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SHAPING THE FUTURE OF HIGHER EDUCATION IN ROMANIA: CHALLENGES AND DRIVING FACTORS

Ion Gh. Roșca, Carmen Păunescu

Academy of Economic Studies Bucharest

Cristian Pârvan

Association of Business People in Romania

Abstract. *The paper summarizes the main challenges that the Romanian higher education will be facing during the years to come, in terms of its responsibilities for both the individual development and community evolvement. These challenges are revealed as gaps against the European and international tertiary education system, but also as opportunities as well as threats. In addition, the article explores the changing factors that shape the future of higher education in Romania, with a focus on those factors that build the entrepreneurial process throughout the university and sustain its performance on long term. By using the expertise provided by a team of knowledgeable experts from academia, government and various business fields, we explore the future provocations that universities should address in order for them to be sustainable and increase their impact on local or regional community; furthermore, we discuss the key driving factors that shape the future of educational market in Romania as well as influence the labour market trends. The changing factors addressed in the paper were determined based on a PESTEL analysis conducted for higher education by an interdisciplinary team.*

Keywords: human capital development, higher education challenges, learning, changing factors, educational market trends, PESTEL analysis, community development.

1. Introduction

The paradigmatic shift of the current educational system is moving away from educational institutions towards learning environments where individuals are encouraged to liberate themselves from the „*self-incurred tutelage*” (Benkler, 2006) and to develop an internal locus of control, thus making *free choices about who they want to become* (Senges, Brown and Rheingold, 2008). These learning environments sustain what is called *creation of one’s own identity* and help building a community that offers each individual a better life.

Nowadays, learning becomes simultaneously: individual and collective, a means and an end, a stock and a flow, active and reflective (Akrich and Miller, 2007). And, critically, learning is defined by its context: the why, how, when, and where of acquiring knowledge – at a particular point in history (Miller, 2006). As all information is available, the educator’s challenge is to identify and select materials that make *meaningful connections* and generate *significance* in the learner’s life.

Everyone learns differently and in different ways and rhythms at different times about different things. Higher education needs to be able to nurture this diversity and make it easy for learners to discover the best way for each person or group to learn in any circumstance (European Commission, 2007 and 2008). New skills and competences related to changes in specialisation, collaboration, and improved tools, continue to emerge in the public as well as in the private sector. From a macro-level perspective, this ongoing process of skill reallocation and the development of new competences signal potentially disruptive changes in the context for learning (Becker, 1993; Miller, Shapiro and Hilding-Hamann, 2007).

In all OECD member states the cooperation between academic research and corporate R&D is increasing. Businesses are financing an ever greater share of the research work done in public universities (OECD, 2008 and 2009). Knowledge and skills must be permanently updated so as to prevent them to become obsolescent. Learning must evolve into a mixture of *interactive types of teaching*, group and individual work, as well as tasks and projects (Finance, 2009). Continuing education and training will be an integral part of everyday work in the future (Gerhard, 2009). Thus, entrepreneurial schools should emphasize the acquisition of *basic skills and of lively, interdisciplinary* and relevant knowledge.

Currently, there is an increased interest for carrying out the knowledge in a context of *application, trans-disciplinary, heterogeneity*, but also a more socially accountable and reflexive way. It includes a wider, more temporary and heterogeneous set of practitioners (from academia, companies, research institutes, NGOs, etc.) collaborating on a problem defined in a specific and localised context (Akrich and Miller, 2007; Miller, 2006).

In this context, the current paper explores the future challenges that universities should address to help individual develop and create his/ her own identity in society, as well as in order for them to be sustainable and increase their impact on community. It also discusses the key drivers that shape the future of educational market in Romania and the trends of labour force market alike, with the main purpose of building the entrepreneurial process throughout the university, and sustaining its performance on long term.

The article is organized in five parts. The *Introduction* part offers a brief overview of the paradigmatic shift that the current educational system is facing. It also states the problem which is investigated, and what the authors want to achieve. The second section presents the methodology used in the research. The third section discusses the challenges for universities concerning their important role in human capital development and community involvement. The fourth section briefly explores the changing factors that shape the future of higher education in Romania in the years to come. Last part offers a few concluding observations regarding the future of Romanian higher education.

2. Methodology

Individual interviews were employed and focus groups sessions were conducted with professionals and experts from both the academia and socio-economic environment to diagnose the current status of Romanian higher education and learn more about/ understand better the stakeholders' demands and expectations. The group's work adhered to a precise, predefined framework established by research coordinator, which consisted of: an introduction that defined the object of analysis and the main concepts used; a description of the present situation of the educational system; an analysis of the key developments as they appear today; an identification of the major forces (changing factors) likely to impact on future developments; and, finally, challenges for the future of higher education. A PESTEL (Political, Economic, Social, Technological, Environmental, Legal factors) analysis was also performed, using the same knowledgeable team of professionals and experts from academia and industry, with the purpose of better understanding the market trends and its dynamics. The aim of these group sessions was to provide a rich and well-documented presentation of the main challenges considered pertinent to the evolution of each educational actor, its missions, its values, its competencies, and its relations with the other actors of the higher education system.

The sample consisted of 53 research actors from universities, companies, research institutes, student organizations, NGOs, ministries, and other organizations, who hold managerial positions in their institutions. The interviews (face-to-face meetings) were conducted between June 2009 and December 2009. Four focus group sessions were organized during the same period of time.

One additional point that is worth mentioning is that although the focus groups followed a set pattern, the authors were free to choose their own hypotheses and frames of analysis.

3. Challenges for Higher Education

The challenges discussed below refer mainly to the role of universities in human capital development and their contribution to the progress of community at local, regional, and/or national level. These challenges are revealed as gaps against the European and international tertiary education system, but also as opportunities as well as threats for Romanian educational market.

3.1. The anticipated correlation between the educational offer of universities and the structure and dynamic demands of the labour market

Adapting the educational offer of universities to the need of durable socio-economic development on a local, regional and national level, and to the needs and interests of educating and training students represents an essential requirement for

encouraging the competitiveness and economic growth of a nation (Machin and McNally, 2007). In our country, the situations in which universities train under or over-qualified work force with no adequate place on the current labour market are the ones that occur most often. Not always are the qualifications needed on the current labour market created and the competences necessary for obtaining and keeping a job are not all the time generated, even if we are talking about one's first job.

At the moment, the labour market does not hold sufficient information (or the legislative framework does not offer the needed support) to make the distinction, for example, between undergraduates and graduates. The postgraduate level of preparation is also questioned (doctorate studies, cycle 3 of the Bologna System) in the sense that the persons that obtained this degree are over-qualified, they are not able to find enough appropriate jobs (given the fact that the scientific research institutions are struggling, universities hire only a very small percentage of them and companies/ organizations with a research and development orientation are scarce in Romania) (see Gonzalez and Wagenaar, eds., 2003).

The adverse, incomplete, non-accurate and permanently reconstructed character of the legislation and its current deficits has led to a very low level of adaptation of the educational offers to the real demands of the labour market, and has led to sustaining a nonoperational qualification system for the Romanian labour market. Also, the low degree of involvement and the lack of professionalism of the political decision-makers have resulted in the deficient correlation between the levels of education and its forms with respect to the educational process content, its competences and the qualifications it offers.

3.2. Increasing the relevancy of education, validating its results and lifelong learning

Extending the private higher education in the detriment of the public higher education, the invention of new forms of graduate training (100% on-line universities) and the appearance of equivalent educational programs offered by companies or local (regional) organizations will lead to an increase in competitiveness on the educational services market, but not necessarily to an increase in the quality of the educational services offered. This is possible due to the lack of efficient structures on a national level and due to lack of counselling and orientation procedures for persons towards finding the study programs which are the most adequate for the development of their individual and professional competences at the level of the society in which we live in.

Also, the discrepancies between the relevance of the results obtained in the private and public educational system will persist due to the inexistence of a unitary set of indicators for the evaluation of the study programs, which would serve the purpose of determining the measure in which the competences declared by the universities and those acquired by the students are real. Moreover, this discrepancy

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occurs as a consequence of the lack of an integrative approach towards all the study cycles, made possible through the development of a unitary set of indicators for the evaluation of the competences acquired by students in high school and then, successively, in the undergraduate correlated with the graduate and postgraduate education. In addition, it is necessary to draft and adopt systems which will recognise the level of knowledge acquired in the formal educational system through the activity of the persons at their work place.

Even more so, because of the globalization of the labour force market, the necessity of developing new competences will determine an increase in the demand of ongoing training programs in different areas of specialization (lifelong learning programs). The need for the educational process to include everyone, to include individual integrality and to include all the forms of education determine the planning and organizing of education to proceed through the perspective of it spanning over an entire lifetime.

3.3. Developing alternative programs for the traditional educational system

The rise in the number of universities which offer on-line and off-campus educational programs (there are even universities which offer only on-line study programs), and the increasing competitiveness of the foreign universities which offer the programs help diversify the educational offers and the types of preparation in the higher education system in Romania, but they can as well contribute to the decrease of the will to study and the interest in learning.

The quality of the educational system and the relevance of the learning outcomes are also put to question. It is known that the employer does not appreciate the quality of an off-campus or on-line preparation as much as it appreciates that of a traditional one. On the other hand, the simultaneous access to several information means (libraries, internet, TV, international databases, etc.), including the use of electronic devices (Ipod, cell phones, MP3, electronic agendas, etc.) determine an increase in the individual's capacity to learn and quicker assimilation of data and information. In case of absence of innovative means for teaching/ learning and absence of the necessary logistical support, the educational personnel will encounter difficulties and they will be forced to overcome these challenges.

The policy of the decentralization of the educational system imposes the necessity of regulating new forms of education (off-campus, on-line) accessible to those who work, and new methods of teaching/ learning adequate to these forms of preparation. Thus, the necessity of assuring alternatives of studying to all those interested is highlighted.

3.4. The development of university networks and creation of career opportunities

The consolidation of university cooperation (internal, European and international) through the creation of university networks, including the partnership development with companies (as an integral part of these networks) will facilitate informational, technological and „good practice” transfers but will also intensify the mobilization of teachers/students/ researchers regarding experience exchanges. The grouping (fusion) of universities will allow the creation of administrative, organizational and financial structures that will facilitate the development of educational programs between partner universities, with the proper acknowledgement of graduated studies, respectively the skills and qualifications acquired at the level of the created structures (for example: such a fusion between universities is already functioning in the northern countries, in the UK).

The absence of formal structures for periodical consultation and for direct involvement in the universities activity by all economic and social partners for the creation of universities networks, as well as the lack of institutionalized communication between universities and the business environment, lead to the increase of imbalance between what the universities offer and what the employers need. Also, at present, as a reaction to the intensification of globalization, the Romanian universities do not have the capacity to train the required work force, who's skills and abilities could answer to the global economy's current and future problems (skills that would allow the graduates to think and act in an global environment).

The increase of the importance of entrepreneurial education in universities attracts/ demands the increase in the efforts made for creating structural changes in the higher education system regarding: the development of the internship programs, the integration of applications and experiments, simulations in/from the business environment, offering extra-curricular classes and also identifying financing solutions for optional courses (other way they will remain at a statement level in the curriculum, without being actually implemented).

The low level of adjustment of the Romanian universities' educational offer in compliance with the current reality in our country, more specifically, offering a limited number of entrepreneurial education courses that focus on real life and concentrating them mainly in universities with an economic or business profile, doesn't favour student entrepreneurial initiatives, nor the professor's, that can be quantified in creating spin-offs or start-ups and the creation of new jobs.

3.5. The demographic decrease, population ageing and exodus from the rural to the urban environment

Statistical research shows that the active population of Romania has experienced a sharp downward tendency in the past few years, and that the school eligible population will diminish dramatically towards 2025. The population

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numerical decline, as a consequence of the decrease in the birth rate, will determine a decline in the number of students, regardless of their academic degree (bachelor, master, Ph.D.), who are involved in the continuous education and lifelong learning process. The phenomena of active population emigration will continue in the following period as well, and will lead to the diminution of the activity rate in our country (approximately 2-3 million Romanians – active population – have emigrated between 2000 and 2009).

Furthermore, the population ageing and the depopulation of the rural areas and small towns, through the exodus of population to more socially and economically developed areas, lead to the transformation of the rural environment and small towns in underdeveloped areas (some of those have already fell back to their previous status of villages).

3.6. The under financing of higher education and inappropriate governance

The access to education, including the academic level, and its accessibility are becoming increasingly dependent on the financial status of the family. More and more students, regardless of their academic level (bachelor, master, Ph.D.), will be interested in getting hired during their study years (or even before starting them), in order to sustain themselves financially, or to gain work experience, the education completion being realized simultaneously with the work process activity.

The budget policy will be forced to assign priorities to health, social care, etc., the universities' financing having to be realized according to the type of study programs offered, the results of the research–development–innovation activity, the results of the collaboration between universities and socio-economic partners, etc. This matter will lead to the decrease in public financing and the sustainment of financing universities based on results and performance criteria.

The technological changes will be possible only by intensifying the research – development – innovation activity efforts, both in universities, and in companies (currently, universities contribute for only 20% of the technological development). At the same time, the growth of academic independency, similarly to the state's policy of sustaining preponderantly certain university specializations, will have to lead to the increase in the contribution of tuition fees, the decrease of the total number of students, the boost in the number of foreign students in the tax-paying system, etc.

Without a legal framework to regulate the financing system of universities based on performance criteria, and also of a loan system for students and a reimburse one of tuition fees paid by them (state guaranteed system; e.g. 5-10 year reimbursement system, for a limited number of students, a certain amount allocated, etc.), the current financing system will continue to lower the quality level of the education process and the university scientific research.

In Romania, there still remains a gap between what universities offer and what socio-economic partners require (EurActiv, 2009). Stating the convictions of all socio-economic partners interested in the higher educational system in our country will trigger the rethinking of the academic management system and the restructuring of the educational offers. Periodic reviewing the structure of universities' educational offer, by also taking into account the needs of the different categories of economic and social partners (including students) that are anchored in the realities of the practices sustained in our country becomes a major goal for the university. Discrepancies continue to be reported in terms of financial endowments that facilitate the computerization of educational process in what concerns administrative and logistical support, provision of scholarships and social facilities for students, encouraging demand for education from the disadvantaged socio-economic groups, etc.

Romania records low degrees of participation in education at all levels, particularly in rural areas on one hand and, on the other hand, the notable failure of education and employment structures in our country to adapt rapidly to changing labour market needs stands out. Moreover, the legislative framework adopted in order to allow our country's educational system to be in line with the requirements of various.

European level initiatives – for increasing student mobility and their number of opportunities on the labour market, for reducing the number of university specializations and for increasing participation in master and Ph.D. programs – needs major improvements.

3.7. Increasing adaptability, flexibility and speed of reaction of universities towards change

By developing new action plans and strategies of modernization/transformation for periods of 10-20 years, universities can maintain/strengthen on the long term the competitive advantages they have on the educational services market, reacting proactively and influencing market trends. Dramatically reducing the level of importance that the educational system of universities attaches to basic industries such as metallurgy, chemistry, oil, gas etc. threatens the survival of adherent academic specializations, as well as the survival of these branches of economy in the future. Moreover, the development of the service sector, including the industrial type one, will determine the increase in demand for labour force with interdisciplinary (cross-sector) knowledge and skills; this is already visible in economic sectors such as: renewable energy, biochemistry, medical-informatics etc. Moreover, the development of economy at a local or regional level as a result of the penetration of performance technologies (laser, plasma cutting etc.) and the increase of access to information will lead to rethinking the role of universities in these fields.

Without reconsidering new curricular structures of academic study programs that take into account the formation of interdisciplinary (cross-sector) skills, also by

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including compulsory extra-curricular activities, the above trends will continue and will deepen. Furthermore, quality assurance and continuous improvement of the educational process remain the basic requirements of the successful social and professional inclusion of graduates, but also of the adjustment to structural changes of the economy imposed by scientific and technical progress.

Globalization of existing value systems will lead to turning materialism and individualism to good account. New systems of values resulted from the structure of the super-tech and computerized society impose new socio-psychological approaches; there is also a need for studies and neuro-psychical methods of compensation. The university should encourage both the value of human contact, of socio-professional relations as well as the use of modern technology, should offer specialized courses and have at hand techniques and methods to counter the adverse neuro-psychical effects and the change in the value system.

Nowadays, local values merge with international ones (European, global) in the context of expansion and diversification of motilities, both for students, teachers and researchers. Universities have become obliged to promote adequate structures of socio-professional integration and emphasize local (national) values, in an increasingly globalized world. A necessity appears to establish communication networks in education and research worldwide. Cultural values, that influence business management, must be assimilated as part of academic education.

Academic career will continue to require ongoing new skill development activities, the outlining of a clear value system, efforts to achieve professional results recognition, to obtain university degrees, etc. For this reason, valuing materialism at the individual and society levels, in a society dependent on technology and information, will increase the demand for trainings and awareness courses in the field of ethics and social responsibility, necessary for the increase of solidarity and social cohesion.

4. Changing factors

The PESTEL analysis conducted for higher education by using a inter-disciplinary team of experts from academia and industry highlights important trends and dynamic changes for both the educational and labour markets, as discussed below.

4.1. Socio-demographic factors

Demographic decrease (decreasing birth rate, migration). High decrease in the number of world population as a consequence of decreasing the birth rate will lead to diminishing of the student population – regardless of the learning cycle they pursue: bachelor, master's program, or doctoral studies – that is enrolled in the formal learning and lifelong learning programs. In addition, the phenomenon of migration of active

population will lead to diminishing of the employment rate in our country and this will continue in the years to come (more than 2 mil. of the active labour force from Romania migrated during 2000-2009 abroad).

Poor access to education and low accessibility. The access to education, including to higher education, and its accessibility become dependent on the level of income per capita and the overall wealth of the family. Such as, ensuring the equal access to education for all those interested in learning represents a major challenge for universities.

Students' increasing interest to get employed during studies. More and more students, regardless of the learning program they are enrolled in, are interested to acquire work experience during studies and get employed faster, the education being completed simultaneously with the work process activity. Nevertheless, employment during the bachelor program is not always to the students' advantage when it comes to their preparation for work and life. Universities should take into consideration all these trends and act proactively by offering trans-disciplinary educational programs that meet employers' demands.

4.2. Technological factors

New alternatives to the traditional educational system. Thanks to the new technologies available and enhanced ways of communication, the rise of the number of universities that offer on-line, long-distance and other off-campus learning programs (it is known that there are universities that offer solely on-line learning), on one hand, and the rise of competitiveness from foreign universities which offer equivalent learning programs, on the other hand, represent other provocations that higher education in Romania should take into consideration.

Increasing the role of research and development. Technological changes will be possible only with the joint effort from both the academia and businesses towards intensifying their role in research, development and innovation and enhancing their contribution to society development.

4.3. Economic factors

Miss-consideration for some branches of economy. Dramatic decrease of the interest given by the educational system to some industries, such as: metallurgy, chemistry, petroleum etc., jeopardizes further subsistence of adherent specializations offered by universities, and furthermore, subsistence of these branches of economy in the future.

Development of the services. Services development, inclusive of industrial type ones, will lead to the rise of demand for labour force having acquired inter-disciplinary and cross-sector knowledge and competences. This trend is already

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visible in some branches of economy, like: renewable energy, bio-chemistry, informatics etc.

Local development. Economy development at local and regional level, as a result of new technologies penetration, and the increased access to information will lead to rethinking the role of universities in these areas, this meaning enhancing collaboration with local communities with the purpose of solving specific problems raised by these regions.

Expansion of the universities networks/fusion of universities. Creation of university networks, particularly partnerships developed with companies, NGOs, civil society, will facilitate the know-how transfer, but will also enhance mobility for all faculty members, researchers, and students. Fusion of universities will allow building some administrative, organizational, and financial structures that sustain the educational programs extended among the partner organizations and recognize the competences acquired.

High relevance of entrepreneurial education. The sustained efforts to implement radical structural changes in higher education, as regard: the practice stages for students, internships, simulations, experiential learning, extra-curriculum activities, highlights the necessity to recognize the value-added by entrepreneurial education to all learning cycles and all fields of specialization.

4.4. Political and legal factors

Changing and apparently non-conforming legislation. The discrepancies and current deficits of legislation in the field of education have as direct consequences a relatively low correlation between university's educational offers and the demands of the labour force market. In addition, a defective and inefficient qualification system is sustained on the labour market in Romania.

Poor and generally unprofessional involvement of policy makers. Ineffective correlation, regarding the content of the educational act, between the three learning cycles (bachelor, master, Ph.D.), on one hand, and improper competences and qualifications developed by various educational programs and forms of education, on the other hand, will further deepen the discrepancy that exists between the Romanian higher education system and European or international one, as well as will further nurture non-performance.

Budgetary policy. The budgetary policy will determine financing of universities based on new criteria, such as: the type of learning program (on-campus, on-line, long-distance), the R&D results, the industry – universities link and collaboration and its outcomes, etc. Increasing of the autonomy of universities will attract a new policy for schooling, in terms of tuition fees, number of students enrolled in different learning circles, number of scholarships granted by government, a loan system for students to complete their studies, etc.

Decentralization of the educational system. This policy generates the need to regulate new types of education (e.g., long distance, on-line), accessible to those students or adults who work and are interested in completing their education. The need to offer alternatives to all those interested in learning appears and should be considered.

4.5. Environmental factors

Increasing the amount of pollutants. This will lead to an increased need for appropriate technologies that help ensure environment protection and reduction of pollutants in atmosphere, soil, or water. The assurance of environment protection will put to question the necessity to carefully consider the balance between cost – competitiveness – medium and long term impact. Restructuring of the educational offer of higher education by taking into account the requirement of environment protection, inclusive of by creating new learning programs and specializations focused on this area, is an important issue to be reflecting on. In addition, creation of spin-offs in the fields of renewable energy, eco-friendly transportation means, „passive” buildings, satellite villages etc. with the expertise provided by universities are also to be considered.

5. Results and Conclusions

The diagnosis analysis performed, using a knowledgeable team of professionals and experts from academia, government and various business fields, discusses the current status of Romanian higher education and its priorities for the individual's development and community evolvement. Thus, seven main challenges for the future of Romanian universities are further explored, such as: the anticipated correlation between the educational offer of universities and the structure and dynamic demands of the labour market; increasing the relevancy of education, validating its results and lifelong learning; developing alternative programs for the traditional educational system; development of university networks and creation of career opportunities; demographic decrease, population ageing and exodus from the rural to the urban environment; the under financing of higher education and inappropriate governance; and increasing adaptability, flexibility and speed of reaction of universities towards change.

The challenges described in the paper predict but also determine the future of Romanian higher education and help to create successful strategies for universities taking into consideration their particularities and available resources. Also, a high impact of universities on solving local community issues is expected.

Furthermore, based on a PESTEL analysis conducted for higher education, the key driving factors for enhancing entrepreneurial process in Romanian universities are

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further addressed, with the purpose of preparing it for future development. The changing factors identified help universities ensure a better link between their educational offer and the labour force market needs and trends. This will also lead to the need for universities to focus more on developing competences and less on forming qualifications.

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