

A new framework for measuring quality in engineering education and research in Slovak Republic

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Abstract – *This paper outlines the results of the project SAETO (Self Assessment for Educational and Training Organisations) aimed at developing a framework for quality securing and measurement in higher education in Slovak Republic. It presents some tools able to simplify and improve the use of EFQM (European Foundation for Quality management model) in conditions of Slovak universities.*

Index Terms – quality in education, EFQM, CAF, ISO 9000, accreditation, evaluation.

INTRODUCTION

In the past, quality of higher education was not considered an independent problem-solving area. The rules of quality assurance were relatively stable, mostly settled by the State authorities. Once a university was founded and its educational program approved, it was assumed it would keep producing education of good quality.

Currently, this approach to quality is beginning to change remarkably. Liberalisation has been intervening into the education environment, and universities have to adapt to the changes. They need to learn how to face the competition on the education market, not only at national but also at European levels. The competition forces universities to re-evaluate their approaches in their activities, mainly in recruiting students and gaining necessary financial sources. The problem of quality is assuming a new dimension, and ways of quality assurance and management are being looked for.

In the course of years the views on the quality in education have been developing, and they are stemming from several quality concepts. Recently, the concepts defining quality as a compliance with the goal - 'fitness for purpose' - have been used the most. The concepts enforce the opinion that quality education is supposed to react to various needs, demands and interests of students, employers, society, government and state, and they start from the assumption that the educational institutions themselves should try to provide the demanded quality. This definition admits quality is specific, and depends on a customer's needs, in spite of the fact the specification of a final user is not always unambiguous in education. We identify with the opinion that the direct

customer is the student, the indirect customers are employers, society represented by the government, and from the viewpoint of quality systems they are employees, too.

In recent years, university institutions have been forced to re-evaluate the ways of their functioning, and they take up working out and implementing quality assurance systems, especially on the basis of the consequences of constantly growing competition, and of economic influences in the university education area.

Quality assurance and assessment in education require, as in other areas, a system of methods and techniques which guarantee monitoring and coordination of processes, and unity of a university institution outputs.

Therefore standards and guidelines for quality assurance have been accepted at European level, with the official support of the European Commission. Their main objective is to provide help and guidance for university institutions at creating their own quality assurance and assessment systems, i. e. harmonising the existing various university systems, respecting and maintaining at the same time the national systems.

The higher educational institutions in Slovakia are staying for the problem quality in engineering education and they are finding the best solution. The first step of the solution is to understand the two base questions:

- Why the quality in engineering education is more important nowadays than was in the past?
- Which methods and tools are important to know and use if the higher institution want to accomplish the best quality in education?

The answer to these two questions is in this contribution.

The second step we will accomplish as a pilot project in these days is using of the EFQM model as a new framework for the measuring quality in engineering education at the University of Zilina.

STRATEGIC DOCUMENTS OF EDUCATION

In the area of education several strategic quality-bound documents have been approved recently. They are the documents as follow:

Lisboan Strategy

At the meeting of the European Council, held in Lisbon in 2000, the top representatives of the EU countries and of the European Commission introduced the strategy of further

directing and reforms of the EU. The main stimulus for its elaboration was the social changes caused by the globalisation in the second half of the 20th century, and by the need of transforming the European economy. The basic corner-stones of the transformation was starting-up the economic reform, building the information society by means of supporting innovations, modernising the social and educational system and creating unified market. The aim of the Lisbon Strategy is to make the EU by the year 2010 the most competitive and the most dynamic knowledge economy in the world, the economy of sustainable economic growth, [1].

By the Lisbon Strategy, universities should respond first of all to the labour market and young people's demands, to the demand for lifelong education, and the best of the universities should become centres of research and development at an internationally comparable level.

In spite of the effort aimed at fulfilling the Lisbon Strategy, the European Commission's report on the state of the society for 2004 claimed the objectives had been too ambitious and they were not being fulfilled as expected. At restarting the Lisbon Strategy goals, it was again pointed out that also in the further European Union's development the priorities would remain the same: university education of good quality, science, research, innovations, employment and creating informative society and business environment. The basis of the Lisbon Strategy has not changed; they still are structural reforms and creating conditions for the development of knowledge economy which is based on the ability of people to work with new information and use them in practice.

Bologna Declaration

The Bologna Declaration was an important turning point in the development and direction of European higher education. The Declaration meant the beginning of university education reform in Europe, with the emphasis on the quality of institutions, [2]. It was officially declared at the Bologna University in 1999, during the meeting of Ministers of education and top representatives of universities from 29 European states. The main goal of the Bologna process is to create „European Higher Education Area“. 45 countries are participating in it at the moment. The Ministers have declared the goals which are supposed to be fulfilled by 2010. The goals are as follow:

1. To adopt a system of transparent and comparable academic degrees.
2. To adopt a system based on two main cycles, undergraduate and graduate.
3. To establish a system of transferring and accumulating credits (ECTS).
4. To improve mobility by removing obstacles.
5. To promote cooperation in quality assurance.
6. To promote European dimension in higher education.

The reform is based on simple principles many of which are being put into practice by governments and university institutions. From the viewpoint of quality the 5th of the objectives above is the most important one.

The aim of the Bologna process does not unify the national education systems but trying to find the tools to connect them and thus enable the various national systems to develop within the European Higher Education Area, and to guarantee transparency among university education institutions.

Ministry summits

Meeting of the Ministers have great importance. They are organized every two years, to evaluate what has been achieved in the recent period, and to accept necessary measures to improve the situation. Since the Bologna Declaration was signed in 1999, three meetings have taken place:

- Prague meeting in 2000, which was focused on lifelong education, students' engagement and improving attractiveness and competitiveness of the European Higher Education Area [3].
- Berlin meeting in 2003, where unifying the European Higher Education Area and European Research Area was emphasised. During the meeting the Berlin Communiqué was accepted. In the Communiqué the Ministers confirmed the quality of education as the basic element of the European higher education, which has been a condition to the creation of the European Higher Education Area. The Communiqué also re-confirmed that the higher education reform quality improvement and supporting the cooperation to provide the quality were one of the main goals of the Bologna process, as well as a part of the European Commission policy in the area of education. The Ministers agreed that the basic responsibility for quality assurance in higher education was up to the individual university institutions themselves. [4].
- Bergen meeting in 2005, where the importance of partnership in the reform process was emphasised. The overarching framework for the qualifications was accepted in the European Higher Education Area. Another important thing was also the approval and acceptance of the proposal of the standards and guidelines for assuring quality in the European Higher Education Area prepared by the ENQA - European Network for Quality Assurance in Higher Education [5].

Copenhagen Declaration

Accepting the Copenhagen Declaration [6] was an important event in the development of technical education in Europe. The main role of the Copenhagen process is to enforce technical education by means of improvement its quality, attractiveness, and by means of stimulating mobility within the European Union. The main goal is supporting the cooperation in the area of quality assurance, in the area of models and methods exchange, common criteria and principles of quality. The partners participating in the creation of the Copenhagen Declaration outlined 5 main objectives which were inevitable for the acceptance of technical education and for improving its quality:

- A single framework of competences and qualifications

- A system of transferring credits in technical education, similar to the European system of credits transfer in study
- Common criteria and principles for the quality in technical education
- Common principles for the acceptance of informal and unofficial education
- Counselling for lifetime education

Common Quality Assurance Framework – CQAF

The common framework of quality assurance, the CQAF model, has been established as a part of the Copenhagen process, and is focussed on continuous quality improvement [7]. It is a general model which should serve as an instruction for the development and reforming the systems of quality evaluation in technical education. It helps the member states engaged in its preparation to develop, improve, monitor and evaluate their quality systems by means of a common referential system, and particular tools. The CQAF model provides simple instructions for self-assessment and refers to the „European guide for self-assessment“, which contains the instruction for the ways how to do self-assessment with particular quality criteria. The acceptance of the CQAF by the European Council in May 2004 was an important impulse for the cooperation in the area of quality assurance in vocational education.

The CQAF model offers a set of indicators to measure and evaluate the quality in vocational education. Each part of the model is assigned a certain number of quality criteria. The basic quality criteria are presented in such a way that they can be applied to different environments. The model also enables comparing performances and results in different member states and at different levels of the education system.

The model emphasises the external monitoring of the quality system at the institutions of technical education, which is possible to do in several ways, using different systems of quality.

QUALITY SYSTEMS

Recently, the need of implementing common quality assurance criteria has begun to be enforced also within the individual EU states, by means of common steps at the European level, within the framework of the European Higher Education Area. The Berlin summit and Copenhagen Declaration have dealt with quality issues the most. The ENQA - European Network of Quality Agencies report referring to the proposals of quality standards, presented at the Bergen summit, stated the European Higher Education Area varied was characterised by the variety of university systems, social and cultural traditions. Therefore it was not possible to apply simple approaches to quality. Even the meaning of the word 'standard' is perceived differently in the quality systems in Europe, and it has different interpretations, from precisely defined regulation requirements to general rules. That is why the accepted standards and regulations do not have a formal directive character, they are characterised by general formulations, so that they are applicable by all of the university institutions and agencies dealing with quality assurance in Europe, and

so that it is possible to respect the differences of national systems and programmes areas. Also the standards proposal accepts the priority of the national systems of higher education, and the importance of the institutional and agency autonomy within the individual national systems. The standards are more concentrated on what is supposed to be achieved than on how it is supposed to be achieved. The report on the standards proposal also stated that accepting the standards and recommendations was only the beginning of the process of their implementation, and achieving the required quality. The standards do not denote what quality evaluation system should be implemented. Universities themselves have the right to decide what quality system they will use, whether they will develop their own system, or will adapt one of the already verified managerial quality systems. Because the standards specify what is to be achieved, it is necessary to solve the problem how it is supposed to be achieved. There are more ways and tools of how to achieve required quality. Some of them have already been used at universities, the other ones are necessary to be implemented. Deciding for a standard requires analyses and experience of using quality systems. Therefore we are presenting them briefly.

Accreditation

The role of accreditation is first of all considering the abilities of a faculty to realise educational activities and award academic degrees in particular study areas and thus ensure quality at universities. Accreditation is very close to a control process, on the basis of which certain quality is maintained at university, and so is transparency between universities which have similar programmes. The acknowledged study programme has to fulfil given accreditation criteria.

In Slovakia accreditation is compulsory, and the accreditation committee [8] uses the criteria suggested by the committee itself, commented by universities representatives, and approved by the Ministry of Education of the Slovak Republic. The accreditation criteria are divided as follow:

- The accreditation criteria of university education study programmes.
- Criteria evaluating the level of research, as a part of the complex accreditation of a university 's activity.
- Accreditation criteria for habilitating proceedings, and proceedings appointing professors.
- Criteria for a higher education institution to become a university.
- Criteria for a university to become a research university.
- Accreditation criteria for accreditation of non-university institutions.

Accreditation consists of a self-assessment report elaborated by a university institution, and of the verification of the self-assessment documentation, which is done by the members of the accreditation committee. At accreditation only little emphasis is put on the assessment of the educational process itself, as well as of further criteria related to the quality management systems.

Evaluation

In comparison to accreditation, the evaluation of an institution is not compulsory. Among the definitions of evaluation, the best known are the ones describing evaluation as:

- 'A process providing information for a deciding process.
- Systematic quality analysis of the object by means of evaluating the object. In case of evaluating a university, what are evaluated are its goals, inputs, processes, products, and outputs' [9].

The best known of the programs of institutional evaluation of universities in Europe is the Institutional Evaluation Program of the EUA – European Universities Association. Its basis consists of the quality concept “fit for purpose”, and the concept of the improvement of a university.

The intention of the EUA's Institutional Evaluation is not to evaluate the education and research quality but to go over the processes and mechanisms which have been implemented in order to measure and assure the university institution quality. The core of the evaluation is the evaluation of the institution itself, based on the EUA methodology. The methodology reflects the effort of the European higher education environment to elaborate appropriate procedures for the implementation of quality assurance systems at universities [10].

ISO 9000 standards

The above standards belong to the best known norms, and have become an international standard for the assessment and assurance of quality systems in enterprises. If an organisation meets the standards, it may apply for the certification of its quality system. Applying an ISO norm as such does not guarantee products and services quality. The basis of ISO 9000 is a procedurally oriented management focused on quality, which is characterised by shifting from hierarchical management to teamwork, as far as the managerial procedures are concerned. Appropriate measures are taken to ensure customers' satisfaction. The ISO 9000 norms are known as so called generic norms of managerial quality systems, and they can be used in any organisation – small or big enterprise producing certain products or providing a service; they can be used in any sector, in sales, state administration, public sector or governmental institutions [11].

The ISO 9000 norms which specify the requirements for a quality management system can also be applied in the area of education. In previous years many faculties introduced their quality systems based on the ISO, a few of them got the certificate. The certification is perceived positively from the outside, especially by the companies the universities cooperate with. **However, it does not have any remarkable impact on the quality of education process, or research activities.**

Excellence model EFQM

The EFQM – European Foundation Quality Model came to existence in 1998 on the basis of the initiative of 14 most significant European production companies, with the support of the European Commission, with the main goal to renew and enforce the competitiveness of European enterprises against American and Japanese companies.

Whereas the ISO 9000 standards system was developed to simplify the customer-supplier relations, the purpose of quality evaluation was to improve the total level of competitiveness [12]. The EFQM is a tool helping organisations, by means of measuring, understand where they stay behind, and it gives impulses for solutions. The EFQM is based on 9 criteria; see figure 1 but it is not normative.

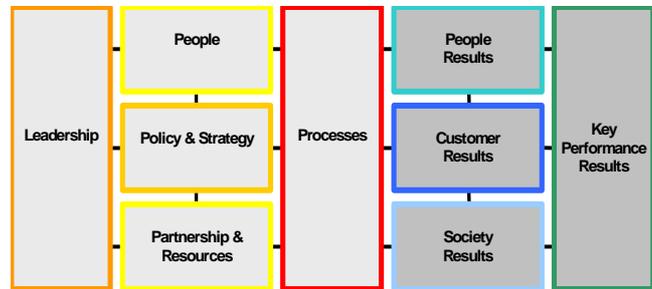


Fig. 1. Model EFQM, source: SAETO Tutorials [13]

Results are achieved by the realisation of eligibility. The model emphasises the fact that innovations and 'learning' help the improvement of eligibility, which leads to better results. The model is based on the principle of regular and permanent review and self-assessment of performance by given criteria. Comparisons of the results itself to strategic goals of an institution and to the performance of the best competitors (benchmarking) are done on the basis of the referential model. The excellence model has its grounds in the TQM - Total Quality Management principles, and it also includes the ISO 9000 standards principles. The model is most frequently used to evaluate companies in the European Quality Prize Competition. Companies often use it also as an internal methodology for measuring the company's abilities, and for self-assessment. The main EFQM principles are: goal-orientation, correct management, and consistent application of management principles, fact-based management, permanent innovation and improvements, development and engagement of employees, customer orientation, development and improvement of partnerships, responsibility towards the public.

Common Assessment Framework - CAF

The CAF Model [14] is based on the principles identical with the EFQM principles, and it tries to include more detail assessment criteria. The CAF has been inspired by the EFQM but it is simpler. Its main goal is to make public administration institutions orientate on quality development, effectiveness, efficiency, orientate on solving problems in favour of citizens, with the emphasis put on employees' development. The CAF Model provides a simple and easy-to-use manual for the assessment of public administration organisations; it makes it easier to understand the quality management. The CAF Model is also used to identify good examples of quality system usage in the area of state administration. The basis of the model is self-assessment. An institution implementing self-assessment by means of the CAF Model uses 9 evaluation criteria, similarly to the EFQM. Within each criterion, the following area assessed:

- Strong points of organisation
- Areas requiring improvements

QUALITY SYSTEMS COMPARISON

All of the mentioned systems have their bases in the self-assessment of an institution. The self-assessment differ in the number of data they contain, in the data-gaining periodicity, measuring and evaluating the data, in the depth of the data analyses, with the emphasis on feedback and process of permanent improvement of the institutions. Self-assessment is the most elaborated one in the methodologies of the EFQM and CAF Models.

The EU does not prescribe any particular internal managerial quality system; it is up to each university institution to decide for one. The internal quality systems of universities should meet the Standards and Guidelines Quality Assurance proposed for higher education, or the regulations contained in the CQAF proposed for technical education. According to the suitability comparing of the individual quality systems in [15], we may state the following facts:

Accreditation

Accreditation of an institution is required by Law. It is done by an accreditation agency. Its role is to check on the minimum criteria which have been stated for the approval of providing educational activities. Accreditation does not deal with the processes of an institution, or other areas of the institution. It does not focus on the quality of running processes, and has minor influence on further improvement of the processes.

By Law, it is done once in six-year period, it is not done regularly with the aim of permanent improvement of the institution performance. There is no regular quality monitoring in between the accreditations. Collecting data and evaluating them by the accreditation criteria at universities are not done regularly.

Evaluation

The evaluation of an institution is done on the basis of voluntarism and demand of the educational institution. Evaluations of universities are a suitable tool to monitor activities, functioning, outputs, namely for the institutions with no quality systems implemented.

The university gets an overview of what its quality evaluation and management system is like.

The evaluation of an institution is a single activity. Its results are recommendations which might become impulses for the university to introduce a quality evaluation system. It provides the basis for continual improvement of the institution.

The conclusions of a self-assessment report are the first step towards a quality system creation.

Self-assessment report is elaborated in detail but it reflects only the period immediately before the evaluation – it is a single act.

ISO 9000

Some of the advantages of the implementation of the ISO 9001:2001 quality systems are: mapping the processes, exact appointment of responsibilities and duties of all employees, confirming the certificate by the third side, better perception from the side of customers – students and buyers of research results. The certification by the ISO 9001:2001 by themselves does not lead to improving the processes, it is a means of introducing a systematic approach to managing an institution activities, it does not have a direct impact on the quality and improvement of the educational process.

Among the problems associated with the ISO implementation are: different understanding of the notions 'quality' and 'quality management', disunited attitudes, lack of cooperation between an organisation's departments, insufficiently institutionalised and formalised processes of approving and decision-making in connection to the measures focused on quality, time-consuming and administratively demanding implementation of the system.

Focussing the audit on optimization and documentation of processes often does not lead to improving the performance but to confrontation. Problems associated with the implementation of the system are mainly in the areas which require creativity, which is also the case of educational institutions [16].

EFQM a CAF

The intentions of the EFQM and CAF are by means of self-assessment to increase an institution's performance, and to keep improving it. It is also very important to collect, compare and analyse quality indicators with an emphasis on feedback.

The EFQM and CAF are based on TQM - Total Quality Management. TQM is an organisation's management's strategy which puts emphasis on working the quality demands into all of the organisational processes.

A common feature of all of the described quality evaluation systems is self-assessment of an institution. These differ namely in the depth of data analysing, which has been the most elaborated in the EFQM and CAF. As the quality systems by the ISO, also the EFQM has been applied the most by university institutions, faculties which intensively cooperate with practice. The implementation of the system sends out a message of quality readable by both, the surroundings and practical life.

When all of the systems are compared, the one which has its methodology elaborated in the best way is the EFQM, and also the CAF. The latter's terminology and sub criteria (28 in CAF, 32 in EFQM) were adapted to the needs of state administration in the best way. Compared to the ISO, the EFQM includes all activities areas. Figure 2 shows the comparison of the areas emphasised by the ISO 9000 norms, and the areas observed by the EFQM [13]. ISO do not comprise two criteria: Society results and People results. Only criteria People and Processes are comparable in both quality systems.

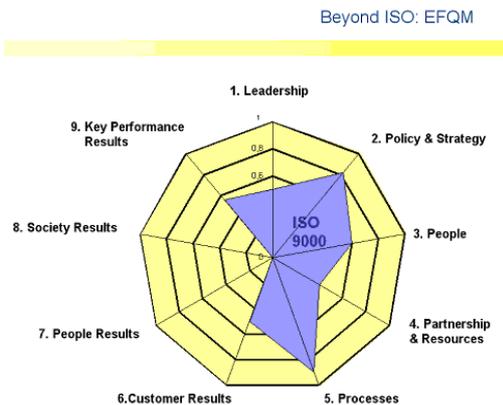


Fig. 2. ISO and EFQM comparison, source: SAETO Tutorials [12]

SAETO –SELF ASSESSMENT FOR EDUCATIONAL AND TRAINING ORGANISATIONS

Within the framework of the European Union several calls have been published to submit projects aimed at the application of education quality standards, development of efficient tools to assure education quality, implementation and development of quality systems with the emphasis on information-communication technologies. These facts were also the impulse for the preparation of the Leonardo Project 2005LI/05/B/F/PP/164510 SAETO – Self-Assessment for Educational and Training Organisations. The University of Žilina is one of the project partners, and has been taking an active part in the project tasks. An on-line survey was done in the EU countries in the first phase of the project. 157 various institutions took part in it; therefore its results are not possible to be compared to the situation of universities. The objective of survey was to find out about the state in using the quality systems, and about planning their implementation in the nearest future, and to find out about the needs and requirements of educational institutions in connection to the systems implementation. The survey has shown the following:

- Most of the educational institutions have not yet implemented the managerial quality assessment system
- Currently the most frequently used system is the ISO, 87%
- Evaluation is mostly done in the form of written questionnaires
- Most of the answers have expressed a belief that doing surveys and self-assessment by means of information-communication technologies is the most effective
- Most institutions are planning to implement a quality evaluation system within 3 up-coming years, only 20% are not planning to do so
- Those who are planning the implementation, want to use the EFQM

The survey has identified the EFQM as very suitable tool for self-assessment of university institutions and improving quality systems. Among other models the survey presented the CQAF and CAF Models. On the basis of the project survey it was concluded that developing the self-assessment

system model itself was demanding; for universities it would be simpler to adapt the quality management models which worked and were verified by real life.

Because the EFQM was originally determined for business area and production enterprises, it was necessary to re-transform the evaluation criteria of the model into the educational institutions' terminology. It was a process similar to the EFQM adjustment, as in case of the CAF Model determined for the state and public administration institutions. The result is the EFQM determined for educational institutions.

Ensuring as effective way of gaining, evaluating and processing information as possible is done by means of the GOA WorkBench software tool, which was developed within the project.

The final phase of the project is the implementation of the EFQM into reality. The 'Field tests' of the Slovak version of self-assessment is being done at the Faculty of Management Science and Informatics, at the Faculty of the Operation and Economy of Transport and Communications, and at the Institute of Continuing Education of the University of Žilina. The results of the tests will be known in June 2007, and then compared to the results of the other project partners.

More information about the project is available at www.saeto.com.

CONCLUSION

On the basis of the direction and development of the approaches to the assurance and assessment quality of higher education institutions in the EU it is obvious that from a formal point of view quality assessment by an external agency will still keep its importance. The agency will recommend an institution to be appointed the institution with the right to provide higher education. The EU's intention is to create a network of national quality-assurance agencies, both private and state, which will be certified and subordinated to a central agency - the European Register of quality assurance agencies [17].

Therefore universities have to re-evaluate their approaches so far to the assessment of the provided education quality by means of introducing quality systems. It is not enough any more to fulfil the minimum accreditation criteria, it is important to systematically and continuously assure the quality of the entire process of education, and the associated processes. Universities have the possibility of selection.

Using the SAETO Project results is one of the possible ways how to implement a quality system, and how to begin innovations in education. The adjusted model criteria for educational institutions and the possibility of using the software have been a great help for the implementation. However, improving quality, and the changes the innovations in education require, has to originate from the universities' managements, and implementing them is a task for both, employees as well as students of universities.

ACKNOWLEDGMENT

This contribution was undertaken as part of the following research projects SAETO project funded by the European Commission under the LEONARDO DA VINCI Community Vocational Training Action Programme and based on the Fundamental Concepts of the European Foundation for Quality Management (EFQM) and VEGA 1/2548/05 - Quality of services perceived by customers and VEGA 1/4573/07 - Possibilities, limits and development trends of the obligatory service conception in post and telecommunication in the process of globalization. It benefited from grants from EU and the Ministry of Education of Slovak Republic for which the authors express their gratitude.

REFERENCES

- [1] Euro Info. 2005. Sformulovanie Lisabonskej stratégie. In: Všetko o členstve Slovenska v Európskej únii. In: <http://www.euoinfo.gov.sk/index/go.php?id=957>>
- [2] European Commission, Education and Training. 1999. Bologna declaration. In: <http://ec.europa.eu/education/policies/educ/bologna/bologna.pdf> >
- [3] European University Association. 2001. Prague communiqué In: http://www.eua.be/fileadmin/user_upload/files/EUA1_documents/OFFDOC_BP_Prague_communique.1068714711751.pdf >
- [4] European University Association. 2003. Berlin communiqué In: http://www.eua.be/fileadmin/user_upload/files/EUA1_documents/OFFDOC_BP_Berlin_communique_final.1066741468366.pdf>
- [5] European University Association. 2005. Bergen Communiqué In: http://www.bologna-bergen2005.no/Docs/00-Main_doc/050520_Bergen_Communique.pdf>
- [6] European Commission, Education and Training. 2002. Copenhagen Declaration. In: http://ec.europa.eu/education/copenhagen/copenhagen_declaration_en.pdf>
- [7] European Commission, Education and Training. 2004. Fundamentals of A Common Quality Assurance Framework (CQAF) for VET in Europe. In: http://eu2006.bmbwk.gv.at/veranst/qual/fundamentals_of_a_cqaf_for_vet_in_europe_version1.pdf
- [8] Accreditation commission SR. 2002. Kritéria na posudzovanie spôsobilosti vysokých škôl a nevysokoškolských inštitúcií podľa par. 82 ods. 8. zákon č. 131/2002 Z.z. o vysokých školách. In: Kritéria. <http://www.akredkom.sk>>
- [9] LÉNARTOVÁ, G.: Potreba zdokonaľovania systémov hodnotenia kvality na slovenských vysokých školách. In: Zdokonalenie slovenského systému zaisťovania kvality – zborník zo záverečného seminára projektu ESQAS v rámci programu TEMPUS. Žilina: EDIS, 1999, 8 s. ISBN 80-7100-671-8
- [10] European University Association. 2005 Institutional Evaluational Programme . In: <http://www.eua.be/index.php?id=58>>
- [11] ČIKEŠOVÁ, M. 2005. Inštitucionálne hodnotenie vysokých škôl v Slovenskej Republike. In: Slovenská rektorská konferencia. In: http://www.srk.sk/autoupload/Projekt_EVA_Verzia_A_25_5_2006.pdf>
- [12] European Foundation for Quality Management – EFQM. In: <http://www.efqm.com/Default.aspx?tabid=35>>
- [13] SAETO presentations. 2007. Tutorials-en. In: <http://www.saeto.com/>>
- [14] Slovenská asociácia Európskych štúdií v spolupráci s projektom PHARE.: Spoločný systém hodnotenia kvality – Príručka modelu CAF 2006. 1. vydanie. Bratislava : GUPRESS, 2006. 93 s. ISBN 80-7160-223-x
- [15] Kuzmova, L.: Využívanie IKT pri implementácii systémov kvality v univerzitnom vzdelávaní, bakalárska práca, FPV, Žilinská univerzita, 2007
- [16] MATEIDES, A. a kolektív.: Manažérstvo kvality, história, koncepty, metódy. 1. vyd. Bratislava : Vydal: Ing. Miroslav Mračko, 2006. 456 s. ISBN 80-8057-656-4
- [17] Official Journal of the European Union. 2006. European Register of Quality Assurance Agencies. In: http://eurlex.europa.eu/LexUriServ/site/en/oj/2006/l_064/l_06420060304en00600062.pdf>