, which ranks our country on the penultimate place in the European ranking, but it has to become competitive according to the international criteria used to evaluate it.

8. American Education as a reliable model for Romanian Education

As to the question related to the possibility of considering American education a model for the education reform in our country, the answers must be carefully analyzed.

There are not any important fluctuations in perceiving American education as a model. Those who accept the model without reserves are mainly pupils and university students, 20, 76%, followed by parents, 17,45%. Teachers – 80, 51%, however, accept it only as a partial model, which demonstrates a favourable but reserved attitude, followed by pupils and students, 70, 92%, and parents, 65, 23%.

Although in the respect of excellence, American education is well represented,

when asked if the American education could be a model for Romanian one, only 17, 4% of those interviewed answered that American model should be entirely accepted. 71, 1% stated that it should be partially accepted and 11. 3% considered it inadequate.

9. Conclusions

Starting from the previous analysis, we conclude that American education can become a model for Romanian education, 27, 4% of those questioned accepting the model entirely and 71, 1% accepting it partially. We believe that the partial acceptance of the American model comes from precaution, which is natural and it appears any time a model is adopted, being necessary an adaptation to the local educational environment. The national specificity of Romanian education must be considered any time we look at another model and, of course, mistakes must be avoided whereas the components of the model, which have triggered its success, must be taken into consideration. This is the reason why this study is also a means of information about American education. The hypothesis has been validated; a great affinity for this model being remarked, but its adoption must take place under specific national circumstances. The reserve of those who answered the questionnaire may come from insufficient knowledge of the most intimate elements of the American model.

Although educational problems cannot be resolved with universal solutions, a comparative study might open the door to solve many common problems in educational field.

The facts presented above have led to the conclusion that the general hypothesis from which the study has started, the fact that the model of American education is desirable for the Romanian educational reform, at a declarative level, although, in essence, the

actors involved - teachers, students and parents - have no thorough knowledge of either the specificities of this model or the concrete context in which it works, has been validated.

In the modern age, only by leaving behind ethnocentrism we shall be able to understand better the factors which must be taken into consideration when choosing a solution for solving educational problems, which throughout the history of education have proved to have a whole series of similarities, either as processes or as causes.

The reason for which we have considered that such an analysis would be necessary is simple. Romanian people have always been attracted by American model, not only in education but also in all other fields of life. Acknowledgement of a fact which, generally speaking, might be considered as a potential model, offers us better chances to decide: to adopt the model, to adapt only parts of it, or to reject it, but it is necessary to make a fully informed decision.

Other information may be obtained from the address: lucianradu10@yahoo.com.

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