Quality management system at The Faculty of Economics and Business

Paper presented in track 1 at the
31st Annual EAIR Forum in Vilnius, Lithuania
23 to 26 August 2009

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Key words
Quality
Abstract

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Aimed at finding appropriate QMS (quality management system) in HE (higher education), this paper introduces ISO 9001 at the higher education institution. Early chapters explain the basic of the ESG standards and guidelines, ISO 9001, TQM and EFQM excellence model. Other topics include practical example of implementation of ISO 9001 at The Faculty of Economics and Business and comparison with other quality management systems. This paper uses a case study approach to examine implementation of QMS in HE issue and conducts a review of the closely related models. It concludes with idea that quality culture in HE can be realized if HE institutions accept ISO 9001, with particular attention to conform all stakeholders’ needs. Further consideration should be given to implementation of TQM or EFQM model, in order to develop quality culture and efficient quality management.
Presentation

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Introduction

All over the world, there is an increasing interest in HE, reflecting its inevitable meaning in countries development. The recent decade has brought unprecedented public demands for higher quality in colleges and universities. Higher education institutions today are under increasing pressure to introduce some system for monitoring or assessing quality as a result of both external and internal forces (Tam, 1999). ENQA created Standards and Guidelines for Quality Assurance in the European Higher Education Area. This was important step towards quality culture in HE area. As quality culture and customer requirements got ahead HE institutions needed to find available model of quality management.

Existing management systems are outmoded and can no longer ensure success in an increasingly competitive world (Tuttle, 1994). There are many different models for the implementation of QMS in HE. Consideration should be given to demystify and clarify the concepts behind ESG, ISO 9001, TQM and EFQM and identify the best practices.

The fact is that the role and importance of higher education in society have changed dramatically over the years, but institutional practices have not (Chaffee & Sherr, 1992). Young (1996) speaks about expansion in the university sector and need for quality assurance for two reasons: “First, with a much wider range of abilities at intake, effective learning can no longer be taken for granted, as it might have been 20 years ago in an elitist university system. Second, the much increased numbers in higher education translate into a correspondingly large public subvention of the sector, and it is natural that the community wishes to be re-assured that its money is well and effectively spent. In Croatia, HE policy is very important part of the overall Social policy. During the last ten years, Croatian HE has experienced dramatic changes. These include: reform of HE system, international cooperation and competition, expansion of new and existing institutions, accessibility of HE for wider population, significant growth in postgraduate education, development of continuing education, distance learning, accesses and increasing use of new technologies. Against this background, it was necessary for Croatian HE institutions to find the way to manage quality issues and become significant part of European Higher Education Area.

Hence, this paper reviews previous research in Croatian HE area and analyse introduction of ISO 9001 at The Faculty of Economics and Business as example of good practice. In this study as a case research, the teachers and students were observed in order to define their opinions on ISO 9001 results. The premise is that quality culture in HE can be realized if they accept good practice from business.

Environment - Croatian HE area

According to the census from 2001, only 7,82% (15,9% of working people) of the Croatian population has a higher education degree. Decentralization, lack of quality systems and culture, insufficient financial and human resources has been some of the important issues to manage. Croatian HE needed substantial reform process. Several projects have started to develop Croatian HE system. Results of quality related project would be addressed below.

All Croatian Universities were included in the project “Quality Assurance in University Teaching”. The project was driven by national priorities essential to maximise the impact of the Bologna Declaration on the need to reform HE. Structural and strategic problems within Croatian HE and the resulting needs to be addressed in the project are (Knezevic & Francic, 2007):

- Academic quality is central to the overall quality of HE
- The effective operation of quality assurance framework is a necessary but not a sufficient condition in ensuring educational quality
- Staff development and training are essential to the development of educational quality and provision needs to operate with a degree of academic freedom, that is, be independent of management directive or control.
Three documents were written to inform future HE policies and strategies in quality assurance in Croatia: *Code of Good Practice in Teaching and Assessment, National Strategy for the Evaluation of Teaching Effectiveness 2007-2011,* *Action Research Programme for Enhancing the Quality of Teaching.*

Another important project was one of *National foundation for Science, Higher Education, technological development and Universities* for development of quality system at University of Zagreb in 2005. Project was based on need to establish institutional quality system at the University of Zagreb. This project included questionnaire about institutional quality systems at faculties of The University of Zagreb. Results showed insufficient quality awareness, but greater number of faculties had started activities to increase quality culture. Research reviewed lack of quality assurance system at University of Zagreb (Andrassy, 2007):

- decentralization of the University management and quality policy,
- belief that quality is understood in academic society and there is no need for quality assurance procedures,
- undeveloped quality culture,
- monitoring of quality system was not developed,
- duration of studies was 50% longer than regular,
- percentage of graduated students was 35% of overall number,
- teachers were not stimulated to improve didactical and pedagogical skills.

Following all stated reasons institutional quality system at University of Zagreb has been established through Board for Quality Management and Office for Quality Management. According to University of Zagreb Statute, Board of Quality Management has main task to evaluate scientific and research system, and HE system at the Zagreb University and to present the University in the National Quality Assurance Network.

Figure 1: Current Quality Assurance system for higher education and science in Croatia

Next relevant project was internal project at The Faculty of Economics and Business, *Quality Management Systems in HE.* It included: research on quality culture at Croatian faculties, identifying and ranking quality factors that influence the development of the universities, attitudes and level of knowledge on international standards and guidelines for quality, perspective of Croatian higher education with regard to the EU accession. Questionnaire with 15 questions was sent to deans of 57 Croatian faculties. Rate of return was 40%, i.e. 23 deans from five universities were involved in the research. Results of this research were (Lazibat, 2005):

- A large number of unanswered survey questionnaires indicated the possible evasion of quality related issues.
Rating the importance of individual quality factors related to the functioning of the faculty ranked the ability to fast adaptation to the last place. This was disappointing, because all related studies confirmed the necessity of rapid and radical reform of the Croatian HE system.

Only 22% of analysed faculties had formally established a policy of the quality. Teachers were informed on quality related issues, but there was not effective informing system. 91% of analysed faculties did not have ISO 9001 certificate and most deans were not familiar with the possibilities and practical application of this standard. There was insufficient knowledge of the ISO/IWA 2 guidelines, so it was necessary to introduce management and employers of universities with the above guidelines.

In addition, most respondents (70%) were familiar with the project Development of Quality Assurance System in Higher Education, although there were deans who have not heard about the project. Most universities had various initiatives to improve quality, but there was not single idea how to form quality system.

For all that, at the time of research, there was no sufficient support of Ministry and University management, for the development of culture and quality system in the Croatian HE area.

Today, Croatian Agency for Science and Higher Education promotes the development of quality culture at all levels of education. Evaluation of HE institutions is organised through the programmes of evaluations in line with European Standards and Guidelines. Croatian area of HE is developing rapidly regarding international standards and needs of all stakeholders. In addition, the number of faculties who implemented ISO 9001 standard is increasing.

**Quality Management Systems in Higher Education – review and comparison**

To deal with external challenges, the internal structures and environment of higher education need to change accordingly to keep pace with the unprecedented demand for quality (Tam, 1999). All over the world, there is an increasing interest in standards and guidelines for QMS. HE institutions need to demonstrate that they take quality of their programmes seriously and willingness to provide the means of assuring and demonstrating that quality. When transparency of the institution is ensured, quality management system must be transparent too, in order to clearly see the results of quality assurance (Ivanosevic, 2006).

QMS should include all stakeholders in HE. There are a variety of stakeholders in higher education, including students, employers, teaching and non-teaching staff, government and its funding agencies, accreditors, validators, auditors, and assessors (Harvey & Burrows, 1992).

Avelini Holjevac (2005) describes the QMS as improvement system to increase flexibility, efficiency and effectiveness of operations; and any activity that seeks to ensure and create conditions that all the employees together achieve maximum efficiency and effectiveness of one goal: to produce the product and provide service when, where and how customers and consumers want and expect, for the first time and every time.

Speaking of QMS Mencer wrote (2005): “system of quality guarantees the freedom of creating a teaching and research programs, but also a commitment to the completion of the planned obligations”. The most important QMS models for HE identified in this paper are: ESG, TQM, ISO 9001, EFQM model.

**ESG (EHEA Standards and Guidelines) in HE**

According to ENQA report on Standards and Guidelines in EHEA (The European Higher Education Area), the purpose of a European dimension to quality assurance is to promote mutual trust and improve transparency while respecting the diversity of national contexts and subject areas. The standards and guidelines for internal and external quality assurance have been developed for the use of HE institutions and quality assurance agencies working in the EHEA, covering key areas relating to quality and standards. The objectives of the ESG are:

- to encourage the development of HE institutions which foster vibrant intellectual and educational achievement;
to provide a source of assistance and guidance to HE institutions and other relevant agencies in developing their own culture of quality assurance;

- to inform and rise the expectations of HE institutions, students, employers and other stakeholders about the processes and outcomes of HE;

- to contribute to a common frame of relevance for the provision of HE and the assurance of quality within the EHEA.

The ESG are in three parts, covering internal quality assurance of HE institutions, external quality assurance of HE institutions and quality assurance of external quality assurance agencies. ESG for internal quality assurance within HE institution include: policy and procedures for quality assurance, approval, monitoring and periodic review of programmes and awards, assessment of students, quality assurance of teaching staff, learning resources and student support, information system and public information. External quality assurance standards and guidelines consists of: use of quality assurance procedures, development of external quality assurance processes, criteria for decision, processes fit for purpose, reporting, follow-up procedures, periodic reviews, system-wide analyses.

**TQM in HE**

Quality cannot be enforced from outside the university (HE institution), it can only be achieved through the join commitment and effort of all those inside it. What is required over next few years is: a rapid increase towards the professionalization of university teaching, the establishment of TQM practices at all levels of each university, increasing recognition and resourcing of teaching and rewards for excellence in it (Elton, 1993).

Arnold Friegenbaum first introduced the term TQM in 1956. Fundamentally, TQM embraces the principle that organizations should listen to those whom they serve, continually evaluate how well they are responding to the needs of their constituencies, and initiate change in order to meet or exceed the expectations of these groups. TQM focuses on processes and tools that extract quality definitions from costumers and translate their desires into corporate actions (Safakli & San, 2007).

Safakli & San (2007) spoke abut required constructs of TQM in HE, which were: sound of top management leadership, strong customer focus, congenital relations with suppliers, harmonious employee inter-relationships, effective information/communication systems, benchmarking against competitors and good management of processes and products.

Brower (1994) described TQM components as follows: working with and through teams, understanding the role of managers, leaders and facilitators, creating a learning organization, being clear on purpose and on product/service definition, understanding customers and meeting or exceeding their needs, knowing quality is designed and built in, not inspected in at the end, building partnerships with customers and suppliers, focusing on understanding and improving processes, performing continuous improvement and benchmarking.

**ISO 9001:2008 in HE**

In academic institutions, considerable attention is paid to quality control (e.g. outcomes assessment) and quality in design (e.g. curriculum design). Inadequate attention has been paid to quality process (Chaffee & Sherr, 1992).

ISO 9001 is recognised as an international standard on best practices in internal quality management. ISO 9001 gives a series of general requirements that can be applied irrespective of the organization’s activity, size or ownership. More on ISO 9001 requirements and effects will be outlined in the following section.

**EFQM model in HE**

The EFQM (European Foundation for Quality Management) was created to promote world-class approaches to the management of European organizations that would lead to sustainable excellence. The EFQM model was introduced as the primary framework for assessing and improving organizations, in order to achieve such a sustainable advantage. This model is based on following Fundamental Concepts
Quality management system at The Faculty of Economics and Business of Excellence: customer focus, leadership and constancy of purpose, management by processes and facts, people development and involvement, continuous learning, improvement and innovation, partnership development, corporate social responsibility, result orientation.

Comparison of QMS models applicable in HE

There are many different QMS models. Above four models were chosen because of their popularity and suitability for use in HE area. Table 1 gives an overview of these models, with respect to: quality policy and leadership, stakeholders approach, work force and learning, processes, resources, measuring of results and improvement.

All models are based on management’s support and a clear definition of the quality policy. The difference in QMS models is the approach towards the stakeholders. Apart from the EFQM model, not a single model gives clear instructions about environment and social responsibility issues. Related to the work force and continuous learning, all models seek to assure worker satisfaction and learning possibilities. TQM model devoted the biggest attention to development and empowerment of the employees. All models are based on the process approach. Requirements related to organization’s resources are best defined in the ISO 9001 model. In consideration of measurement and analysis of the results, ESG and ISO 9001 models are conformable, while TQM does not provide clear guidelines (i.e. application of quality management tools and methods is recommended). Furthermore, all models highlight the need for continuous improvement.

From all mentioned, conclusion is that those four models are not opposing, but have similar requirements for the development of QMS. ESG standards and guidelines provide a basic framework for the area of HE, but some of the other models should complement them. The first step in quality system development, with respect of the ESG, could be implementation of ISO 9001:2008. Implementation of ISO 9001 means that minimum quality related requirements has been met. After ISO 9001, HE institutions should endeavour to increase quality and excellence by applying a TQM or EFQM model.

Table 1: Comparison of QMS models applicable in HE area

<table>
<thead>
<tr>
<th>Quality Policy &amp; Leadership</th>
<th>ESG standards and guidelines (internal &amp; external)</th>
<th>TQM principles*</th>
<th>ISO 9001:2008 requirements</th>
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<td>- management responsibility</td>
<td>- leadership and constancy of purpose</td>
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<td>- customer focus (chain of customers, internal suppliers and internal suppliers)</td>
<td>- monitoring customers satisfaction</td>
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<td>- participation - team work - all employers included - empowering - continuous learning</td>
<td>- defining criteria for suppliers evaluation</td>
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Implementation of the ISO 9001:2008 at the Faculty of Economics and Business

ISO 9001 is recognised as an international standard on best practices in internal quality management, and is applicable to every HE institution that strives for quality. It contains five main chapters: quality management system, management responsibility, resource management, product/service realisation, measurement, analysis and improvement. Documents required by ISO 9001 are: quality policy, quality manual and quality objectives, and all other documents belong to the organization. Since the revision in 2000, there has been reduction in the document requirements, and compulsory procedures are as following: documentation management, records management, internal audits, non-conforming products/services management, corrective action and preventive action (Lazibat, 2009).

To maintain explosive growth and improve organization’s stability, The Faculty of Economics and Business decided to improve operational processes and implement QMS based on ISO 9001. Croatian faculties are dealing with ongoing efficiencies, waste, increasing risk, competition and increased student requirements. Improving students’ satisfaction is an essential component. The ISO 9001 standard focuses on compiling and analysing data related to the QMS, which provides the objective information for decision making in order to enhance internal quality and improve user satisfaction. The QMS by ISO 9001:2000 was implemented at The Faculty in April 2008.

The introduction of ISO 9001 at the Faculty began in 2007. Main reason that encouraged our management to implement and certify ISO 9001 was enabling the institution to manage and control their quality related core activities and to deal with national and international competition. The working group started the project by an introduction training followed by the assessment of current practices of the Faculty. The dean and heads of departments were consulted in this process. Based on this assessment, working group documented the current processes. Three core processes were defined: administration process, academic process and process of business management. The working group made ISO 9001:2000 Quality Manual consisting of brief introduction about the Faculty, strategy, quality policy, quality and operating objectives, followed by standard requirements. Speaking of standard requirements, we needed to specify how Faculty meets: documentation requirements, management responsibility, resources management, service realization, measurement and analysis and improvement requirements. In the next step, working group, along with the Faculty representatives, reviewed these processes. Interdependencies were highlighted and improvement opportunities identified. Based on these outcomes, the processes were significantly improved. Besides the core operating functions, proceedings were defined and improved for all support departments. To ensure sustainable changes, working group frequently mentored the process owners and implementers. Training on conducting Internal Audit has
been provided to four employers and plan for training other employers done. Working group also led the first Internal Audit process. The internal audit was planed to determine whether the QMS conformed planned arrangements, the requirements of ISO 9001 and requirements set forth by the organization were effectively implemented and maintained. The audit criteria, scope, frequency and methods were defined in procedure for internal audits. Following the standard procedure, Certification Company was called and certification audit was carried out in May 2008.

The Faculty passed through Inspecting Audit in 2009 and result was positive, non-conformities were not found. Besides the ISO 9001:2008 certification, our core objectives were to achieve operational benefits. These objectives were well addressed as several core-operating processes have been re-engineered for better performance. The new and highly improved quality system was defined and implemented and the Faculty begun witnessing its benefits. The result of ISO 9001 is organization based on the processes, planning, documentation and resources used to meet the quality objectives and, consequently, foster continuous improvement of the service provided (Lazibat, 2009). Therefore, for Faculty general planning, it has managed to achieve a direct relationship between its strategic plan, action plans and the processes it has executed, all based on customers needs and expectations. This enables to the Faculty to detect whether or not the work is done in accordance to the requirements, which, together with the defined planes, gives the institution the opportunity to detect and analyse any organizational activity.

Conclusion

Faced with the challenges of globalization and the requirements for the quality, HE institutions have to accept the international standards for quality management. This process is extremely difficult for Croatian institutions, because the Croatian higher education area has been facing numerous issues. In this case, it is result of extremely poor quality culture in the past. Today, Croatian HE is developing rapidly, implementing European standards and guidelines.

In order to define an effective QMS for HE area, the review of four most popular models of QMS in HE was done. These include ESG standards and guidelines, ISO 9001 requirements, TQM principles, EFQM Fundamental concepts of excellence. Basic requirements of all mentioned models are conformable. All of them require management support, respect for stakeholders needs and requirements, work force training and participation, focus on processes, partnership with suppliers, measuring results and continuous improvement. ESG provides basic guidelines for quality assurance in HE area, and that should be accepted as initial point in the development of quality management system. However, in today’s environment, regarding increased students and other stakeholders’ requirements, HE institutions have to go one-step further.

The ISO 9001 certificate proves that the organization operates in accordance with quality requirements. As business practice and health care have proven, implementation of this standard achieves a better competitive position and increased reputation.

The process of implementation of ISO 9001 standard is shown on the example of the Faculty for Economics and Business. Results of the implementation of ISO 9001:2008 are following benefits:

- students satisfaction increased,
- well addressed objectives,
- team work and information flow improved,
- several processes have been re-engineered for better performance,
- planning has managed to achieve a direct relationship between its strategic plan, action plans and the processes,
- all plans, objectives and processes are based on stakeholders needs and expectations,
- opportunity to detect and analyse any organizational activity,

After successful implementation of the ISO 9001 model, HE institutions should begin activities towards excellence, using TQM or EFQM model.
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