

Investing in Training and Research: an Action Plan for Development

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I. Dynamics of the higher education system

After the fall of the totalitarian regime, Romania underwent a complex transition to market economy and democracy. This process affected every domain, from society to economy, culture and politics. Reform in the field of higher education began right after 1989 and aimed initially at eliminating courses that had become obsolete in view of the new political and economic option and, during a second and more comprehensive phase, building a coherent legal frame that could ensure an increased effectiveness of higher education.

Recent changes that have occurred in the Romanian and European higher education system are grounded on the options of continental countries, **expressed in the Bologna Declaration**, to achieve a unique European space in this field by the year 2010.

In a synthetic overview, the main changes in the higher education system are the following:

- *Better definition of long-term and short-term programmes*, with bridges built to enable students to move from the short-term to the long term ones;
- *Making study programmes more flexible*, by offering optional elective paths, and by gradually increasing the individual time of study;
- *Setting national standards* for temporary authorization and institutional accreditation;

- *Internal and external evaluation of study programmes* in view of temporary authorization and accreditation by the National Council for Academic Evaluation and Accreditation (created in 1993 and subordinated to the Parliament of Romania), as well as introduction of periodical evaluation;
- *Introduction of the transferable credit system*, evaluating students' participation in education activities and encouraging their mobility;
- *Switch to global financing* using the number of students as a main indicator (“*formula funding*”); the introduction of complex quality indicators leading as a first step to ranking of universities according to their performance, encouraging through financing the more dynamic and effective higher education institutions;
- *The possibility for public universities to enroll students with tuition fees*, public universities have an enrolment quota supported by budget and approved every year by the Ministry of Education, Research and Youth (MECT);
- *Diversification of the scholarship system*, supporting students with social problems but also taking merit students into account;
- *Emergence of private universities.*

The existence of the two distinct forms of education is an **extremely favorable premise for the implementation of cycles stipulated in the Bologna Declaration**. Short-term education, present in all the fields of university education, and which is destined to train graduates with a great capacity of insertion on the labor market, can easily be transformed into a first cycle, granting the graduates the title of Bachelor. Furthermore, this form is open, graduates from short-term education can carry on their studies in the long-term form after passing the examinations for the make-up programmes and the recognition of the credits obtained.

II. The Bologna Declaration – the fundamental charter of change in Romanian higher education

Changes occurring today in Romanian higher education aim at the creation of a pro-Bologna university environment, as well as at the implementation with maximum efficiency of recommendations issued from the Declaration signed in 1999 by the ministers of education from the European countries. The agreed objectives for the creation of a European space for higher education are also the objectives of today's university restructuring and modernization.

Higher education structure by cycles.

One of the main objectives is the structuring of higher education by cycles and its subsequent organization. Discussions that occurred within the National Council of Rectors, during various workshops have shown a general consensus regarding the switch to this structure, most probably starting with the academic year 2004/2005.

Thus, are individualized:

- *the first cycle*, amounting to 180-240 credit points, finalized by a **title of Bachelor**;
- *the second cycle*, amounting to 120-60 credit points, finalized by a **title of Master**;
- *the third cycle*, the doctorate activity, finalized by the granting of the **title of doctor in science**, for which only master's graduates are eligible.

Status of the implementation of the Diploma Supplement

Romania has signed the Lisbon Convention, April 1997, on recognition of qualifications obtained in the higher education and has ratified this document through Law no. 172/02.10.1998. Section IX, art. IX.3 stipulates the promotion of the Administrative appendix to the diploma, namely the Diploma Supplement.

Having regard to the Lisbon Convention, the joint Declaration of the European ministers of education in Bologna on July 19, 1999, the recommendations of the Council of Ministers of the EU from May 6, 1996, as well as those of the European Commission and UNESCO on transparency in view of academic and professional recognition, the Minister's Order (no.3659/20.04.2000) introduced, upon request, the administrative appendix to the diploma, the unique European model. Based upon this order, any graduate may require the emission of the Diploma Supplement and each accredited university has at its disposal the required form and instructions for filling the form.

The transferable credit system

The organization of the education process using the transferable credit system has begun during the 1998/1999 academic year. This mode of organization makes possible the use of an analytical evaluation system of the time and effort necessary to carry on activities composing the education process. Moreover, it has advantages both for the mode of organization and its management, and for its validation with the education process in other universities in Romania and abroad.

Granting the credit points attributed for one subject is conditioned by successfully passing this subject. The minimum passing grade is 5, on a scale from 1 to 10, and, once obtained, the student is granted the number of credit units attributed to the subject. Successfully passed subjects are recognized in any case. In the case of *DEA*

and *Master's* – the finalization is through a *Dissertation*, where the minimum passing grade is 6,00.

Higher education quality assurance

The system of higher education quality assurance is undergoing a process of clarification and finalization. The Ministry of Education, Research and Youth is financing CALISRO, a research programme on the quality of higher education in Romania, which constitutes the basis for the structuring bodies responsible for ensuring quality at the level of institutions and at national level. Thus, each higher education institution is responsible for ensuring quality for all activities and at all levels, in agreement with the standards of reference, which are being updated.

Following the results obtained also by the CALISRO research programme, a normative act is under preparation, an act related to the creation of a national system on the assurance of quality of higher education, through the creation of a national structure in the field in charge of managing the whole process. Basically, it will define the general framework, promote advanced European systems of quality assurance, disseminate the best practices in the country and abroad.

The newly created structure will cooperate with higher education institutions in Romania and abroad, as well as with other European institutions, in order to support the efforts of assuring quality of higher education in Romania at the level of EU requirements.

International student mobility

Romanian universities are adapting rather rapidly to more efficient forms of international co-operation. We can mention:

- Trans-frontier student exchanges between various higher education institutions, for short-term study visits or practical activities, on the basis of

bilateral agreements, supported by the National Office for Study Scholarships (ONBSS);

- International student mobility based upon institutional agreements or the affiliation to various university networks, with the recognition of the study periods by use of compatible transferable credit systems;

- Involvement of Romanian university departments or teachers in the offering of trans-national higher education including joint training programs, programs typical to virtual universities, to other types of institutions involved in e-learning etc.

- Teaching staff exchange in the field of education and research, in order to cover an existing need in the field at the host university or to offer aid in the development of new syllabi, new support for learning, new technologies of teaching and learning etc;

- The creation of programs for granting joint degrees on the basis of an agreement between a Romanian university and a foreign university, with the observance of the rules existing in each one of the participating countries.

Student and teaching staff exchange programs were set beginning with 1991 within the TEMPUS program between Romanian universities and universities in EU countries.

Higher education institutions in Romania have been involved in SOCRATES and LEONARDO da VINCI programs starting 1997. After 1998, over 9,000 students were granted mobilities within the ERASMUS program. During the academic year 2002/2003 45 universities participated in ERASMUS activities, involving approximately 2,400 students. At the same time, a significant number of students from various EU countries have studied in Romania.

Starting with 1998 Romanian universities have taken part in projects developed within the CEEPUS Programme (Central European Exchange for

University Students Programme). This programme supports universities to create networks consisting of at least three universities from various countries in order to promote student mobility for full academic studies, master's and doctorate programmes, as well as to promote exchanges between teaching staff and researchers. After 1998, over 1500 students and teaching staff have been involved in such exchange programmes. During the 2002/2003 academic year, 16 universities have taken part in 18 such networks.

The European dimension of the Romanian higher education

The promotion of the European dimension of higher education was possible through an intense cooperation and direct international contacts between Romanian universities and European institutions, international organizations and bodies. The implementation of European programmes has had positive effects on academic structures and curricula, as well as on the new vision of the mission of higher education, including the means of fulfilling this mission.

The efforts of making the Romanian system compatible with the European ones included the elaboration of the List of fields and reference specializations (promoted by Government Decision no. 1336/2001 and updated by Government's Decision no. 682/2003), which increased the area of competence of graduates, ensured a better insertion of universities in the social, economic and cultural life, and eliminated some deficiencies in the process of authorization/accreditation.

The European dimension of higher education in Romania was promoted by the introduction of study programmes in foreign languages (English, German, French, Spanish, Italian or Russian). These programmes are offered in most universities at university level. Both Romanian and foreign students studying in Romania can attend these courses.

Diplomas awarded by universities are, upon request of the beneficiary, written in one of the foreign languages. The introduction of the *Diploma Supplement* is a mechanism of implementation of the Lisbon Convention, promoted by Romania.

The social dimension of higher education

The state budget ensures most of the financial resources for university higher education and research, respectively 4% of the gross domestic product (as stipulated in the Law on education no. 84/1995).

Aside from the budgetary resources, universities may mobilize additional sources of revenue within legal terms. The funds allocated from the budget of the Ministry of Education, Research and Youth are utilized for basic and complementary financing, for investments in objectives, for funds for student scholarships, as well as for their social security. The level of funds allocated in 1999 from the state budget was 1.700 billion lei (110 million USD), and in 2003, it was 5.400 billion lei (160 million US dollars).

Students at graduate and postgraduate level, including those enrolled in doctoral studies, benefit from the 75.000 places supported every year from the budget, and approximately 25% of the students are granted scholarships from the state. The average distribution of these scholarships is estimated at 5% performance scholarships, 25% merit scholarships, granted for outstanding results ; 30/40% scholarships ; 30/40% scholarships for social support.

In order to train specialists in the rural area, students from rural areas are stimulated by granting 1000 scholarships per year (Government's Decision no. 1020/11.10.2001), each scholarship has a quantum that exceeds the average study scholarship.

Some students from underprivileged families, enrolled with tuition fees may be granted exemption or reduction of such fees, upon decision by the university senates.

Life long learning

Education and training – two essential, priority concepts for the EU countries, are also priorities and main fields of interest in Romania.

The law stipulates facilities for those who follow further-training courses for professional training, namely the right to standard salary, for those issued from public institutions and the payment of housing, per diem and transport, for those who take courses in other localities than that of their domicile.

For the training of adults the same law stipulates the possibility of organizing institutions and networks of open or distance education, that make use of modern communication and information technologies. The provisions of the law apply in all universities in Romania.

III. Priorities for implementing the recommendations from the Declaration of Bologna

As a European country, Romania is very receptive to all changes occurring in the education system in the continent and promotes all necessary measures in order to harmonize the legislation in the field, to create the unique European space for higher education. Considering the progresses already made, we envisage the following for the period immediately following the meeting of the ministers of education in Berlin:

- the structuring of higher education in cycles, finalized by degrees (bachelor), dissertation (master) and doctorate thesis;

- the multiplication of efforts in view of ensuring quality particularly with higher education institutions and through a national organism, in the context of European evolutions;
- a full operationalization, at national and international, of transferable credit systems;
- the support of student and teacher mobility through Socrates, Leonardo da Vinci programs, as well as through an active participation to the TEMPUS III program;
- the participation of Romania in programs and actions aiming at the internationalization of higher education.

Following the meeting in Berlin, Romania will review these priorities, adding other priorities, according to the decisions that will be adopted and will proceed to a more systematic schedule for their implementation.

IV. Increase in RTD public investment

A gradual increase in RTD public investment funds is foreseen for the next years, as follows: 2004 - 0.32%; 2005 - 0.47% up to 1% of GDP in 2007.

The promotion of scientific and technological excellence is reflected in the following figures and activities:

- 7 national programmes having a special component dedicated to setting up of centres of excellence based on competition
- 34 multi-user research centers
- Increase the impact of public funded RTD activities on economic competitiveness
- Promotion of collaborative RTD projects
- Stimulation of excellence-based partnerships between:
 - RTD organisations (including universities)
 - Enterprises
 - SMEs
- Project co-funding of enterprises (higher industry expenditures for RTD)

More and better human resources for RTD and innovation will continue to be developed by:

- Attracting and maintaining in the R&D activity young high professional graduates
- Development of the scientific careers, aiming at formation of European level research personnel;
- Setting up and strengthening of high performance research teams;
- Ensuring an adequate wage level for the research personnel;
- Promotion of the researchers' international collaboration and mobility.
- Payment of students' and PhD students' activities in research contracts
- Research grants for encouraging return of researchers working abroad

The results obtained by Romania in the Framework Programme 5 (FP5) can be summarized as follows:

- Contribution to FP 5: **45 mil. euro**
(out of which 21 mil. PHARE funds + 24 mil. national budget)
- Recovery through projects: **22.9 mil. euro**
(4.9 mil. universities, 1.4 mil. industry, 11.2 mil. research institutes, 5.3 mil. other institutions)
- Loses **1.1 mil. euro** national budget + **21mil. euro** PHARE
- 221 projects with **3606 partners** out of which **338 Romanian partners**
(349-DE, 345-UK, 319-F, 236-IT, 184 GR, NL, 181- ES, 133- BE, 122- AT, 118- PL, 104- SE, 99 -BG, 90- HU, 78-CZ, 74-DK, 71-FI, 67-PT, etc)

whereas the participation in FP6 (first 2003 calls, provisional data) shows an encouraging start, reflected by 669 proposals, of which 80 were selected for funding (IP 206/25; NoE 241/30; SA 59/8; STREP 120/12; CA 43/5).

The strategic vectors for 2003-2010 are oriented towards:

- Harmonizing policy measures, in order to ensure maximum consistency and effectiveness of actions taken by European countries and stakeholders, at national and trans-national level

- Integrating the interests of the main stakeholders (higher education institutions (HEIs), research and technology organisations (RTOs), industry, regulators, user groups, etc.) around key technologies, in order to devise and implement a common strategy for development
- Leveraging public awareness and support to research and technological innovation, including effective public financial support through fiscal measures
- Significant actions in order to improve the careers of researchers, to bring public research and industry closer together, to develop and exploit fully the potential of European and national public financial instruments (e.g. FP 6)
- Encouraging and monitoring the redirection of public budgets and making full use of the possibilities for public support to industry offered by State aid rules and public procurement rules
- Improving the environment of research and technological innovation: intellectual property protection, regulation of product markets and related standards, competition rules, financial markets, the fiscal environment, reconsidering the treatment of research and innovation in companies' management and reporting practices.

All these vectors are meant to converge towards ***better corporate governance and best KM practice.***