Introduction

In global economic integration the quality has became one of the most important factor for the survival and success of organisations. The Quality Programme of the European Union considers quality as a tool for strategies of European organisations. In the course of European integration, quality becomes important for Lithuanian business, service companies, as well as for higher education institutions. Quality determines efficiency of public sector organisations, the economic stability of a country, and quality of life of members of society. Quality of life is a subjective measure of every individual, by which he/she evaluates his/her life, encompassing his/her physical and psychological well-being, social and spiritual factors, his/her level of independence, and relationship with the community. Quality of life is also determined by the material status (the...
quality of one’s home and contents, etc.), environment and the development of the economy, community health, a moral and psychological climate, security levels and quality of education (Ruževičius, 2005a).

The aim of this study is to highlight peculiarities, problems and inconsistencies of quality assurance in university and college education.

This article uses scientific and methodological literature along with organisational research, case-study analysis and some of the educational practices in universities and colleges of Lithuania.

There are many opinions on how strict the quality management system should be, and which standards are to be applied to higher education institutions. The problem arises when people see ISO 9001 standard as a set of specific methods that should be implemented. In the present case study research, discussions about methods have been skipped, whereas the focus has been shifted on the basics of quality management principles and philosophy.

Useful analysis is provided for other higher education institutions that plan to choose a quality assurance model for the implementation of their quality management system.

The article addresses the need to share information about implementation of quality management methods and systems in higher education institutions, and offers practical advice to the universities and colleges seeking to assure the quality of their products and processes.

Models of quality assurance in higher education

Organisational initiatives and movements in Europe and throughout the world seek to guarantee the quality of higher education (declaration from the UNESCO World Conference on Higher Education in 1998, 1997 Lisbon Convention on the Recognition of Qualifications concerning Higher Education in the European Region, the Salamanca Convention and Declaration, the Bologna Process, the ideas promoted by the European Network for Quality Assurance in Higher Education, etc.). The above-mentioned international agreements and documents along with an ever-changing environment of higher education (rising demands of organisations and society on the quality of education, changing expectations of students and employers for the content and methods of studies, growing financial pressure in the public sector, increasing competition among universities, and internationalisation and globalisation of higher education) not only encourage but force organisations to search for new systematic measures of improvement and assurance of the quality of higher education (Koch, Fisher, 1998; Aly, Akpovi, 2001; Ruževičius, 2006a; 2006b; Willis, Taylor, 1999).

The main mission of university education is to satisfy the requirements of an individual and society for the development of knowledge, and to assure that these requirements would be met with the highest level of competency. In order to accomplish their mission, universities seek to fulfil the following tasks: train highly-skilled employees who will be able to meet all reasonable demands as required in a workplace; foster a spirit of active involvement in society; develop knowledge through research; understand, interpret, protect, strengthen, support and spread, national, regional, and international historical cultural values; protect and strengthen social and humani-
tarian values; and contribute to the development of education at all levels, including further training of lecturers.

For higher education institutions that are the drivers of technological and economic achievements, it is increasingly important to be market oriented. As the sponsorship for education system is limited, the actual drive for the change is surely – economic effectiveness.

Models, principles and implementation methods for the quality improvement and assurance are still little used in universities of Lithuania. The existing systems of quality assurance are more oriented to a static quality assessment. Usually a specific education product (programme, subject, exam, etc.) or process is assessed or subdivision of an education institution is certified. However, under tough conditions of today’s competition there is a need of a systematic and dynamic quality management and creation of models for the quality assurance of universities.

The analysis of activities in foreign higher education institutions showed that the principles and methods of the total quality management (TQM), quality evaluation models, as well as quality management systems (QMS) complying with the requirements of the international standard ISO 9001 are widely implemented throughout the organisations (Dahlgaard et al., 1998; Kanji, Tambi, 1998; Koch, Fisher, 1998; Kanji, Tambi, 1999; Aly, Akpovi, 2001; Adomaitienė, Ruževičius, 2002; OBHE, 2003; Hodgkinson, Kelly, 2007; Venkatraman, 2007).

Throught TQM has its roots established predominantly in an industry, there has been a strong pressure to adopt and apply TQM in higher education institutions. Therefore in different countries of North America, Western Europe and Asia TQM principles have been successfully implemented in higher education institutions within administrative and support levels but the extension of TQM to the education process has been proven to be a challenge (Kanji, Tambi, 1998; Kanji, Tambi, 1999; Aly, Akpovi, 2001; Adomaitienė, Ruževičius, 2002; OBHE, 2003; Hodgkinson, Kelly, 2007; Venkatraman, 2007).

Improvement of a quality of administration in higher education institutions is one of the most important demands and needs to be met in order to satisfy the needs of customers and society at large, as well as to realise the goals of universities. Implementation of quality models to improve administration quality is simpler and less threatening to academic staff, which undoubtedly often sees any attempts to introduce new ideas as restriction of their academic freedom. Having achieved success in improving administration quality it is usually easier to get lecturers to agree to suggested improvements regarding education processes and education quality (Gelders et al., 1993; Aly, Akpovi, 2001; Hodgkinson, Kelly, 2007). Some administrative processes of higher education institutions (for example, management of documents, information about students, and delivery of correspondence) and some training processes are similar to the processes that take place in consulting or other service organisations. Therefore, the same methods and models of quality improvement and assurance in higher education institutions can be used, but the authors of the paper argue that universities are
quite unique and it isn’t possible to use excellence models directly implementing them from other industry branches.

Examples of activities in higher education institutions show that effectiveness of the organisation can be reached using models created by the education institution itself. Some universities apply guidelines of Crosby, Deming and other quality “guru” or use different quality management methods and tools modified according to the particularities of higher education (Oakland, 1995; Ho, Wearn, 1996; Michael et al., 1997; Montano, Utter, 1999; Canic, McCarthy, 2000; Hodgkinson, Kelly, 2007).

National quality awards are a powerful incentive to commit to quality improvement and excellence (Lundquist, 1996b; Michael et al., 1997; Dew, 2000; Hodgkinson, Kelly, 2007). These awards may even be adapted to function as models for assessment and evaluation of quality assurance in a university. When seeking for effectiveness and excellence, the higher education institutions of Lithuania can also use the criteria of Lithuanian quality prize that is similar to the European excellence model; however, Lithuanian public organisations still do not understand the necessity of such models.

ISO 9001 quality management system is perhaps the most successful example to date of an international third party quality assurance in higher education. The number of higher education institutions involved in the system is thought to be quite large, particularly in Asia. Some of the institutions that have been certified as ISO 9001 compliant are as follows: Monash University and University of Southern Queensland (Australia), Yuan Ze University (China), Hanyang University (South Korea), Memorial University’s Marine Institute and St. Lawrence College (Canada), St Paul University (Philippines), Bina Nusantara University (Indonesia), Sripatum University (Thailand), SEG International Group of Colleges (Malaysia), Rai University (India), Miguel Hernandez University (Mexico), and others (Kanji, Tambi, 1998; OBHE, 2003; Warnborough University). In Europe, there are also higher education institutions that already have created quality management systems or have done the preliminary work (Lundquist, 1996a). Most of certified education institutions are located in the United Kingdom, Germany, the Netherlands, Italy, France and few other countries, for example, University of Camerine (Italy), University of Rijeka (Croatia), and University of Pecs (Hungary). Wolverhampton University (UK) was the first European university that registered all its processes as complying to the requirements of BS EN ISO 9001 standard in 1994 (Doherty, 1995).

Quality improvement and maintenance are not the only reasons why universities seek for ISO 9000 certificate. Satisfaction of internal needs of organisation is the primary motivation factor to create an ISO 9000 quality management system in most of the universities; rarely the customers of universities ask for the certificate or organisation tries to correspond to market conditions (Aly Akpovi, 2001; Adomaitienė, Ruževičius, 2002; Ruževičius et al., 2004; Ruževičius, 2006a). Universities seek for a better image or are highly concerned about an increase and sustaining of a certain market share. In general, ISO 9001 certification is neither necessary nor sufficient on its own to guarantee the quality of education or its administration. However, the certification can confirm an organisation’s efforts towards continuous quality improvement and can be a signal
for customers that organisation strives for a high quality.

ISO 9001 standard model (and especially the version revised in 2000) can be used as the basis, from which an organisation is able to continue developing the concept and methodology of its quality improvement. It could be discussed, whether a higher education institution should choose to implement QMS and to strive for ISO 9000 certificate or to develop its own excellence model. The motivation to choose the alternative might depend on its expectations for change and the potential of the university (the current status).

In summary, there may be several possibilities of quality improvement and assurance in higher education institutions:

I. Implementation and use of studies quality indicators to be established after comprehensive analyses, what are the priorities of university.

II. Implementation of a quality assurance system and appointment of top level managers to be responsible for quality. Then development of the quality policy of a university, and of standards of the processes of studies organisation, resources and results of those processes according to the policy; implementation of internal audit system; implementation of improvement process that includes corrective and preventive actions; the order of correction and prevention registration and fulfilment; defining the process of documents management; establishing the process of systematic review of quality policy and goals.

III. Development of a quality culture ensuring contribution of all employees in provision of high quality education. Continuous endeavours of the organisation are necessary when forming these principles of performance: establishment of the community of the organization, and identification of employees with university; involvement of students in studies quality improvement; fixation of the quality culture with internal relations, division of responsibilities, systematic change management; development of processes and quality standards; establishment of the information important for the organisation, and its systemic collection and analysis; involvement of all concerned parties (stakeholders) of the organisation; promotion of a systematic and periodical self-analysis in order to find the areas to be improved; revision of the strategy with reference to the results of self-analysis.

The university oriented to achieving lasting results and eventually projecting its image, as the authors of the article suppose, should use the third possibility – development of a quality culture and its own excellence model. All the possibilities considered do not contradict each other; and on the contrary, they complement each other.

Therefore, to develop an effective quality culture it is necessary to start with simple things. According to the systematic management approach, any improvements of education quality should be started from a thorough analysis of the situation. M. Hodgkinson and M. Kelly (2007) states that without an awareness of the existing organisational culture the introduction of any model, process or approach will not in itself create or sustain a quality enhancement culture.

From industry experience, it is understood that TQM implementation warrants a huge amount of time, effort and money. Since educational processes are quite different from the industrial ones, a careful planning is required for a success-
ful cost-effective TQM implementation in higher education institutions (Venkatraman, 2007). When starting with education quality improvement the utmost importance is clearly formulated and easily understandable (for both the university community and its customer) vision, mission, quality policy and outline of the main values, which clearly define “the product” of the university and its quality parameters, identify the main customers and suppliers, consider the proposed interaction and association, and assign the key processes to appropriate administrators.

During this process a widespread introduction of TQM concepts and methodologies within the whole organisation should be done. Institution should proceed with setting of complex of quality targets and indicators, including: development of standards of the processes, promotion of teamwork, implementation of QMS elements etc. Subsequently, continuous improvement could become an element of the organizational culture.

Application of excellence principles in universities gives benefits. The benefits of quality improvement and assurance in universities are compared in the Table 1.

The commitment of higher education institutions and their branch managers to quality is the essential and foremost concern when improving the quality of uni-

<table>
<thead>
<tr>
<th>Benefits of quality improvement in higher education institutions</th>
<th>Control of study quality indicators</th>
<th>Quality assurance system</th>
<th>Formed quality culture</th>
</tr>
</thead>
<tbody>
<tr>
<td>Profound understanding of vision, mission, objectives and goals of university appears</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Students and employees’ rights and responsibilities are expressed in more detail</td>
<td>*</td>
<td>*</td>
<td>*</td>
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<tr>
<td>All employees are involved into the process of study quality improvement; quality of services is improved continuously in such way.</td>
<td></td>
<td></td>
<td>*</td>
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<tr>
<td>Teamwork assures cooperation among students and teachers, teachers and administration, facilitates ear of students wishes and needs, creates friendly environment</td>
<td></td>
<td></td>
<td>*</td>
</tr>
<tr>
<td>Communications between academic personnel and auxiliaries fasten with identification of internal clients’ needs</td>
<td></td>
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<td>*</td>
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<tr>
<td>The competence of personnel is better used</td>
<td></td>
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<td>*</td>
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<tr>
<td>The confidence of business and society about the quality of products and services of university outgrows</td>
<td>*</td>
<td>*</td>
<td>*</td>
</tr>
<tr>
<td>Academic standards and examples of good practice are used more widely</td>
<td>*</td>
<td>*</td>
<td>*</td>
</tr>
<tr>
<td>The necessity to use the results of periodic internal audit as a mean for definition of level of organisation’s achievement and usage of the best practices of analogous organisations appears</td>
<td>*</td>
<td>*</td>
<td>*</td>
</tr>
<tr>
<td>Creation of study programmes and teaching process are improved continuously of</td>
<td></td>
<td></td>
<td>*</td>
</tr>
<tr>
<td>The necessity to make decisions using facts appears</td>
<td>*</td>
<td>*</td>
<td></td>
</tr>
<tr>
<td>The need for change and its management appears</td>
<td></td>
<td></td>
<td>*</td>
</tr>
<tr>
<td>Competitive advantage in national, regional and international markets is achieved</td>
<td></td>
<td></td>
<td>*</td>
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</tbody>
</table>

Table 1
versity education, and the provision with effective management to ensure changes (Aly, Akpovi, 2001; Brennan, Shah, 2001; Salis, 2002; Bogue, Hall, 2003, Hodgkinson, Kelly, 2007). Success will be achieved only by an active and effective involvement of managers in this area, properly defining ever-changing demands of both internal and external university customers, systematic assessment and attempt to satisfy these demands, systematic higher education customers’ needs satisfaction analysis and evaluation, prioritisation of fundamental changes as required in the management of the organisation, and further training and improvement of professional qualifications of its employees of all levels (Oakland, 1995; Goetsh, Davis, 2000).

**Improvement of education quality in Vilnius Law and Business College**

**Basic facts, object, methods and scope**

The purpose of this case study is to identify the reason and problems faced when implementing ISO 9001 requirements in the management of a higher education institution. The object of the research is the management system existing in Vilnius Law and Business College. The research methods are as follows: analysis of the existing processes made through interviews and flowcharting, using a specially designed questionnaire; review of management documents and facts provided on paper or electronically; expert surveys; and meta-analysis.

Vilnius Law and Business College is a non-state higher education institution with prevailing non-university studies. It was established on 1 September 1998 as a private business school. The constantly growing number of students reached 2,500 in the academic year 2005-2006. The management culture was developed by the staff itself, and not inherited from big organisations. By the government decree of 24 August 2001, Vilnius Law and Business College was granted a status of a higher non-university education institution. To provide services of higher education the College has to obtain a license issued by the Ministry of Education. The requirements cover the approval of studies programmes, requirements for qualification of lecturers, and for the organisation of studies processes.

Vilnius Law and Business College is a modern higher education institution, which conforms to the integrate requirements of both Lithuanian and European education systems.

There are four faculties in the College: Law, Economics, Informatics, and Humanities. In 2005, the students of the College studied for a Bachelor’s degree at the University of Abertay of Dundee (Scotland) by mutual agreement.

**Selection of a QMS model**

Quality in education is achieved through a systematic approach, maintaining QMS – the authors, who analyse the topic, provide no contra arguments. However, a lot of opinions consider how strict the system should be, and which standards are to be applied to these institutions. There are a lot of pros and cons concerning ISO 9001 implementation in education institutions. The problem rise when people see ISO
ISO 9001 standard as a set of certain methods that shall be implemented. Discussions about "best" quality management methods are fruitless, because ISO 9001: 2000 still have some residues relating to needs of "production" companies. In the current research we found that it is important to skip the discussions about methods, and proceed to the basics of quality management principles and philosophy. QMS principles and philosophy is very general and can lead to application of different QMS models, therefore the links between principles and ISO 9001 requirements were made. The relation between TQM principles and techniques/methods required by ISO 9001 is provided in the Table 2.

By analysing relations, given in Table 2, comparing to the interview and document review results, we conclude, that quality management in higher education institutions exists regardless the fact how detailed it is documented. The level of documentation depends on competence level, organisational culture, the level of authorities and trust, and other.

Analysis of existing system documents

The research team studied how existing documentation that reflects desired processes conforms to ISO 9001 requirements. The following documents were analysed in organisation: College Statute; College Regulation; College Study regulation;

<table>
<thead>
<tr>
<th>TQM principles</th>
<th>ISO 9001:2000 requirements and chapter numbers (given in brackets)</th>
</tr>
</thead>
<tbody>
<tr>
<td>The understanding of any message goes through consistent and systematic repeating of clear, unambiguous and up-to-date information.</td>
<td>Theoretical and practical training (6.2).</td>
</tr>
<tr>
<td>Different people fall into different categories of personalities, that have abilities to decode various information channels: a) by listening; b) by reading and imaging; c) by experiencing in practice; d) by monitoring visual examples (live or on screen); e) by sensing.</td>
<td>Documenting and visualising what was thought; controlling of documents and data. Assuring that any information (incl. documents) is clearly understandable; up-to-date; reflect real facts, but not desirable outcomes (4.2).</td>
</tr>
<tr>
<td>Management has to: - coach and direct people; - explain clear values of organisation; - give them understandable and affordable milestones and indicators; - allocate necessary resources for supporting improvements and maintaining of system.</td>
<td>Write and communicate Quality policy (5.3). Define clear goals and deploy them to the ground level of organisation (5.4).</td>
</tr>
<tr>
<td>Support freedom, democracy within responsibility framework.</td>
<td>Define responsibilities, authorities and communication channels (5.5).</td>
</tr>
<tr>
<td>Ensure proper tools, facilities and environment to enable people to perform efficiently.</td>
<td>Control of infrastructure (6.3) and work environment (6.4).</td>
</tr>
<tr>
<td>Define clear processes.</td>
<td>Process control (7).</td>
</tr>
<tr>
<td>Analyse and improve – keep to the best practice.</td>
<td>Measuring, analysis and improvement (8).</td>
</tr>
</tbody>
</table>
Marketing plan; Study programmes. Results of investigation are given in Table 3.
In the Table 3 the analysis of ISO 9001 chapters 4 and 5 is given. The complete analysis is available in research documentation. This table reveals some general trends and problems in the development of QMS, its methods and relations to ISO 9001.

**Analysis of success and failure factors; recommendations for the QMS improvement project**

After the analysis of existing management practice that was made solely by the research team the following conclusions were drawn out:
- before selecting models and meth-

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**Evaluation of quality assurance documentation of the College**

<table>
<thead>
<tr>
<th>ISO 9001 requirement</th>
<th>Evaluation of existing practice in higher education institution.</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Defining of QMS – processes, improvements; [Chapter 4.1]</strong></td>
<td>Good attitude and focus on main value added process – education. Related databases and forms are well maintained. Supportive processes are not defined nor structurised. It is little authorities given for responsible managers.</td>
</tr>
</tbody>
</table>
| **Existing QMS documentation [4.2]** | There is no clear structure of management documentation, no reference links. Conditional segregation of document types was done:  
- Vision and mission statements, announced in homepage bear Quality policy statements;  
- Quality targets are documented in Marketing plan, but communicated only to top management;  
- Improvement activities are documented in Self-Assessment report, that is required by Ministry of Education and Science;  
- Requirements for the main processes are defined in College Study regulations that cover: student admittance; study process management; testing and examination; failure control; monitoring of study programs; study mobility; finishing of studies.  
Responsibilities are defined in College Statute. Existing Job descriptions are formal documents, and are not used to define authorities in practice. There is formal organisation structure in the College. |
| **Quality manual [4.2.2]** | Is not documented. Missing documents and clear understanding who belongs to „products“, what are quality product parameters. Should be more clearly defined who are the clients, what are their needs, how to set priorities between the needs. |
| **Document control [4.2.3]** | Documents has been issued gradually, therefore some areas are overlapping in different documents. Analysis of new requirements impact to previous is not made; change control is not implemented. Ambiguous requirement spoils attitude of personnel to normative documents. |
| **Management responsibility [5]** | College Management defined Quality policy. The main purpose of the policy is to define stakeholders and their general needs. Targets and indicators are provided in detailed and structurised Self-Assessment report (over 200 pages). Analysis of indicators is performed yearly. Improvement actions are documented in the same report. Self-Assessment as TQM tool gives significant impact into College improvement process. Improvement actions are supported by financial budgets. Self-Assessment and Budgeting as management methods are not required by ISO 9001, but are proved in practice. |
ods, quality management principles and philosophy has to be clarified for the team;

• in the growing organisation of higher education there increases the need to document responsibilities, authorities and processes in order to set unified requirements;

• a naturally developed existing system in higher education institutions conform only to some ISO 9001 requirements;

• the main education process of higher education institution is more complex comparing to other service industries, because usually the end users’ needs are unknown before the „product“ (students knowledge) quality is tested in practice;

• ISO 9001 standard gives the framework for QMS in higher education institution, but not restricts the use of other management tools, originally known as TQM tools.

The authors of effective QMS for education organisations make the following recommendations which are introduced in the College:

- It will take time for a new quality culture to be accepted throughout the whole organisation and replace the routine work culture. The institutionalisation of these changes is a consciously managed process requiring preparation and specific skills.

- Management – one of the most important elements when creating a quality system demanding utmost accountability – needs to be trusted to highly competent individuals in the field of quality management. The management principles need to be taken into account when developing a strategic plan by top level managers.

- The lack of a clear strategic direction and the lack of a real understanding of the aim of quality system implementation will defeat the purpose of using a quality system in the first place.

- The aims and expected results of QMS implementation need to be identified for each organisation individually by first carrying out a series of tests and strategic assumptions, the outcomes of which will be used to present a quality system vision, or ideal, that the organisation must work towards.

- In order to reach the highest level of effectiveness of QMS it is imperative that the initial ideal vision is not modified or adapted at later stages according to the situation or various possible barriers, so that the idealised result will still be reached.

- When elaborating on the potential variations in the quality system being implemented, it is important that at the same time employees are provided with timely information, training and that all channels of communication be open.

Most of education institutions implementing quality management tools and principles confront with such major problems (Gelders et al., 1993; Makijovaitė, Ruževičius, 1998; Aly, Akpovi, 2001; Adomaitienė, Ruževičius, 2002; Ruževičius, 2006; Venkatraman, 2007):

- complication of the description of study quality concept and content;

- multiplicity of study quality indicators and their measurement and assessment delicacy;

- the lack of skills using TQM concept, its principles, ISO 9000 management models and quality methods;

- complication resolving university work into interdependent managed processes and process thinking formation;

- inertia and sometimes even resistance of part employees to fundamental changes.
Managing the improvements of QMS in higher education institution

The further case study analysis involved more respondents from Vilnius Law and Business College, and more active roles were performed by the authors. However, levels of activity were different as observers were different: participants as observers, observers as participants, and a complete observer with no social interaction with College people. These different roles helped us to collect more information and different views at QMS. The main target for the research was to define which internal and external factors have influence on QMS implementation in an organisation of higher education.

The evaluation of external factors has to be linked to the time frame, as these factors in Lithuania are changing 6-10 times faster comparing to European developed countries (see Figure 1).

External factors resulting to following current and future developments of QMS in Lithuanian institutions of higher education:
- further QMS expansion to other segments (e.g. from clearly defined to sophisticated services; from businesses to non-business organisations; from relatively stable organisations to single projects, etc.)
- further integration with new organisational structures and new management areas;
- more orientation to effectiveness, rather than formal compliance;
- more efforts to meet social requirements of people;
- automation of collection and analysis of data and facts;
- expanding of terms “document” and “data records” from the point of view of ISO 9001.

By analysing external factors within the QMS implementation team, strategical goals for the system were defined.

Internal factors – people, environment, processes and quality management. These

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**Fig. 1.** The dynamics of factors influencing QMS development in Lithuania throughout 1990-2005-2020 years

<table>
<thead>
<tr>
<th>Lack of new management principles</th>
<th>Deficit of employees</th>
</tr>
</thead>
<tbody>
<tr>
<td>Low productivity level</td>
<td></td>
</tr>
<tr>
<td>Lack in knowledge about QMS</td>
<td>Lack of abilities to control personal energy</td>
</tr>
<tr>
<td>Lack of financial resources</td>
<td>New technologies and standards</td>
</tr>
<tr>
<td>Cultural / communication barriers in business</td>
<td>Ineffective utilization of resources</td>
</tr>
</tbody>
</table>

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Table 4

<table>
<thead>
<tr>
<th>TQM principles</th>
<th>Process improvements in College</th>
</tr>
</thead>
<tbody>
<tr>
<td>Consistent and systematic, clear, unambiguous and up-to-date information.</td>
<td>Developed training programs on QMS; introduced personal consultations.</td>
</tr>
<tr>
<td>Different information channels and their combinations: verbal, visual, sensomotoric, etc.</td>
<td>Improved use of server; systematic meetings with clear agenda and action plans.</td>
</tr>
<tr>
<td>Management abilities and commitment:</td>
<td>In-depth analysis of market research and self-assessment material, and defining targets for processes and departments; Created new structures: - to deal with continuous learning and feedback from former students and their employers; - to manage scientific research and international projects.</td>
</tr>
<tr>
<td>- coach and direct people;</td>
<td></td>
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<tr>
<td>- explain clear values of organisation;</td>
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<tr>
<td>- give them understandable and affordable milestones and indicators;</td>
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<tr>
<td>- allocate necessary resources for supporting improvements and maintaining of system.</td>
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</tr>
<tr>
<td>Support freedom, democracy within responsibility framework.</td>
<td>Defined and documented processes do not require to make extra activities &quot;to maintain quality system&quot;; processes define points of information sharing and monitoring to facilitate faster and more reliable data gathering, analysis and actions.</td>
</tr>
<tr>
<td>Ensure proper tools, facilities and environment to enable people to perform efficiently.</td>
<td>Feed-back system from lecturers to those, who responsible for proper functioning of tools, facilities and environment; annual budgeting to improve infrastructure.</td>
</tr>
<tr>
<td>Define clear processes.</td>
<td>Following processes were structurised: Main (value added) processes: Improved: 1) student admission; 2) student selection; 3) planning and organizing of studies; 4) control of study process; 5) final evaluation of students; New: 6) Collaboration with former students in the field of employment and further education.</td>
</tr>
<tr>
<td>Analyse and improve – keep to the best practice.</td>
<td>Supportive processes: Improved: Personnel management; preparation of methodical material for studies; control of infrastructure (incl. IT); New: Strategical planning, budgeting and review of system effectiveness; control of non-conformities; control of corrective and preventive actions; internal auditing; document and data control.</td>
</tr>
<tr>
<td></td>
<td>Improved and expanded self-assessment system: - by involvement of all departments; - clarifying areas of improvement; - preparing and controlling action plans</td>
</tr>
</tbody>
</table>
were changed during the QMS improvement process in the college. The results were summarised in Table 4.

As indicated in the table above, the implementation of QMS does not mean the break of existing processes and creation of something very new. The focus of management was on quality and efficiency of the main education processes – and the result is obvious – just one out of six processes were newly designed. On the other hand, supported processes were not developed – and about 60% of them were newly developed.

During QMS implementation Ishikawa’s “fish bone” approach was widely used, striving to move attention from effect to causes, especially focusing on personnel. Later the authors discovered that cause-effect analysis is rather circular than linear e.g. in some moments effects became as a causes for further effect – it is like clock-wise rotation of squares shown in Figure 2.

As majority of authors presented in the literature analysis stress, the focal point of QMS improvement shall be customers (internal and external) and other stakeholders, and those people have to benefit from improvements. Benefits we mean in a broad sense – e.g. by increasing values of individuals and teams. The “cause-effect” analysis and QMS improvement model (Figure 2) in every square defines internal and external clients as a main cause for further results.

Fig. 2. Cycle of “cause-effect” analysis and continuous improvement in higher education organisation
Developments and further research of QMS in the college

The QMS in College research started in September 2005. In June 2006 it was certified against ISO 9001:2000 by international certification body Bureau Veritas (BVQI); nevertheless it is still much to do to achieve TQM in higher education.

The further research is planned to work out in following areas:
- perception of College QMS by internal and external clients;
- analysis of QMS driving factors;
- perception of educational quality via benchmarking, promotion, personal and experts' experience;
- correlation analysis between process performance indicators and educational results.

Conclusions

The analysis of activities of higher education institutions showed that there are three possibilities of quality improvement and assurance in universities: implementation and usage of study quality indicators, implementation of quality assurance system and formation of quality culture. All these possibilities in higher education institutions are realised through the implementation of the main principles and methods of total quality management, quality evaluation models, as well as quality management system that meet international standard ISO 9001 requirements.

The survey conducted at Lithuanian universities has indicated that there are improvement areas to be tackled. The system of education quality improvement and excellence should be designed as continuous process considering that the quality of final product of university activities is the result of achievements of all stages of educational process. University leaders' commitment to quality, participation in the improvement process using excellence principles, methods and tools are the key-stone for the success.

Quality assurance of administration processes of higher education institution is very important requirement, though the main aim of universities should be the improvement of all processes and activities of organisation through application of TQM concept and methodology and formation of a new quality culture.

The implementation of TQM and ISO 9001 systems in universities and colleges communicates the following benefits: personnel involvement into the processes of education quality improvement; better usage of personnel competency; more precise measurement and assessment of work results; better identification and control of processes; rise of satisfaction of clients, social partners and society with universities work results.

QMS implementation in the College case study showed, that existing management tools, required by licensing process, and those implemented voluntary (before ISO 9001 project) are acceptable according ISO 9001.

Most of education institutions implementing quality management tools and principles confront with such major problems: complication of the description of study quality concept and content; multiplicity of study quality indicators and their measurement and assessment delicacy; the lack of skills using TQM concept, its principles, ISO 9000 management models and quality methods; complication resolving university work into interdependent
managed processes and process thinking formation; inertia and sometimes even resistance of part employees to fundamental changes.

QMS improvement has to be an endless “cause-effect” solving process; “cause-effect” analysis has to be circular rather linear.

In order to be certified by ISO 9001:2000, there is no need to explain standard requirements in detail – it is enough to define, implement, and systematically maintain TQM principles and common sense.

Vilnius Business and Law College case study showed, that in order to implement complete QMS, and certify it against ISO 9001, more efforts need to be made on structuring of supportive processes and implementing new (60 % new processes), rather than the main processes (16% new processes).

References

KOKYBĖS UŽTIKRINIMO AUKŠTAME MOKYME YPATUMAI: LIETUVOS MOKSLO ĮSTAIGŲ TYRIMAS

S ant r a u k a

Pasaulio ekonominės integracijos ir globalizacijos kontekste kokybė tampa vienu iš svarbiausių organizacijų konkurencingumo ir sėkmenės veiksnių. Kokybė sąlygoja ne tik verslo, bet ir viešojo sektorius organizacijų efektyvumą, šalies ekonominį stabilumą bei visuomenės narių gyvenimo kokybę.

Šio tyrimo tikslas – atskleisti studijų kokybės užtikrinimo ypatumus ir problematiką universitetoje ir kolegijoje. Rekomendacijos formuluojamos remiantis teorinės ir metodologinės literatūros bei užsienio universitetų patirties analize ir įdiegtos kokybės vadybos Lietuvos aukštojoje mokykloje atvejais.

Tyrimai parodė, kad studijų kokybė užtikrinti gali būti naudojami trys skirtingi modeliai: visuotinės kokybės vadybos (VKV) diegimas, kokybės apdovanojimų reikalavimų ir vertinimo modelių taikymas bei kokybės vadybos sistemas pagal ISO 9001 tarptautinį standartizuotą modelį kūrimas.

Pagrindiniai aukštojo mokymo institucijų kokybės vadybos sistemos tikslai yra: užtikrinti studijų kokybės nuolatinį tobulinimą; suinteresuotoms šalims pademonstruoti veiklos rezultatus ir dokumentus, įrodančius, kad mokymo institucijos gali pateikti aukštos kvalifikacijos specialistus, kurie visuomenės narių gyvenimo kokybės veikėjas. Kokybės vadybos sistema mokymo institucijoje turėtų būti projektuojama kaip nepertraukiamas procesas, atsižvelgiant į tai, kad universitetinės veiklos galutinio produkto kokybė yra visų šio proceso anksčiausiu etapu pasiekiamas rezultatas.

Kokybės vadybos sistema galėtų būti svarbus „laiptelis“ tobulinant organizaciją bei
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Žengiant link visuotinės kokybės vadybos. Lietuvos universitetų veikloje dažniausiai vyksta specifičių mokymo produktų, administravimo procesų įvertinimas ir mokymo organizacijų pavienių padaliniių sertifikavimas. Administravimo kokybės tobulinimas aukštojo mokymo institucijose yra vienas iš svarbiausių reikalavimų, siekiant patenkininti savo klientų norus ir įgyvendinti užsibrėžtus tikslus. Tačiau pirmasis ir ypatingai svarbus žingsnis šiame procese yra kokybės koncepcijos ir metodologijos paskleidimas visoje organizacijoje bei naujos kokybės kultūros formavimas.

Autorių atlikta konkrečios Lietuvos aukštojo mokymo institucijos veiklos, įgyvendinant kokybės vadybos sistemą, tyrimas parodė, kad prieš minėtąsias tobulinimo priemones įgyvendinimą egzistavo tam tikra nepilnai struktūrizuota ir dokumentuota kokybės vadybos sistema. Šios sistemos dokumentacijos ir veikimo lygis priklausė daugiausia nuo isorės suinteresuotųjų šalių reikšmės, negu nuo vidinių poreikių. Dalinė atitikties ISO 9001 reikalavimams buvo įrodyta kolegijos statutu, įstatais, Studijų nuostatais, Marketingo planu, Studijų programomis ir kita susijusi faktus fiksuojančia dokumentacija. Sukūrės svarbiausius studijų kokybės leminčius procesus ir procedūras, organizacijos vidinių ir išorinių vartotojų pasitenkinimo sisteminio tyrimo ir analizės priemonės, kolegijos „produktų“ kokybės vertinimo posistemą, įdiego ir įgyvendino kokybės kultūros, koregavimo ir prevencijos priemonės, patikrinus minėtų priemonių realų veikimą ir veiksmingumą, buvo pasiekta pilna veiklos kokybės atitikties ISO 9001 standarto reikalavimams, ir kokybės vadybos sistema buvo sėkmės sertifikuota tarptautinės sertifikavimo įstaigos.

Autoriai pateikia tokias rekomendacijas aukštojo mokymo institucijų efektyviai kokybės vadybos sistemai sukurti ir įgyvendinti:
- prireiks laiko ir ypatingų vadovybės pastangų naujai kokybės kultūrai suformuoti ir įtvirtinti;
- būtina įsavinti ir paskleisti tarp visų organizacijos narių šiuolaikinę procesų valdymo ir pokyčių vadybos metodologiją;
- organizacijos aukščiausios vadovės apsiprengimas ir aktyvus tiesioginis ar tinkamai deleguotas dalyvavimas naujos kokybės kultūros, veiklos tobulinimo, grįžtamojo ryšio ir koregavimo procesų kūrimo yra leminčius veiksmynai kuriant veiksmingą studijų kokybės vadybos sistemą;
- aiškios ir akademinė bendruomenei priimtinos organizacijos strategijos nebuvimas, KVS diegimo tikslų ir priemonių nepakankamas suvokimas, aukščiausios vadovės nepakankamas įsipareigojimą ar atskakimus siekti kokybės kultūros ir fundamentalių pokyčių vadybos gali lemti formalius ir menkai veiksmingas organizacijos susukūrimą.

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ОСОБЕННОСТИ ОБЕСПЕЧЕНИЯ КАЧЕСТВА ВЫСШЕГО ОБРАЗОВАНИЯ: ИССЛЕДОВАНИЕ ВЫСШИХ УЧЕБНЫХ ЗАВЕДЕНИЙ ЛИТВЫ
Р е з ю м е

В статье рассматриваются проблемы и особенности управления качеством в высшем образовании. Раскрыты недостатки применения принципов и методов управления качеством в заведениях высшего образования Литвы. Представлены результаты исследования опыта внедрения системы управления качеством в конкретной высшей школе.

Ключевые слова: обеспечение качества, управления качеством, качество обучения, ISO 9001, управление всеобщим качеством, Литва.