

## TRANSFORMATIONS IN EDUCATION IN A KNOWLEDGE-BASED SOCIETY

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### ABSTRACT

*In the current economic context, the generalization of a global economic crisis raises a number of issues and questions for both the academic environment concerned with the mission for which it is created, namely to prepare graduates able to integrate rapidly into the labour market and the economic environment, which needs specialists capable of mobility and continuous adaptation to change. The interest shown by society for education is extremely inconstant, as it culminates in final evaluation periods, followed by obtaining documents certifying the passing of a certain educational path, documents that theoretically offer higher chances of obtaining a place of well-paid work. Such an instrumentalist approach is acceptable (though not desirable) from the perspective of the beneficiaries, but not from the perspective of education providers who are defined as educators. Education is a vast, generous concept which, in most cases, is viewed by society, especially in terms of its concrete results. This attitude can be considered justified, since in all areas the major interest is manifested for the result rather than for the process. The study we propose is intended to be an interpretation from a predominantly humanistic but realistic perspective of a situation described synthetically and detached from statistical data to see to what extent the observance of the commitments assumed by Romania at the declarative level are found in the consciousness of the main actors in the field: students and teachers.*

**KEYWORDS:** *education, knowledge-economy, learning organization, strategic management.*

**JEL CLASSIFICATION:** *M12, M14, M21, O15*

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### 1. THE KNOWLEDGE-BASED ORGANIZATION

About education management has been written very much already. Firstly, because the manager himself is the "product" of an educational path, and secondly because in education it is extremely difficult to reconcile the need for standardization with the uniqueness of man and the specificity of the culture to which he belongs. The truth of this finding is reflected in the extremely lively interest that European institutions and European educational institutions manifest in trying to harmonize higher education in such a way that higher education in Europe allows for unity in diversity. Education is defined by the Explanatory Dictionary of the Romanian Language as „the set of measures applied systematically and consciously to the formation and development of the intellectual, moral and physical faculties of the people (especially children and youth)”. The central point of education and its ultimate goal is the transmission of social and cultural values, traditions, moral and religious principles from one generation to the next. These values are, of course, added to the learning of occupational skills. For instance universities are considered and referenced as economic and civic leaders in their local area. They have the necessary moral authority to drive

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fundamental changes at socio-economic levels by a) contributing to the elaboration of local economic strategies, b) connecting research and teaching priorities to local economic and social needs; c) supporting public engagement, community well-being, and active citizenship skills (Bejinaru, 2017)

Over time, as human society developed as a result of discoveries in all areas of activity, discoveries that redefined the boundaries of knowledge, the tendency was to move from a general education to a more specialized, more focused education on a certain field of activity, moving to the central mission, the transmission of cultural dowry, to the development of skills necessary to carry out some useful activities for the society in the most efficient way possible. This trend has been exacerbated by the explosion of information, has been exacerbated by the competition between the world's states and continues to grow as we speak. (Bejinaru, 2010)

The learning organization which characterizes as "learning the changes", "learn to learn" and "continuous learning" modifies the potential actions field in a certain given context. The learning rhythm towards anticipating and adapting to the new progress becomes a competitive advantage resource from the first stages of creating a new organization that focuses on efficient activities. This is defined by the organization's specific results. (Bejinaru & Iordache, 2010). Bejinaru (2016) emphasizes more on the perspective that the organizations are "nothing but social inventions meant to achieve goals by group efforts". The main feature is the twists within the transition from the actual economy towards the one based on knowledge, such as: the main organization's functions become the coordination, protection and integration of knowledge; the transactions and activities which involve high levels of specialties and knowledge become internal matters; the organization's abilities and management which become convergent; the networks between education, economical activities and personal development redefine themselves. As a result, the knowledge-based organization is going to be simple, with less structural levels, more flexible and intelligent. Instead of the conventional corporation's artificial discipline, there is a more dynamic world, filled with challenges and disappointments, which, in fact, define the real world. (Bratianu & Bejinaru, 2016).

All these types of knowledge are involved in the innovation process, which generates new knowledge, of different types, which can be marketed directly as they are, or indirectly with the help of the new products and services, which get a new value within the organizations. We underline the demands of the organizations, which become obvious simply by reading the features: The deep identification of these features and people trying to understand that if they are not yet present, they are imminent; The shaping of the organization towards assimilating, implementing and transforming them as a competitive advantage; Re-evaluating all the personnel and motivating them in order to transform all these existent values in competitive advantage; Re-thinking and re-shaping all these strategies and objectives towards goals. Overall, they offer a perfectly shaped image to identify the specifics of a knowledge-based economy and the differences of nowadays economy. (Bejinaru & Baesu, 2013).

Organizations that aim to excellence (defined by standards) are organizations that cultivate a culture of quality. A culture of quality is characterized by permanent concern for quality in all departments of the organization. Preventing lack of quality replaces final quality control. The emphasis is on the process rather than the quality of inputs and outputs. We have to admit, however, that in the case of universities, the concern about quality is manifested in terms of inputs and outputs. Teachers often point to the lack of quality of "inputs" to justify the lack of quality of "outputs". Without wishing to suggest that this understanding has no real basis, we express our opinion that the concern for the quality of the process is insufficient. (Hapenciuc et al., 2016).

Organizational management is an area that many devoted authors have paid attention to. Many titles have become true best sellers because in reality management is present in every individual's life and the need to know as much as how people can be motivated to define more and more bold goals pursuing with dedication and with consistency is steadily increasing, as the world becomes more and more complex and the requirements of competition increasingly difficult to fulfil.

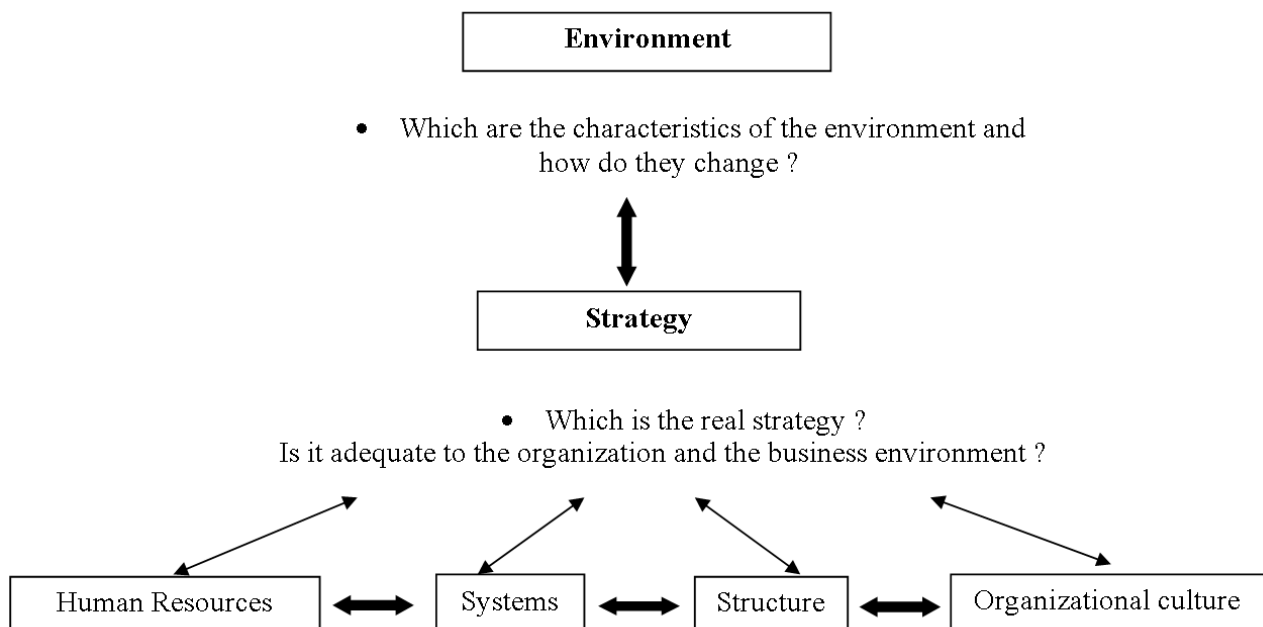
For the purpose we have proposed, titles related to the human resource and organizational culture have enjoyed great interest in our approach to deepening the theoretical foundations required by the management of higher education institutions. As a lasting trend, we considered Kets de Vries (2003) to be extremely inspired that, in the current context, the leader is demanded by the four H: hope, spirit of humanity, humility and sense of humours.

Beyond the theoretical aspects of the academic management issue, there are numerous statistical sources that periodically reflect the progress made in the implementation of common provisions assumed by the adoption of various European documents (the Lisbon Convention 1997, the Bologna Declaration - 1999, the Communiqué from Prague - 2001, Berlin - 2003, Bergen - 2005, London - 2007, Leuven - 2009 and Bucharest 2012).

The TRENDS reports periodically provide statistical analyses of progress made in unifying procedures, teaching content and learning outcomes, reports that are the result of Eurostat, Euro student and Eurydice efforts. The statistical data we have used in our analysis comes from these sources. The existence of European quality assurance agencies is still an indication of the interest in harmonizing higher education in the European space, with the ultimate goal being the creation of the European Higher Education Area (EHEA) and the European Research Area (ERA).

## 2. ORGANIZATIONAL CHANGE, INNOVATION AND PERFORMANCE

The change can have positive or negative consequences, depending on the perspective approached in defining the notion of "positive" and "negative", depending on the coordinate system that defines the field in which the change occurs. Of course, change is not an end in itself; it is just a transition to something. Making a viable change involves understanding and addressing the existing relationship between the environment, strategy and organization. Clarke (2002) schematically represents the organization for change in the following way:



**Figure 1. Managing the organization for the change process**

*Source: adaptation after Clarke (2002, p. 37)*

Any of these elements can be the lever through which the desired change can be effectively implemented. Of course, any change in a field will cause changes in the other areas, as one can

easily infer from the fact that the arrows have a double meaning. As shown in Figure 1, the levels of change are: structure; systems; human resource; organizational culture.

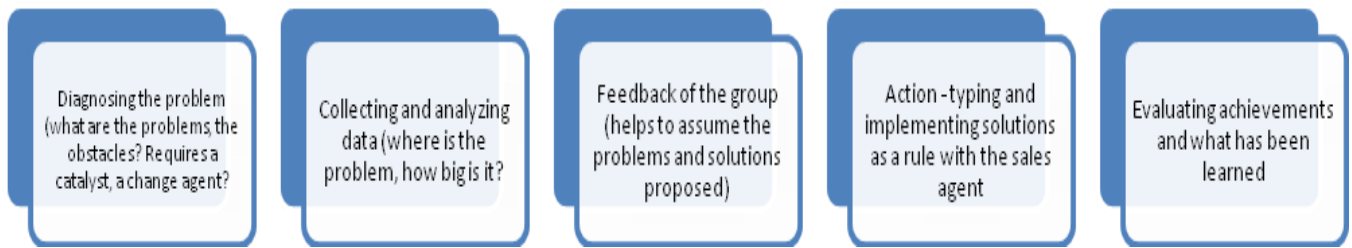
Strategic management aims to adapt the organization to change, whether positive or negative. Even more, due to the consequences of the decisions taken today, strategic management aims to influence the future environment. Alvin Toffler (1980) said that change is not only necessary for life - it is life itself. Regardless of which aspect of life we refer, no matter what plan we report, change is the process of passing from one state to another. In everyday life, change occurs beyond our will, as it is the change of time individually, both physically and intellectually (birth, development, maturity, death), which cannot be avoided, but only influenced by favourable or unfavourable actions (life regime) or by our will (choosing a certain professional path, for example). From the perspective of strategic management, change is an essential notion because what strategic management proposes to respond to is the need to adapt to change from the perspective of future. Strategic management aims to adapt the organization to change, whether positive or negative. Even more, due to the consequences of the decisions taken today, strategic management aims to influence the future environment. (Bejinaru, 2016; Hapenciuc et al., 2016).

Rosabeth Moss Kanter (1984) identifies two types of approaches to implementing change in organizations: the integrative approach and the segmental approach. The integrative approach is characterized by global problem-solving, the willingness to try to introduce new ideas, and the consideration of change as an opportunity rather than as a threat. The segmental approach divides the problem solving of the organization, which is considered rather a collection of departments than a whole. The researcher has come to the conclusion that integrative organizations are much better off at innovation than segmental ones. Through innovation, Moss Kanter understands the introduction of new products / services, but also the implementation of new ideas and practices, the main objective being to respond as well as customer needs. In his view, in order for an organization to become integrative, it is necessary to acquire three types of skills: • power-related skills (persuading others to invest resources and time in new and risky initiatives); • learning how to solve problems arising from teamwork and employee participation; • understanding the way in which organization is structured and formed.

Lewin (1951) and Schein (1951) describe the process of change as a succession of three stages: defrosting - changing - freezing. In the defrosting phase, the main objective is to help people see that change is necessary and desirable. The stage of change is a step in identifying what is being changed in people's attitudes, in their values and actions, and then helping them get the change. At this stage, the existence of an effective change agent is of crucial importance. The last stage, the re-freezing phase, strengthens and confirms the modified behavior through support methods (encouragement, promotion, participatory management style, etc.) (Bratianu et al., 2011).

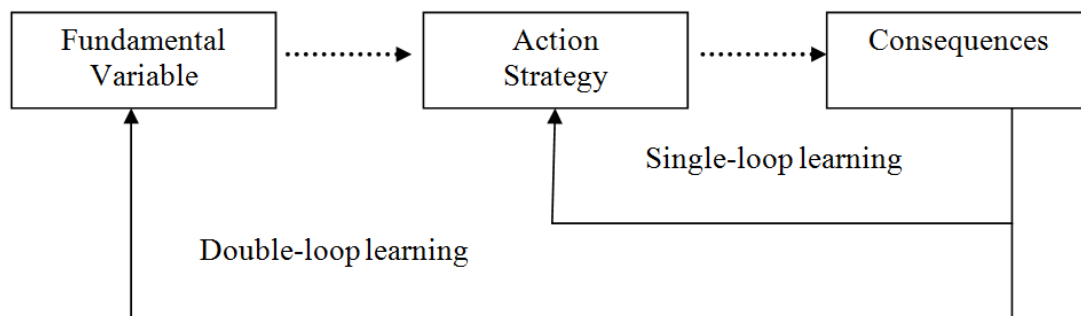
Another approach that drew attention to triggering change is "action research". The term "research for action" was first used by Kurt Lewin in 1944 in *Action Research and Minority Problems*. In that paper, Lewin defines the term "comparative research of the conditions and effects of various actions and social research leading to social action" and which uses "a spiral of steps, each consisting of a circle consisting of planning, action and collection facts related to the outcome of the action". Cole (2004) graphically represents the research methodology for action as can be seen in Figure 2.

The last step is particularly important for the organization because, by evaluating what has been learned, conclusions can be drawn about any mistakes made. In this context, we consider the distinction that Argyris and Schön (1978) make between "single-loop learning" and "double-loop learning". In their view, the way individuals work is determined by obtaining the proposed results and a set of environmental variables.



**Figure 2. A research methodology for action**  
 Source: Cole (2004, p.188)

The way in which these variables are dealt with in identifying the required actions is the one that determines the difference between single-loop learning and double-loop learning. When the purpose of actions is to get the expected results and to eliminate the conflict with environmental variables, we have to do with single loop learning. On the other hand, when actions aim not only at achieving the proposed objective, but also in researching the conflict with environmental variables and possibly transforming them in a favourable sense, both single-loop and double-loop learning are involved.



**Figure 3. Single loop and double loop learning**  
 Source: Argyris & Schön, (1978)

Single loop learning is characteristic of situations where goals, values, frames, and, to some extent, strategies are underlined. The focus is on techniques or improvement. Double-loop learning involves investigating the role of the systems underlying the definition of objectives and strategies. Argyris notes that double-loop learning is absolutely essential for organizations (but also professional individuals) to be able to make informed decisions in contexts that are changing rapidly or are characterized by uncertainty. Action research favours collaboration and involves people working in groups to analyse the problem and suggest how it can be resolved. The major interest in such an approach is mainly due to the fact that it is more problem-oriented rather than solution-oriented, and actively involves employees in the important issues of their work, thereby gaining co-operation in triggering change.

Over the past twenty years, there has been an increasing concern for the idea of excellence. Peters and Waterman (1982) defined excellence as a blend of growth above average and financial profit, along with the reputation of permanent innovators, in response to changing market situation requirements. They have built a model focused on the following features of business organizations: structure, strategy, systems, managerial style, skills, people and common values (or culture).

The major merit of the writings devoted to Peters excellence is to draw a few lines of action for the management of organizations that believe in excellence. These are: increased decentralization; spreading decision-making throughout the organization (giving power); Maintaining stability

mainly through vision and values (culture); encouraging innovation, but in reasonable quantities, more or less continuously; considering mistaken sources of learning; directing global decisions and strategies to customer satisfaction; reflection of customer orientation and within the organization, where each employee is considered the client of another; the consideration of mistakes and failures is an integral part of the desire for excellence, the emphasis on total quality increases as the organization tries to "succeed for the first time"; from the perspective of organizational structures, removal from mechanistic forms and closeness to organic structures. As a conclusion, we can say, paraphrasing Peters that 'organizations which promote excellence believe in constant improvement and permanent change'. Under a competitive market, managing innovation and change is undoubtedly one of the great challenges for organizations wishing to survive. (Peters & Wattermann, 1982).

### **3. THE ROLE OF UNIVERSITIES IN THE KNOWLEDGE SOCIETY**

In this context, the natural question arises: what do we do with our universities? Do they only become educational institutions or capable of generating research and innovation platforms?! Certainly, the knowledge-based economy implies a greater role for universities in society. First of all, universities need to review their missions, in which, besides teaching and staffing, they plan research and marketing activities for research products, as well as engaging more actively in the transfer of knowledge and technology.

The University as a preserver of knowledge should not be seen as a closed system, which "recirculates" the same concepts, notions, truths, etc. It has to be defined as a framework capable of accommodating bold approaches, supporting ideas that many seem unrealistic precisely because it, the university, is called upon to constantly question the state of affairs for the removal of barriers. Learning in "double loop" is learning that should be a priority in universities because double-loop learning is likely to change variables, not just to adapt to them. The result of the activity of a higher education institution is becoming a graduate. This development can be described as a sum of skills and abilities the graduate has acquired and will use them in the future to integrate into society in general and in the labour market in particular. Besides the competencies and abilities specific to the field of specialization of the graduate, the higher education institution is also called to contribute to defining the moral and civic profile of the graduate. Andrei Marga, beyond the specialized training functions, sees the university as: - the intellectual authority of critical examination of the situations; -space dedicated to civil rights, justice and social reform. It follows that the university aims to act beyond the professional plan, adding value also from the perspective of human quality. The whole society expects university graduates to be "quality people," beyond being "quality professionals," waiting for us to be justified. In our opinion, civic development, even if it is not the main objective of the institution, should be better represented. (Prelicean & Bejinaru, 2016).

Universities must also be aware that education has no borders. It becomes a transnational one. That is why there is a need to promote globally innovative universities, and to be more competitive, universities need two things. First, more autonomy and secondly more money, that is, better funding. It is important to note that in the list of the top 10 states with the most universities entered in the Top 200, Top 500 and Top 1000 there are also 6 of the 10 most competitive states in the list of the top 10 states with the most developed knowledge economies, Table 1. More specifically, due to the presence of strong universities, states have been successful in developing the knowledge economy as prerequisites for increasing their economic competitiveness. (Bejinaru, 2017).

The activity of universities is multidimensional, and this can be reflected, including through its presence in cyberspace (web), the Web ensures today total transparency. In this context, the Spanish Center for Human and Sociological Research prepares an annual ranking of universities worldwide, depending on their web presence - "Webometrix Ranking of World Universities".

**Table 1. States of the world at the head of international rankings**

Ranking position	Reference domain		
	Competition	Knowledge economy	Higher education (universities)
1	Switzerland	Denmark	US
2	Sweden	Sweden	Germany
3	Singapore	Finland	Canada
4	US	Netherlands	UK
5	Germany	Norway	Australia
6	Japan	Canada	Netherlands
7	Finland	UK	Sweden
8	Netherlands	Ireland	Belgium
9	Denmark	US	Switzerland
10	Canada	Switzerland	Norway

*Source:* Ranking web of World University. – [www.webometrics.info](http://www.webometrics.info)

We believe that although world universities can be compared taking into account a wide variety of indicators, it is necessary to take into account the wide variety of factors affecting higher education institutions and that the criteria taken into account in such rankings should not be placed in the focus of a university's activity. The favourable position in such a ranking must be the result, not the purpose of the university's activity. Philip Altbach (2001), referring to the phenomenon of globalization and the Internet-induced computer explosion, states that academic institutions and systems in smaller and poorer countries are facing serious problems.

We think that too much energy is consumed around these hierarchies, all the more so as they serve a very limited number of institutions. But we do not want to suggest in any way that the value of these institutions is only on paper. The value of a university is recognized by communities, even in the absence of such hierarchies, by the quality of graduates who integrate into society. (Esi, 2014)

Recognizing the failure of the Lisbon Agenda in 2000 that set itself the strategic goal of transforming Europe into the world's most dynamic and competitive economy by 2010 (WEF, 2012, p. 6), European leaders launched a new competitiveness strategy, Europe 2020 for smart, sustainable and inclusive growth. It foresees five major targets to be met by Member States by 2020, one of the most important being that R & D investments are at 3% of GDP (for Romania the target ceiling was subsequently revised to 2%). The roadmap in the context of the strategic approach to innovation includes several major action lines, including the finalization of the European Research Area (ERA) by 2014 (EC, 2012a, p. 4).

Regarding Romania, according to EU assessments - Table no. 2, the aggregate score on innovation performance was in 2011 below half the European average, with some indicators even more pronounced: Intellectual assets (1/10 of the EU average), innovative entrepreneurship (1/5 of the EU average), quality of systems research (less than 1/3 of the EU average), applied innovations (1/3 of the EU average).

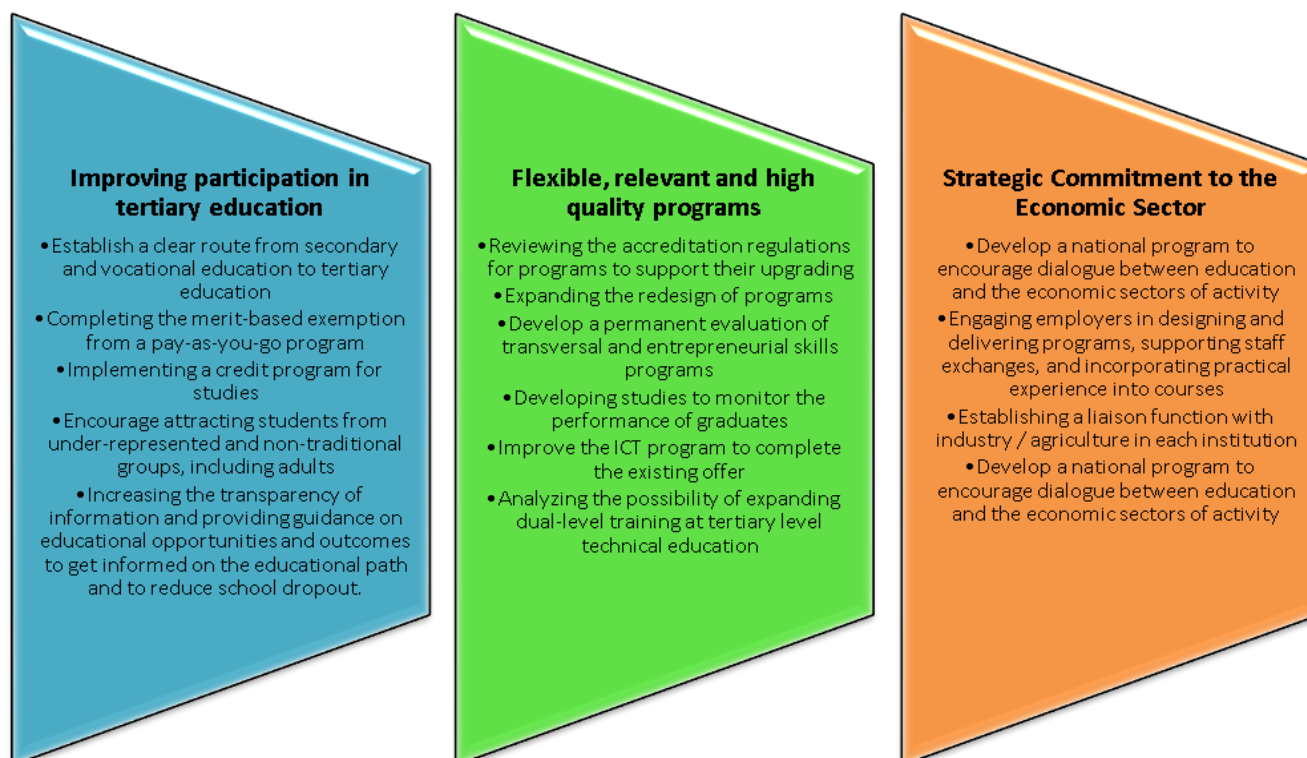
**Table 2. Innovation performance in Romania compared to the EU27 average in 2011**

Categories of performance indicators *	EU 26 Average	Romania	Romania % in EU average (UE=1,00)
Aggregate score **	0.539	0.273	0.53
Degree in human resource education	0.563	0.400	0.71
Quality of research systems	0.530	0.153	0.29
Financial support	0.584	0.235	0.40
Investments of companies	0.440	0.409	0.93
Innovative entrepreneurship	0.487	0.100	0.21
Intellectual assets	0.551	0.067	0.12
Applied Innovations	0.506	0.167	0.33
Economic effects	0.585	0.490	0.84

\* The evaluation is based on 24 indicators, grouped in the eight categories in the table

\*\* The evaluation is based on all 24 indicators

Source: Innovation Union Scoreboard 2011, European Union, 2012, p. 70-71.



**Figure 4. Instruments required for the progress of tertiary education - strategic pillars**

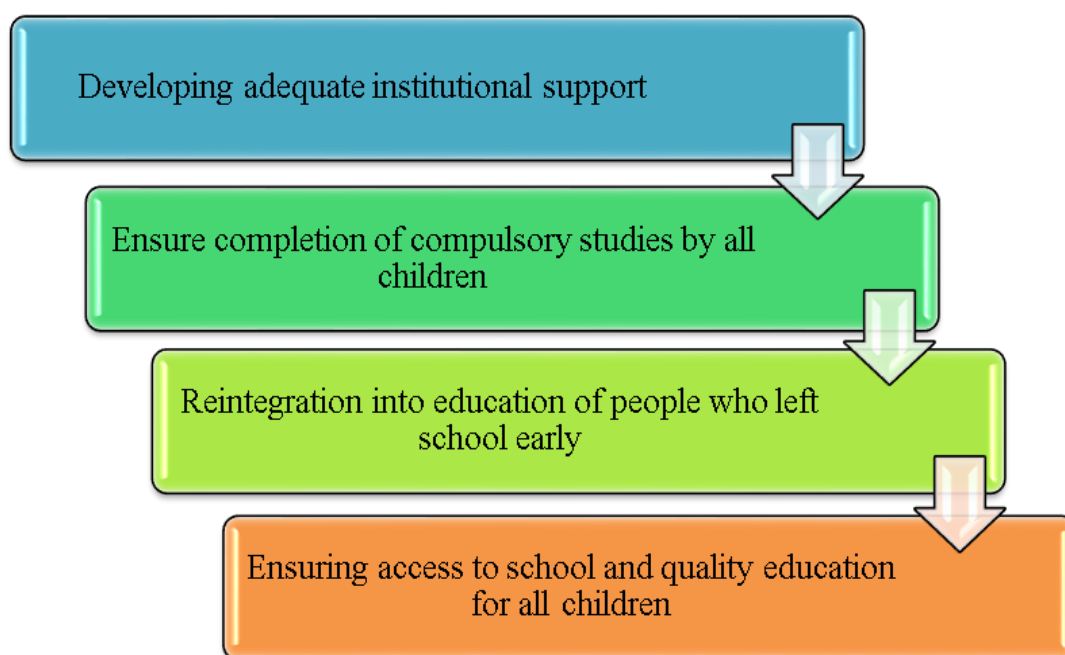
Source: Adaptation to Tertiary Education Strategy 2015-2020, p.26



To achieve progress, in terms of results, quality and involvement, tertiary education benefits from tools to support success in its vital areas. These areas presented in Figure 4 are considered pillars that can support the progress of tertiary education:

To improve school dropout rates in 2020, the target group is the 11-17 year olds today. Approximately 72,000 of the 11-17 year olds are in rural and 18,000 in urban areas. Other worrying figures are: 40% of people are at risk of poverty and social exclusion in 2013; 17% of young people aged 17-24 are not in the education, employment or training system; 37.3% of children aged 15-16 are functional illiterate; 42% of students do not pass the baccalaureate exam.

These four pillars contain measures that will reduce the early school leaving rate to 11.3% by 2020 (represented in Figure 5).



**Figure 5. Measures to reduce early school leaving.**

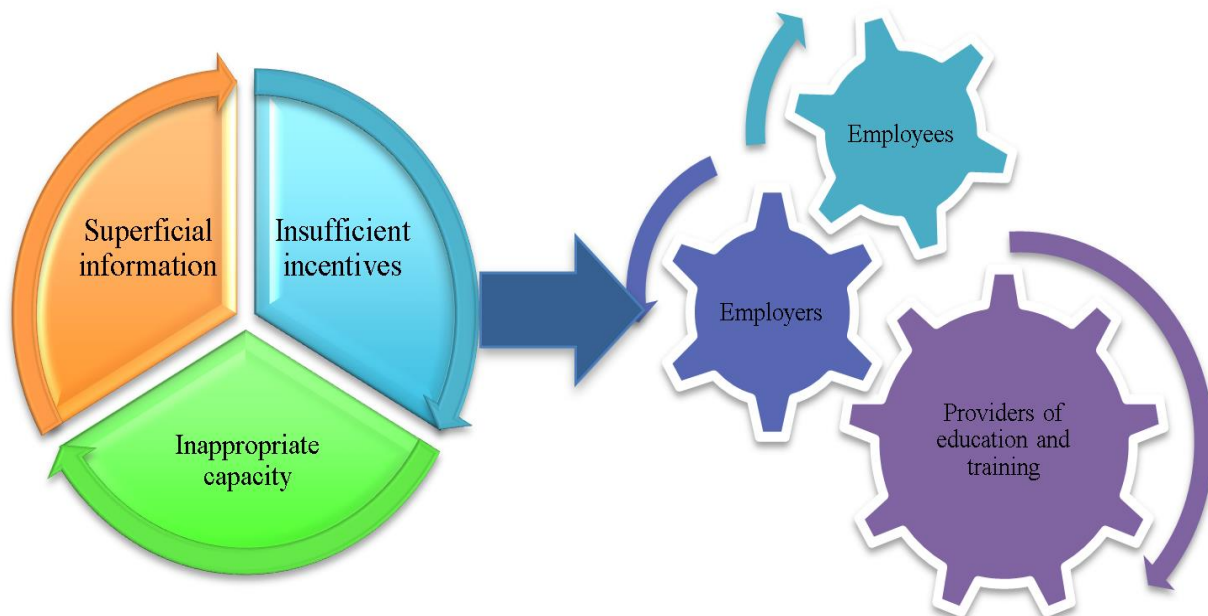
*Source: the authors*

Another objective is the share of people aged 25-64 in the lifelong learning process. The causes of the malfunctions in lifelong learning are according to Figure 6.

Lack of information: 3.4% of Romanians with primary and secondary education have access to information on learning opportunities compared to 31.9% of those with tertiary level education.

Insufficient incentives: the lack of support from employers for the participation of people aged 25-64 in education and training is a major obstacle for 30% of respondents (AEA 2011) in Romania, compared with only 1.3% in Portugal and with the EU average of 8%.

Inappropriate capacity: the cost of training is a barrier to participation in training for 52.5% of respondents (AEA 2011) in Romania (the highest rate among all 30 countries involved in this survey) compared to only 4.7 % in Belgium and the EU average of 13.2%.



**Figure 6. Dysfunctions in lifelong learning**  
*Source: the authors*

#### 4. CONCLUSIONS

The main conclusion we have reached is that the alignment of Romanian higher education institutions with the European quality standards cannot be done simply by accepting and applying some principles, procedures or management systems. In our view, it requires reconciliation of the proposed objectives with existing material and human resources. At European (and global) level, there is a vivid interest in identifying as precise as possible the quality measurement procedures in the field of education, an extremely difficult approach due to the immateriality of the teaching-learning outcomes. Such an interest is also manifested by the Romanian specialists in the field, a fully justified situation. However, in our opinion, the priority for the Romanian context should be to ensure the conditions for obtaining quality and then to research the most appropriate methods of measuring it. We fully agree that defining the target situation is necessary to define a strategy. We believe, however, that it is equally necessary to define the starting point in realistic terms. We believe that measures are needed to change this attitude before European higher education institutions "take over" not necessarily the Romanian educational market, but especially that segment represented by the exceptional students (Prelipcean & Bejinaru, 2016).

Developing a change strategy is difficult because it must primarily focus on the benefit of the student and society and only afterwards upon the benefit of the institution; as a result, the higher education institution sees itself morally obliged to often take on an increased effort, even if material conditions are not created to achieve the desired results. The elaboration of the change strategy and its implementation is hampered by the particularities of the activity in the higher education institutions, first of all by the moral responsibility that these institutions have towards society.

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