SYSTEM APPROACH TO ASSURE QUALITY OF EDUCATION AT THE FACULTY OF MANAGEMENT OF CZESTOCHOWA UNIVERSITY OF TECHNOLOGY

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Abstract: The article presents experiences of implementing the internal quality assurance system at the Faculty of Management of the Czestochowa University of Technology. In the literature, there is no ready-made solution connected with the functioning of internal quality assurance system, there are just defined good practices. One of the solutions used by universities is to use the model based on the ISO 9001 standard or EFQM model. Faculty of Management has chosen model based on ISO 9001 standards, the modification of this system gives great implementing potential in higher education regardless of the educational profile.

Key words: quality of education, system approach, ISO 9001

Introduction

Quality, as defined by the Dictionary of the Polish Language is a certain degree of perfection. This concept with regard to education can be understood as the degree of its appropriateness, which is also an expression of the mission to discover and report the truth and to cooperate with the socio-economic environment. Public and private institutions of higher education are guided by the principle of freedom of teaching, at the same time being subject to certain guidelines, as defined in the Law on Higher Education (Act of 27 July 2005). In addition to the mission and objectives of the university, which assume taking care of the quality of education, the obligations in this regard are governed by the Act. Therefore, at internal level there are formed quality assurance systems of education in which there are supported and monitored efforts to systematically improve quality at university. Universities monitor professional careers of its graduates in order to adapt fields of study and educational programs to the needs of the labour market. They carry out studies with a view to education outcomes, corresponding to the National Qualifications Framework in the areas of education and fields of study. Pro-quality activities at an internal level need not to be confined to the activity of the university. At the Faculty of Management student is co-responsible for the level of quality of education by participating in the works of the committee as well as direct meeting with faculty plenipotentiary for quality assurance of education.

External institutions acting independently to improve the quality of education are Accreditation Commissions, such as the Polish Accreditation Committee, performing the assessment at a given field of study, taking decisions of having the

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rights of units for conducting studies at given field. Rankings of higher education institutions, in turn, reflect the need to have knowledge of their relative position, which is an expression of the need to have information on the quality of education. There is taken at European level cooperation on complying with consistently high standards of education.

One of the main documents dealing with the issue of quality assurance in education is a report prepared by the European Association for Quality Assurance in Higher Education, including standards and guidelines for internal and external quality assurance in higher education. Within the internal systems following actions are proposed [1]:

− developing policy and procedures for quality assurance (institutions should have a policy and associated procedures within the range of quality and standards of offered programs and their effects, they also should take on themselves commitment to develop the culture of quality),
− approval, monitoring and periodic review of programs and their effects (institutions should have mechanisms for approval, periodic review and monitoring of their programs and their effects),
− students evaluation (students should be assessed according to published and consistently applied criteria, rules and procedures),
− quality assurance of the teaching staff (institutions should guarantee that teaching staff has adequate qualifications and competences),
− learning resources and student support means (resources to support student learning must be sufficient and appropriate for each program),
− information systems (institutions should collect, analyse and use information for effective management of offered programs of study and other activities),
− publishing information (institutions should at regular intervals publish up-to-date and objective information, in qualitative and quantitative terms, on programs they offer and their effects.

However, European standards for external quality assurance of higher education should be reflected in activities such as [1]:

− use of education internal quality assurance procedures (please take into account effectiveness of internal quality assurance processes),
− development of external quality assurance processes (first should be determined their goals and tasks that should be published with description of provided procedures),
− criteria for decisions (decisions should be based on clearly defined, published and consistently applied criteria),
− processes suitable for specific purpose (processes should be designed in a way that ensures their suitability to carry out the set goals and tasks),
− reporting,
− supplementary procedures,

- periodicity of maintenance (should be cyclically taken action in the range of external quality assurance of institutions and / or programs and to establish the procedures for inspection),
- system analysis (should be periodically prepared summary reports which give an overview and analysis of general conclusions of carried out inspections / audits).

Quality of education

Among the solutions of system quality control purposeful character has Total Quality Management (TQM) [2].

In this system, to obtain the desired quality (excellence of graduate) is possible through the full participation of all interested in the process of shaping quality, and the main motive for action of institute management staff, faculty, and university is to satisfy the needs of interested sites and directing all activities on the acquisition and maintenance. Implementation of modern quality management system is carried out based on the requirements from the standards ISO 9000 series. These norms are standard in range of management not only in industry but also in administration and education [3]. However, there is the problem of long-term university autonomy and the fear of limiting diversity and creativity. These concerns are most distinctly expressed in publication of Professor Wawak [4]. But there is no, at present, prepared ready system solutions for universities, there are defined good practices that should be taken into account in the process of building internal quality assurance system for higher education institutions. For this reason, it becomes an attractive solution reaching for proven model of quality assurance system based on the 9001 ISO model. This solution does not enforce finished pattern of proceedings and the degree of formalization, and allows you to adjust the system to the specifics of given institution. Very important element is to keep the so-called common sense in the process of developing procedures and procedure guideline as it may cause limit of creativity and diversity of the academic environment. During experience gained as auditor I met with quality assurance systems which functioned for themselves, generating reports and statements that were not used in the process of improvement. They turned out to be unnecessary and were a pure waste of resources. However, the ISO system is a formalized system that requires documented functioning. Figure 1 shows hierarchy of documentation of quality management system, which can be given as an example for quality assurance system in higher education.

All documents of quality assurance system at university are linked together through the Book of Quality. This solution causes that all activities carried out at university are connected with continual quest to provide educational service to interested sites at the highest level.

In the Quality Book there are presented quality policy and quality objectives for the entire university. Typical academic Quality Book should include:

- assumptions of quality policy and the declaration of Rector (Senate, Deans),
- presentation of university / faculties,
- description of the processes carried out at university,
- description of the Quality Assurance System,
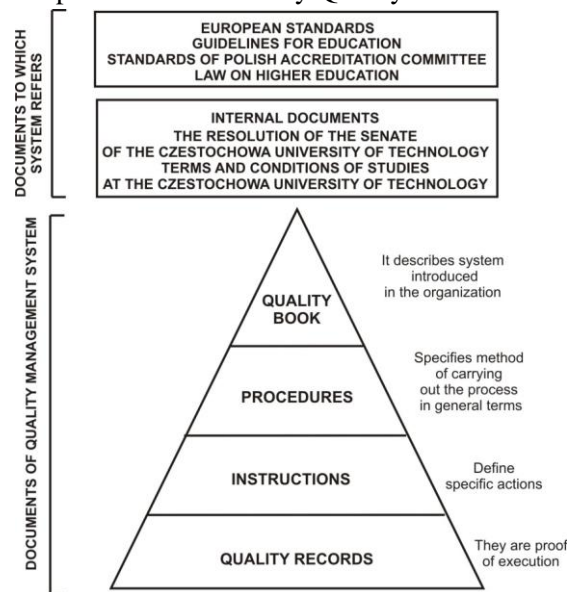- management principles of the University Quality Book.

Figure 1. The hierarchy of documentation in quality assurance system
Source: Author's elaboration based on Hamrol A. Mantura W. Zarządzanie jakością teoria i praktyka, PWN, Warszawa 2002

Assumptions of internal quality assurance system at the Faculty of Management

One of the main conditions of high quality education at the Faculty of Management is implementation of the assumptions of Internal Quality Assurance System. This system covers the entire process of educating a student at the faculty referring to the main factors affecting its proper conduct and high quality. Internal Quality Assurance System at the Faculty of Management is [5]:

- consistent with international standards defined inter alia in Bologna Declaration,
- consistent with the assumptions of the higher education system in Poland and typical solutions applied at universities of the European Union,
- in accordance with quality assurance system of education at the Czestochowa University of Technology,
- correlated with other activities in the area of widely understood education,

- harmonized with the fundamental obligations of academic staff and people associated with the management of the faculty, university and the whole process of education,
- open and transparent with regard to conditions and ways of awarding bonuses of efforts to improve quality of education.

An integral part of the Internal Quality Assurance System is:

- Faculty committee on the quality of education,
- Faculty committee of science,
- Faculty didactic Committee,
- Faculty committee to carry out surveys evaluating academic teachers among students,
- Faculty committee on the selected by lot thesis to verify in the anti- plagiarism procedure,
- Interdepartmental committee on the evaluation of academic teachers.
- Faculty team for national qualifications frameworks,
- Faculty committee on the program content compliance with assumed education effects.

Internal Quality Assurance System is designed to**:**

- Continuous monitoring of educational standards and national qualifications frameworks introduced by the competent minister in charge of science and higher education. Monitoring education standards and national qualifications frameworks is based on a systematic analysis and evaluation of requirements for each field of study: compatibility of study programs with educational standards and national qualifications frameworks, selection of staff carrying out classes with proven educational and scientific output, staffing classes by appropriately selected academic teachers.
- Evaluation of the education process. The process of education is assessed on basis of documentation for given field of study, in particular, it consists of an assessment of: verification of effects of education, compatibility of education program with the education outcomes, plan of study, verification of plans of individual subjects - subjects guidebooks, implemented ECTS point system, examination and credits requirements, requirements set to the thesis (engineering, bachelor's and master), implementation of professional practices.
- Assessment of quality and conditions of carrying out didactic process. Assessment takes place based on analysis of data from the documentation of the teaching process and evaluation of classes, and concerns the compatibility of merits of the particular subject to the standards of education and education curriculum and assumed education outcomes and conditions of education implementation. Assessment of the quality of didactic classes is supported by anonymous survey of evaluating the implementation of the educational process, with questions about the curriculum, teaching staff, and organization of the education process and achieved learning outcomes, filled voluntarily by

students of the Faculty of Management. Important instrument for assessing the quality of didactic process is periodic classroom observation. From conducted observations there are drawn up protocols in the format of classes' observations.

− Assessment of organization of didactic classes. Planning and organizing classes should provide as large as possible part of the classes carried out in a form other than lectures, activating students for independent or group work. In the organization of classes should be observed educational standards and the Regulation imposing standards.

− The assessment of realization of assumed education outcomes. In order to ensure the correct implementation of education process, for each subject should be developed guidebook to the subject. In the content of the guidebook to the subject must be taken into account the effects of education and other requirements included in relevant resolution of the Presidium of the State Accreditation Committee. The guidebook to the subject should be updated in any case, of making changes in standards of education. The update may take place not less frequently than once every two years; this is related to the process of continuous improvement of the didactic process and adaptation of effects of education to the requirements of employers (external interested sites).

− improving qualifications of teaching staff. Faculty of Management conducts periodic evaluation of the teaching staff, which date and manner of conduct is regulated by the management of the Rector of the Czestochowa University of Technology. Research and teaching staff of the Faculty of Management are assessed based on the assessment sheets varied according to positions: assistant, assistant professor, professor. Following the recommendations of the legislator the sheets contain, among others data concerning: scientific development, involvement in the teaching and education processes and organizational and administrative activity.

− Documenting and archiving exams and credits. The procedure for collection of examination papers, credits, transitional arrangements and projects - at the Faculty of Management has been operating since January 2009. There is also a warehouse of examination papers, credits, transitional arrangements and projects.

− Compliance with the preparation of the engineering, bachelor and master thesis. Requirements for the thesis carried out at the Faculty of Management of the Czestochowa University of Technology were prepared taking into account legislation in force, including the Czestochowa University of Technology Study Regulations (issued in July 2011) and traditions and good customs of the higher education institutions.

− Prevention of pathological phenomena associated with the process of education. At the Faculty of Management is implemented a system of anti-pathological phenomena associated with the process of learning (the so-called anti-plagiarism system Plagiat.pl) based on management of Rector of the Czestochowa University of Technology).

− To ensure appropriate measures of support to students in their research, teaching and social activities.
− To ensure participation of internal and external interested sites in the process of defining and verifying of intended learning outcomes.
− Making public information on curricula, education outcomes, organization and procedures of studies course.

Figure 2 shows a model of functioning of the Internal Quality Assurance System at the Faculty of Management of the Czestochowa University of Technology.
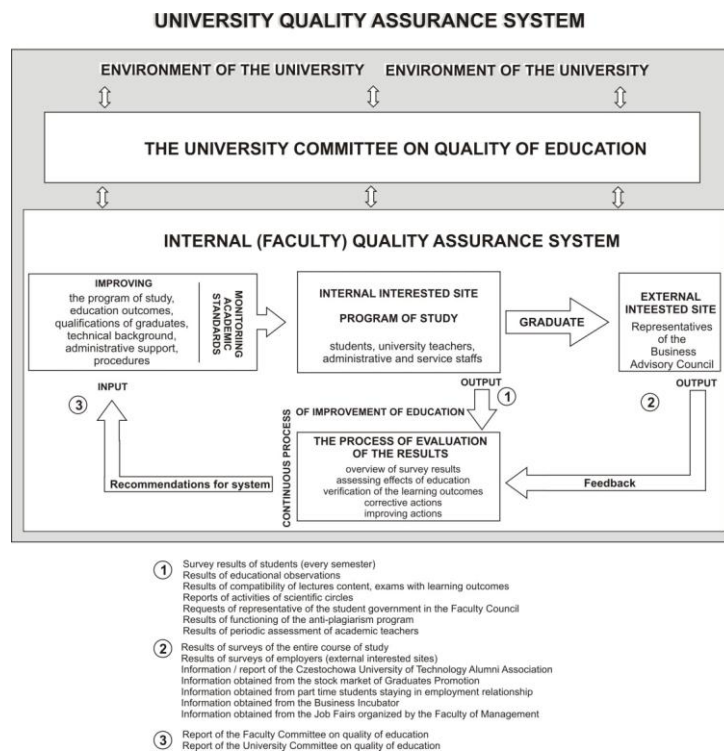

Figure 2. Model of functioning of internal system of quality assurance at the Faculty Management

Source: Author's elaboration based on Ulewicz R. Wewnętrzny System Zapewnienia Jakości na Wydziale Zarządzania, Politechnika Częstochowska – Wydział Zarządzania, Częstochowa 2012.

An important element is measurability of effects of education. Methods of assessment depending on the category of learning outcomes can be presented as follows:

− Category Knowledge: oral exams (non-standardized, standardized), problem, written examinations, reports, tests (multiple choice, true / false, matching) projects.

- Skills: Practical exams (non-standardized, standardized), demonstration of performance under simulated conditions or natural, implementation of tasks, prolonged observation.
- Attitudes: prolonged observation, observation by the supervisor with or without assessment, criteria 360° assessment, assessment by colleagues, portfolio, self-assessment.

Noteworthy is the 360° method, using this method we have the opportunity to develop assessment of workers as well as students from different perspectives. The overall assessment includes:

- Qualitative dimension - used both in assessing the goals and methods of their implementation,
- Quantified dimension - periodic assessment of the total and current work,
- Time dimension - assessment of the future and the past of performed tasks,
- In terms of specific groups - includes a self-assessment and assessment by other superiors, subordinates, colleagues, students-internal interested site and external interested site.

An important factor in assessing quality of education is the level of customer satisfaction in our case a student. Here we can use the sequel method, which will allow us to assess the level of student satisfaction. For a moment, was launched a pilot study of student satisfaction at second degree of full-time and part-time studies. Obtained results will be used in the process of improving quality of education.

Polish Accreditation Commission requires monitoring and documenting of all the factors affecting the quality of education. Another element is to verify intended learning outcomes, which requires from accredited subject to present appropriate reports. According to Josep A. Ferré [6, 11], the quality at university is multidimensional phenomenon with the domain construction (Fig. 3) located in global environment (local, national, international and global). In order to assure quality of education we need to have adequate information that will enable us to proper assessment of the current situation. First question we should ask is what information we have, which information is not known to us, and which are blurred.
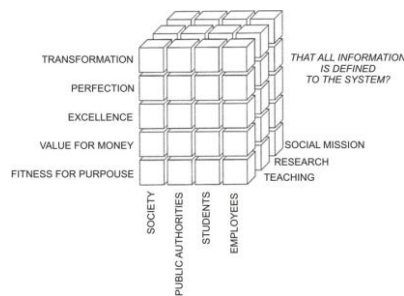

Figure 3. The hierarchy of documentation in quality assurance system
Source: Author's elaboration based on Josep A. Ferré, Quality Assuranceand Rankings, September 2011

Summary

Possession of an internal quality assurance system is mandatory. Art. 9 of point 3c) of the Law on Higher Education [12] - Minister determined by regulation the operation of the internal quality assurance system of education in the scope of the analysis of education outcomes. Article 66, point 3a) - Rector supervises the implementation and improvement of university quality assurance system of education. In the responsibility of the university authorities is the way to develop and implement such a system and to determine the degree of formalization. Too high degree of formalization can reduce the diversity and creativity of academic environment. When forming the internal quality assurance system should be found a balance between standards, procedures, instructions, controls and their suitability for a particular purpose with particular emphasis on autonomy and institutional diversity. Taking care of the quality of academic didactics, expressed in multilateral development of student requires continuous improvement in the range of interaction researcher and teacher, corresponding processes, i.e. education and studying and variables which determine the outcome, and that is: respect for the rules, setting goals in the category of function, activity and tasks, selecting relevant content for their implementation, methods, organizational forms, teaching means, a place of taking classes, and methods of evaluation, progress that students acquire in the process of education and studying. Multidimensionality of the concept of quality and the need to monitor such a large number of factors indicate the need to use information systems to automate the process of collection and analysis of at least some of the factors affecting the efficiency of the education process [7-10]. The main objective of quality assurance system is to build a culture of quality that is collective responsibility for education, patterns of behaviour and activities related to care for quality.

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PODEJŚCIE SYSTEMOWE W ZAPEWNIENIU JAKOŚCI KSZTAŁCENIA NA WYDZIALE ZARZĄDZANIA POLITECHNIKI CZĘSTOCHOWSKIEJ

Streszczenie: artykuł prezentuje doświadczenia związane z wdrożeniem wewnętrznego systemu zapewnienia jakości na Wydziale Zarządzania Politechniki Częstochowskiej. W literaturze nie występuje gotowe rozwiązanie dotyczące funkcjonowania wewnętrznego systemu zapewnienia jakości, znajdują się tylko opisy dobrych praktyk. Jednym z rozwiązań stosowanych przez uniwersytety jest model oparty na standardach ISO 9001 czy modelu EFQM. Wydział Zarządzania wybrał model oparty na standardach ISO 9001, a modyfikacja tego modelu daje wielkie możliwości wdrożeń w obszarze wyższej edukacji, niezależnie od jej profilu.

Słowa kluczowe: jakość edukacji, podejście systemowe, ISO 9001

系統的方法，以確保優質的教育，管理 CZESTOCHOWA 大學學報學部

摘要：本文介紹了在管理技術的琴斯托霍瓦大學學院實施內部質量保證體系的經驗。在文獻中，沒有現成的解決方案，內部質量保證體系的運作連接，還有剛才定義好的做法。一個用於大學的解決方案是基於 ISO9001 標準或 EFQM 模型中使用的模型。管理學院選擇了基於 ISO9001 標準的模型，這個系統的修改高等教育提供了很大的潛力實現無論教育狀況的。

關鍵詞：教育質量，系統的方法，通過 ISO 9001