

THE DESIGN OF THE ROMANIAN EDUCATION IN THE CONTEXT OF KNOWLEDGE-BASED DEVELOPMENT

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Abstract: In the current conditions of the knowledge-based development, particular importance is given to the investment in human capital, especially in the education achieved via the educational system. Thus, the main goal of our article aimed at analyzing the way the Romanian education is designed in the new knowledge society. The specific objectives have considered, in addition to consulting the specialized literature to outline the main theoretical-methodological and conceptual boundaries, a synthesized analysis of the key aspects which require a timely and relevant design on Education in Romania, in the context of the current state of knowledge and economic integration in the European Community.

JEL classification: I21, I25, E00, O10

Key words: education; knowledge-based economy; design; innovation; knowledge economy index

1. INTRODUCTION

The dynamism of the scientific, technological and economic environment at the end of the 21st century represents a permanent and persistent challenge for educational systems all over the world. One way or another, various aspects regarding the functioning of educational systems and their capacity to take over the changing signals coming from society are amply discussed upon in all countries. The quality of Education and the training technologies are discussed. Funding strategies from public and private sources of early education of young generations are analysed, and also of continuous education of those who have recently or long ago passed through the mechanism of initial training. They undermine the school's ability to meet personal expectations and aspirations of professional and social fulfillment, the correspondence between the offer of school training, of educational systems' institutions and the application/demand of professional skills and competencies expressed by those who act on the labour market as employers³¹.

³¹ Korca, M., The Romanian Higher Education Reform, into Transition and Reform, Economic Publishing House, Bucharest, 2001, p.160

The educational policy of the European Union, to which our country has fully adhered, is mainly based on respect for cultural and linguistic diversity of the integrated countries. Natural conditions, related to ensuring the quality of chances to the labour market for the citizens of the member states, impose norms and recommendations accepted by all states.³² The Romanian educational system must respond, through content and organization, to internal and external opportunities, such as:

- the creation of a transparent educational system and competent with that of the Union;

- globalization, where the competitiveness of different economic areas is based on labour resources that have a wide range of abilities and knowledge permanently updated;

- adjusting to the information age. In order to be recognized as active members of the European society, people have to master the use of computer while educational institutions have to use information technology in developing the general and specialized curriculum;

- increasing the age for completing compulsory education which then allows immediate professionalization;

- the application of the latest educational theories and the implementation of the motivated and interactive curriculum;

- ensuring an effective education by applying creative evaluation techniques;

- rationalization and resizing of the school and institutional network, in line with demographic changes.³³

To implement these priorities, the strategy in education provides *a set of programs and projects*, among which we mention the following:

- ✓ *drawing up the methodology underlying the design and dimension of education;*

- ✓ *restructuring of institutional network to ensure the quality of education for socio-professional integration in the European market;*

- ✓ *supporting educational alternatives;*

- ✓ *strengthening university autonomy;*

- ✓ *supporting private education.*

The ultimate objective of this strategy is the social, real assumption of a new scale of values which is necessary to consistently achieve options corresponding to a knowledge-based economy where transforming education is in fact vector of socio-economic development. We will succeed only if these values will be reflected in our actions, not just in the occasional speeches of noble days.

2. THEORETICAL APPROACHES ON DESIGNING EDUCATION

Alongside the development of competitive economy, partnership structures and unions were established. Structural reforms have taken place in administrative organization, an extensive process of decentralization of responsibilities and decisions

³²http://www.edu2025.ro/UserFiles/File/LivrabileR1/diagnostic_panel2.pdf, Diagnostic analysis „University and Knowledge”, Panel No. 2 Coordinator: Anton, A., Raportor: Miron, D., [Accessed on January, 25th, 2014]

³³ Romanian Government, *The National Development Plan 2007-2013*

related to community life. Establishments and educational institutions are increasingly involved in community life, we have achieved the transfer of decision-making skills, of collection and management of financial resources by the local public authority (for pre-university education). Regardless of the position or conotation which addresses the terminology of the word, the structural analysis and the design of education offer a set of tools and processing techniques for developing and piloting the volume of schooling under various stages of the reform programs, and also for a realistic forecast of the future educational development on the short and medium term.³⁴

In other words, school planning, its need and importance make part of the overall strategy of the Government of a country, which through the socio-economic development programs and plans at national, regional and local level recommend qualifying/professional specialization of labour, in line with the absorption of the market economy, which we hope to be a functional one. From the researches made and the specialty materials consulted, it has resulted that all European states, and not only, use school planning, that is determining a certain volume of tuition at regional level or at national level for some states. In all states of the world education is considered a priority and particular attention is paid to it, being a major factor in the socio-economic development of a nation, even if it enters the category of non-productive and very expensive activities. As earlier mentioned, sizing the volume of tuition is ultimately a political decision of the Government because, according to the guidelines and character of the power, school projection may have a controlled or decentralized trend. Substantiating the design and dimension of the tuition volume is based on setting the educational offer and on its adjustment to the social, cultural, economic and administrative environment, and its implementation will be made by taking into account the elements/factors which directly influence it. In our country, the design and dimensioning of education still takes place at national level, while decentralization at the level of school inspectorates and universities is still limited. With regards to the university education, this one offers students a high general, scientific and technical preparation, and training in a particular specialization, preparing them to achieve the competencies required by the chosen field. The general objectives of the University Education mainly refers to the restructuring of higher education level. The European integration process has an important cultural and educational dimension. Increasing the trans-European mobility of the students requires the adoption of structural measures which have to lead to the national educational system compatibility with the systems of other European states. The recognition or equivalence of the study periods undertaken abroad becomes of particular importance in this context.³⁵ In order to regulate these issues, universities in Romania have introduced the system of transferable credits, and the Ministry of Education has proposed *a series of measures*³⁶ on the short term, which aim at:

- restricting the number of specializations;
- reviewing the study programs and their internal organization in accordance with the students' opinions, thus enabling a greater flexibility;

³⁴ The Romanian Government, *The National Program of Reform*, 2007

³⁵ *** Study on "The returns to various types of investment in education and training", completed by London Economics, European Commission, Directorate General for Education and Culture, 2005

³⁶ Government Program for Education 2013 - 2016

- converting the current education from a predominantly reproductive one into a creative one;
- increasing the quality of university education through the redeployment of scientific research at the basis of university studies;
- developing competencies regarding innovation and critical analysis;
- implementing at a larger scale a system of modules that can be capitalised and then adapted to the Romanian academic education;
- developing the interaction between the university and pre-university education which equally contributes to the formation of pupils and students;
- improving the system of information on the possibilities for employment and on the studies required;
- generalizing the electronic communication within the framework of the education system;
- developing international cooperation in the research and higher education field;
- improving the infrastructure (by taking into account, alongside the established resources, attracting contributions from the gross profit of business agents).

3. ROMANIAN EDUCATION IN THE CONTEXT OF KNOWLEDGE-BASED DEVELOPMENT

Technological progress in telecommunications and digitization ensure the democratization of access to knowledge. On the threshold of the 21st century, the knowledge society tends to gain global proportions. At the same time, being aware of the rapid moral depreciation of knowledge and skills, the contemporary society is preparing to adopt a new behaviour towards education in order to become a lifelong learning society. In more developed countries, there is already a legal framework and they are experimenting various strategies of compatibility of the initial education with the requirements of continuous education.

The conference on global economy, held on the 10th – 12th of March, 1999 in Los Angeles by the Milken Institute, highlighted among the predominant factors of the 21st century the increase of human capital importance in creating wealth and welfare and the change of balance between old industries, intensive in standardized labour and new industries, intensive in science and innovation, a change in favour of the latter. It was also pointed out that the loss or deterioration of human capital in some countries imply recovery funds which are higher than those necessary for the recovery of the economy after the crisis phases. One can understand that even in periods of economic and financial difficulties, the society must not neglect the formation of human capital. The fact that education represents the key factor of present times is underlined by the presence of this topic on the agenda of the G-7 Summit of the most developed countries in the world, which was held in Cologne in June 1999. A Charter on Lifelong learning was even adopted in order to draw the world's attention on the necessary measures to address the main challenge nowadays: training and equipping all people in order to survive and prosper in the future knowledge-based economy. Education and lifelong learning are the passport to success in today's global economy and not only for our countries, but everywhere, all over the world – appreciated Prime Minister Tony Blair at the presentation of results from the Cologne Summit in the House of Commons

(June 21st, 1999). The investment in human capital represents first priority in the contemporary society faced with the rapid pace of the scientific and technological novelties, with the innovations in the sphere of trade and financial relations.³⁷ The 21st century is known as a period of intense changes in the financial techniques. If training in business and finance were limited to those specializations directly related to trade or finance, then the educational system would be ineffective, unable to solve a social requirement with an obvious tendency to generalization. In a modern society, where market powers play an increasingly important role in all human activities, knowing the business world is of great importance for all its members, and as soon as possible.³⁸ The mission of educational system becomes an essential part of the strategy of change. Learning must become creative, must develop the ability to solve problems. The initial formative level no longer meets the exigences of a society which finds itself in a constant and rapid transformation. Contemporary reality requires permanent training, respectively lifelong learning.³⁹ The change is induced by many factors, among which the first one is the ability to innovate and not to imitate, and also the willingness to cooperate, to inter-connect valuable and competitive activities from the sphere of knowledge, from industry and services, from the life of the communities. Through their implication in the innovative processes, the education institutions have to respond to this reality by increasing the emphasis on technological innovation and on the immediate applicability of research.⁴⁰

The knowledge society gives new dimensions to the learning process. This will no longer be quartered exclusively in schools and educational institutions. The centre of gravity when it comes to learning will gradually transfer from schools to organizations and institutions, from pupils and students to employees. Every organization and institution that uses employees will thus become a second school where various forms of training will constitute the current currency. In accordance with the objectives of the Lisbon Strategy, transformations are necessary both in relation to the *knowledge-based society* and to the *modernization of the creative processes of human capital* which aim at *information society, at research and innovation developing and at education*.

Romania has to assume the new foundations of competitiveness by developing a culture of innovation, by encouraging creativity, by promoting partnership and disseminating to the community the results of the processes of the knowledge creation which become the foundations of the new competitiveness. Consequently, in our country *a society of knowledge* is built through education and research, the only one capable to bring prosperity, sustainable development and personal development of every citizen. Promoting the *four pillars of the knowledge-based society – education, research, development and innovation* – does not mean just a priority support of these social activities, it means, first of all, a new scale of values. We must make it so that those who continuously study, work in the research field,

³⁷ De la Fuente, A., Ciccone, A., Human Capital in a global and knowledge based economy, [Online], Available on: <http://ideas.repec.org/p/aub/autbar/576.03.html>, [Accessed on January, 30th, 2014]

³⁸ Iancu, A. și Suci, M. C., Knowledge-based Society and Economy, Challenges and Opportunities for Romania, ASE, Bucharest, 2008

³⁹ Roșca, Gh. I., *The Knowledge-based Society*, Economic Publishin House, Bucharest, 2006

⁴⁰ Suci, M.C., Economy. The ney economy and the knowledge-based society, First and second parts, ASE Publishing House, Bucharest, 2004

those who contribute to the development and innovation of institutions or technologies should enjoy the highest social prestige. All measures and actions proposed in this strategy aim not only at a new institutional and legislative arrangement, but especially at a new axiological commitment, a new hierarchy of values. We cannot have a society and economy of knowledge in Romania unless we believe in this country's values.

Some of the international organizations, including OCDE or the World Bank, have put special emphasis on competent management policies dedicated to these resources and specifically on innovative and educational policies. Therefore, the World Bank initiated the programs „*Education for the Knowledge-Based Economy*” and „*Knowledge for the Benefit of Development*”. The World Bank's experts have developed an evaluation methodology entitled *KAM (Knowledge Assesment Method)* where the *Knowledge Economic Index (IEC)* was used. This is an aggregate index that reflects the extent to which a country or a region is prepared to cope with the demands of the knowledge-based society and economy. Based on the KAM methodology, the main components of the knowledge economy are: economic and intititional organization; education; information and communication technologies; national systems of effective innovation. In relation with the IEC values in 2012, Sweden took the first place with an IEC value of 9,43 (where 10 is the maximum possible score to be reached) and Finland and Denmark took the next two positions. Romania was placed on position 44 (with a score of 6.82) among the 146 countries and has seen an improvement of the IEC performance for all four dimensions analyzed in comparison with the year 2000, as one can notice from table no. 1.

Table no.1 Knowledge economy index in Romania, in 2000 and 2012

Country	Knowledge economy index		Economic and institutional regulations		Innovation		Education		Information and Communication Technologies	
	2012	2000	2012	2000	2012	2000	2012	2000	2012	2000
România	6.82	5.66	7.39	5.46	6.14	5.24	7.55	6.37	6.19	5.56

Source: Adapted World Bank Statistics, 2012

From the analysis of the data presented in table No.1, one can ascertain that education is one of the components that has a substantial contribution to the aggregate index value of the IEC. The KAM methodology of the World Bank confirms that education, in general, and top level education, in particular (university studies, masters, doctorates, post-doctorate studies) become strategic priority investments, thus contributing to the improvement of a country's performance in relation to the various methodes of benchmarking.⁴¹ Lifelong education constitutes a real source of the sustainable competitive advantage on the log term. In the specialty literature one

⁴¹ Suci, C. M., Drăgulănescu, V.I., ș.a., The role of universities in the knowledge-based society and economy. Implications for the Higher Economic Romanian Education, Economic Amphitheatre Magazine, Vol. XIII (30), June 2011, p.336-353

estimates that, in the context of the knowledge-based economy and society, enhancing the importance of investment in education occurs on the broader background of increasing the role of: intangible assets and the management of intangible assets; intellectual capital and intellectual capital management; creativity, innovation and creative and innovative management; knowledge and knowledge management.

4. CONCLUSIONS

An increasingly expressive feature of globalization is the reliance on knowledge, which is materialized into: increasing the role of human capital; centering the performance increments on highly educated and specialized human resources; allocating the benefits of development to those well-prepared and capable ones; the tight connection between knowledge and competitiveness.

Connecting the Romanian teaching institutions to the challenges of the knowledge-based society unquestionably implies a certified performance. It can thus begin by supporting the creation of some national poles of excellence which dispose of competitive advantages and which channel their energies towards international debates connection because without these kinds of links our country cannot take part in the worldwide system of knowledge production. The current stage of the globalization process creates the premises but at the same time accentuates the challenges of the knowledge-based society.

With regards to the design of education, we consider it appropriate to plan the volume of enrollment for the following reasons: we cannot school more pupils/students than the physical capacity of the network of educational establishments; the necessary number of teaching staff, of auxiliary teaching staff and of non-teaching personnel can be established only after determining the amount of schooling for an entire academic year, for all levels of training and for all forms of organization of the educational activity; since the academic year does not coincide with the financial year, settling annual state education budget is still based on the structure of flows of pupils/students and its size; determining the teaching staff by specialization/department is also made according to the flows of pupils and students put to school depending on areas of activity, specialization, jobs and types of schools.

In our opinion, an effective design in education requires information regarding the potential demand for certain specializations. The Ministry of Labour is the most appropriate institution to engage in conducting studies regarding the graduates' chances to get employed and their successes from the economic point of view and the transmission of this type of information to the persons dealing with design within the Ministry of Education, and also to the personnel from education institutions responsible of pupils and students' orientation and responsible of the curriculum development, too. Nevertheless, it is very likely that an economy such that of Romania's, which is rapidly evolving, to suffer frequent and substantial changes in the structure of labour demand. Therefore, the attempts to improve the capacity to forecast the demand and offer of jobs should come second place, after the formation of graduates with the greatest power to adapt.

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