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The Application of Total Quality System in Universities

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Abstract: *The Bologna Project reconsidered higher education in the perspective of the triad: development-innovation-research under the idea of quality, in order to achieve the academic performance and competitiveness. The quality strategy was implemented step by step and the document of TQS is similar to commercial rules, which are the most sensitive to the external factors. The didactical act and the academic research become consequently components of an interrelation, without which quality assurance is not possible.*

Keywords: *career; competitiveness; quality; TQS*

1. Introduction

The academic performance is a complex concept that depends on many factors. In today's society it is characterized by the change dynamics, in which information is perceived by most people as something normal, daily, the university multiplies its capacities, being the main place where innovative ideas are born and where the development of humanity is "processed", but it is also the "provider of careers" for both the community and the individual.

Nowadays, in the world there are thousands of universities and the young people eager for knowledge prefer the most famous universities around the world, which created over time, a reputation through the quality of practiced educational act.

In the recent years, Romania also aims, increasingly, at the idea of implementing quality in all areas of activity. It is absolutely necessary to submit the implementation of quality, because, at this stage, no organization, of any type, can survive and develop unless it is competitive. This becomes a reality because the customer generally becomes every day more and more demanding, his requirements being on a dynamic spiral going upward, this is due to the information possibilities offered by the actual society, which was unimaginable only 10 years ago. In this context, the offers have multiplied in geometric progression and the offertory are in a continuous and tough competition, the one who does not withstand, disappears. This race continues forcing rivals to withstand, in other words, to become competitive.

Competitiveness is obtained by implementing the most appropriate management policies and technical solutions, among which it stands out conspicuously, the quality.

The quality is not a new notion, it appeared with the human work awareness and acquiring in time, different approaches. Currently, under the new approach as total quality, the customer is the main actor in the context of informational society and competitive market, so the quality takes new meanings. An organization in which processes are conducted after the concept of total quality, the organizational culture is a quality culture that becomes an efficient organization in its activity domain, and the relationship with the client will be competitive. (Falticeanu, 2000) The quality of education focuses on three sides of university management: scientific research, didactical and administrative activities. The scientific research represents the main component of the university management because it is based and it develops the other two components. This is why many studies are undertaken in the management of university scientific research. (Institutional prestige and reputation among research universities, 2006)

2. Quality, Performance and Competitiveness

In today's society, under the market economy, the university is an educational service provider. Appropriating this role, it competes with other offertory in the market of educational services and it will withstand, only if it becomes efficient, regarding the activities and competitiveness on the educational services market. Acquiring these attributes may be achieved through the implementation of those technical solutions and management policies that have been mentioned above, among which the quality is highlighted; ultimately the "final mark" is given by the customer, that is the society which is the ultimate beneficiary of services. In connection to this subject there are pros and cons, each author having their own arguments. Thus, the author Gutu A. (Gutu), making a review of these pros and cons on the assimilation of the university with a company, quotes: "... it is very important to correctly interpret the concept of competitiveness for the university. To be competitive for a university is not to compete on the land acquisition of a hypothetical market segment, but it means to assert and implement the experiences and distinctive characters of each professor". The same author, quoting the *Magna Carta Universitarum*, says: "... there can be no teaching without research, and the quality of research on its own cannot fully define the quality of the offered education. Thus, only research and teaching represent a single corpus, on the base of which each professor builds its academic doctrine.

The above-quoted remarks show that faculty management is more complex than the general management of an organization, having some features that make this approach to be specific. Quality and quality management simply extrapolated to the general case of the faculty cannot be applied. Therefore, faculty and university management is dealt with by taking into account its specificities. (Gary, et al., 2003)

The total quality applied to schools is based on the real fact that the society, the community where the faculty operates is *the customer*, that is the entity that has "created" the faculty, which provides resources and uses their "products", so it is the main actor which the school as service provider will bring it into its attention. The society requires efficient human resource according to the needs of the development stage and the school will have to satisfy this requirement, and even to come with offers. Only in this way the

university will maintain the quality of supplier, because otherwise, it will be abandoned by the "client", who will find another supplier. In this context, the need for survival on highly qualified labor market, in which the faculty acts as a supplier, will be required to improve in order to become more competitive. (Falticeanu, 2000)

Hence the need to implement technical solutions and management measures, which would lead to acquiring the ability to satisfy the changing requirements of the society. These are, on one hand, the renewal of infrastructure and equipment related to the educational process and, on the other hand, the standards and methodologies designed to change the mentality of the staff for the purpose of creating a quality culture. The latter is in fact an investment in people, for the purposes of their awareness of the defining role that they have in the educational process and on the development of society. As the financial investments in quality are small, but its long-term effects are beneficial and stable for both university and society. This is the explanation to the interest of the highest bodies in EU and in the world, in order to implement quality management in universities. On this subject it was studied and written a lot in recent years. In a synthesis of the specialists' conclusions, we can say that currently the society is concerned about the quality from its point of view and the universities are looking for the best models of quality management for educational process. For several years, T.Q.S. began to penetrate also in universities, but there is a risk of excessive use of the phenomenon which would create a false vision about the university, which, however, is not a business. Therefore it is necessary a thorough analysis of the educational process, which has a high human feature, which cannot be applied literally in the TQS networks, even if it was verified and applied in firms. (Falticeanu, 2000)

Harvey and Green postulate five perspectives for analyzing the quality of educational process:

- *excellence* - exemplified by the external recognition of the schools as a "center of excellence" for scientific research and its exploitation;
- *standards* - illustrated by the set of measurable indicators of quality components of the educational process;
- *relevance* - illustrated by the contribution of faculty research to economic and social development;
- *financial efficiency* - proved by the ability of the institution for the efficient use of allocated resources;
- *transformability* - proven by the ability to adapt to external requirements, but also to influence the external environment.

These analytical perspectives are the basis of the criteria developed by accredited organizations in the U.S. and EU and by national bodies from different countries. (Fălticeanu, 2000)

The great challenge of the university at the moment is its perception by the society as the main provider of highly skilled and efficient manpower, able to meet the requirements of the current informational society. Therefore, it must become efficient to be competitive on the market for educational services. The optimum and safe solution to insure performance is the implementation of Total Quality System, through the development of specific standards, methodologies and procedures, which should be correctly

perceived and understood by all staff; they must be applied consciously, by their own will, after acquiring the mentality of quality required for the system. (Fălticeanu, 2000)

3. The Place and Role of Scientific Research to Acquire Academic Performance

The educational act is extremely complex and the professor has the determining role in its success. The complexity of the educational university act resides in the fact that is working with mature people, already with an initial solid baggage of knowledge and with a general culture rather formed. Also, the faculty educational act has only two components that together lead to performance, that is: the act of scientific research and didactic act, which, as noted above, one cannot exist without the other, only one does not characterize the quality of education.

Scientific research university has a well-defined place in the scope of academic staff activities; it is necessary for several reasons: primarily for cultural and professional completion of the professor, who must be a scholar, a seeker of the new, a regular to the libraries, a devourer of scientific information; these qualities became a model for students, because students need and want models. Firstly, the faculty attracts students also by its existing models, secondly, scientific research by establishing a solid base of knowledge, is the support on which it currently builds a high scientific level, thirdly, the skills created by a research activity of the professor are transmitted, even without intention, to students that tend to create models out of their professors. The Faculty needs academic staff, because they create the university's image. These issues are not new, they have existed since the university is that body of culture, but now the university aims to be a mass institution, and in the context of its new *commercial* vision and its mission may lead to misinterpretation, that may affect the concept of university, that is why it has become obligatory to be reassessed with great care. (Gutu)

This happens for few years, both globally and at European level. The Bologna Process has proven a success among the universities. European Academic Community has set ambitious goals, realizing them in a short time, operating changes in higher education system, in organizing universities, the curriculum design. These elements have a positive impact on society among the students.

Nowadays, the student has become the main actor of the university. According the authors Gutu A., Volkeein, J. F. and Sweitzer, Kyle appreciating the educational process, the student must be the starting point and not professor's knowledge; this is because the student is the result of all the educational activity components including the professor's knowledge. Today's student is clearly different than he was 20 years ago, being more informed and more demanding; he wants to see at his professor an upright personality with selected ethical and professional principles, with great communication skills, all being part of a profound democratic educational context. The University must put into good use this reality, as a priority, because it secures one of the pillars of the quality of the educational activity. In this context, we consider that academic integrity must be the sixth perspective of analysis of the quality of the educational analysis, which should be added to the five ones above. (Gutu) Taking into consideration these new and current issues which make the quality of educational activity, the efficiency of scientific research is one of the founding pillars of academic performance. In all evaluation systems of the universities, the scientific

research is a chapter of major importance, just by its impact on the quality of trained human resource. Specifically, university scientific research is indispensable to the educational act for the following reasons:

- the professor must continuously rise its professional knowledge level which then he shares with the students;
- through research, the professor acquires the ability to search and discover the new in its field of study;
- by well valued research results, it is created a positive image of the university;
- research results are values of the university and of the community, by applying them it contributes to the development;
- by implementing the methods and results of research in the didactical process (lectures, seminars, laboratories), it increases its value;
- by the excellent results of research, the professor gains the specific attributes of a model for a student.

Scientific university research is divided into a series of components, which over time have changed, reaching now, internationally, to an acceptable configuration, which tries to be as comprehensive as possible. (Raboaca, et al., 1999)

These components are:

- research development in research projects financed by international or national, regional or local sources, that were gained through competitions that were launched by the financing bodies;
- development of basic and applied research within doctoral and master's activities;
- evaluating the research results by using them into the didactic process - lectures, seminars, laboratories.
- evaluating research results by developing and publishing articles in recognized internationally, nationally or regionally reviews;
- evaluating research results by communicating them in international and national conferences and published in conference volumes;
- evaluating research results by publishing books, treaties and monographs;
- evaluating research results by licensing them nationally and internationally, to protect intellectual property and revenue assurance;
- encouraging research and results transfer in the socio-economic environment by creating and institutionalizing specific structures at the university level.

As can be easily noticed, the quality of research conditions to a great extent the quality of educational act, which implies the academic performance. Now, we search solutions to mobilize the university into the international competition, which is the current path towards progress in preparing qualified human resource; they are based on assessment of academic performance. There are different opinions regarding the assessment criteria, it seems that the best criteria is the one of quantitative assessment, most currently accepted. The question regarding this criterion is to determine the most significant quantifiable indicators.

At national level, the National Council of Scientific Research in Higher Education, based on the solutions found by European bodies, has recently adopted a series of indicators which are recommended for evaluating scientific research. They are based on all research components described above, and there are:

1. The ability to attract funds for scientific research activity of the university, illustrated by:

- the balanced ratio between the number of submitted projects and the number of people involved in research;
- the balanced ratio between the number of won projects and the number of people involved in research;
- the ratio between the value of acquired funds through research and the number of people involved in research.

2. The ability to prepare the highly qualified resource for research, illustrated by:

- Ratio of the number of doctoral leadership and total number of professors;
- Ratio of the number of doctoral theses completed and the number of doctoral students.

3. The relevance and the visibility of research results, illustrated by:

- the balanced ratio between the number of articles published internationally and the number of people involved in research;
- the balanced ratio between the number of articles published nationally and the number of people involved in research;
- the balanced ratio between the number of pages of published books in Romania and abroad.

4. The University's capacity to achieve and develop innovative products and technologies for business environment, illustrated by the ratio of total number of patents / product with intellectual property, through the university and the number of people involved in research;

5. Institutional capacity of the university to organize and support the research activity and to transfer results in the socio-economic environment, illustrated by the number of organizational structures and existing university transfer.

4. Conclusions

Our conclusions would be that:

1. The university competes on the market of highly qualified human resources, a market which has to adapt according to the conditions imposed by the client, that is by the informational society in a continuous dynamic and in perfect agreement with its humanist role and feature in society.

2. University competitiveness is achieved through academic performance.

3. Academic performance is the gained state by a university in the improvement process in all domains, which gives a good external image, stability and upward trend in the assessment and safety charts on the market.

4. Primary indicator of academic performance is the highly qualified human resource that fits in an increasingly demanding society. The quality of human resources, as "finite product" of the university is conditioned by the quality of achieving process, which are components of the process or educational act.

5. The quality of scientific research lies in the results obtained at university level and, of course, it is reflected in all educational act outcomes ending with the student.

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