A QUALITY ASSURANCE SYSTEM PROJECT AT THE UNIVERSITY OF WEST BOHEMIA IN PILSEN

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INTRODUCTION

This paper presents the system of internal evaluation of the educational process in the stage prior to its implementation at the University of West Bohemia (UWB). The Quality Assurance system has been designed by a work group appointed by the vice-rector for study affairs. This group includes mainly employees of the University that took part in JEP+0811 project (Strategic and Internal Management of Czech Universities: The Design and Implementation of a Quality Assurance System at Institutions of Higher Education in the Czech Republic). These people have substantial experience in teaching and a very good knowledge of the university environment. They could therefore utilise their experience as well as information acquired in the above project in order to design an education quality assurance system for UWB. Consequently, we have a system based on well-tried experience from abroad and reflecting specific conditions at a particular university in the Czech Republic.

Internal evaluation of the educational process allows the university to react to a number of internal as well as external stimuli (coming from students, employers of university graduates, accreditation commissions, etc.). Internal evaluation thus offers important feedback between the educational institution and its customers.

The quality assurance system for the educational process consists of activities focused on the continuous quality enhancement of the following:

- The contents of knowledge being transferred to students, in terms of practical utilisation.
- The ways of transferring knowledge and testing its mastery.
- Communication between instructors and students.
- Links between courses in specific branches of study.
- Provision of technical resources needed for lecturing.
- Support activities of the university, i.e.: study affairs department, university library, halls of residence, cafeterias, etc.

The concept of enhancing the quality of the educational process fully reflects current requirements and long-term objectives of the University as...
well as society. It addresses demographic and economic conditions in the region and requirements made on University graduates by their potential employers. The quality of teaching is conditioned by many factors besides direct teacher-student relationships. The quality of teaching is determined by not only the abilities of students and lecturers, but also the environment and material resources available for the educational process. High emphasis is put on self-evaluation, the depth, width and frequency of which emanates from the needs of the subject being evaluated.

The system intended for improving the quality of education at UW has been designed for internal use by the University and its specific employees. As a by-product, it can be partly used for accreditation of individual courses, branches of study and faculties. It is flexible enough to be used under specific conditions characteristic of various departments and faculties.

**STUDY SYSTEM AT UW**

In order to facilitate understanding of some aspects of the system being presented, it might be helpful to provide a brief introduction into the organisation of studies at the University. UW currently consists of seven faculties: Applied Sciences, Economics, Electrical Engineering, Humanities, Law, Mechanical Engineering, and Pedagogical Faculty. At present, there are approximately ten thousand students. Obviously, the University can be characterised by its multidisciplinary approach as well as the relatively small size of its faculties.

The system of studies underwent reorganisation between 1993 and 1996. This process focused on creating an environment which would facilitate a concentration of resources. The system can be briefly characterised as follows:

**Inter-faculty Operation of Departments**

Each department is responsible for providing lectures and a professional guarantee for its specific branches in all faculties of the University. Organisationally speaking, the department is integrated with the faculty where such a department could represent a specialist field. As a result, even at a University with relatively small faculties (1–2 thousand students) we can establish departments of a reasonable size.

**Organisation of Studies utilising Credit System with Inter-Faculty Application**

The curricula of all study programmes and branches of study accredited at UW faculties are based on uniform principles. These principles (in fact the
rules of the credit system) are flexible enough to facilitate a formally uniform description of curricula of essentially different contents. In conformity with departmental inter-faculty arrangements, curricula of a specific branch of study generally include (as obligatory courses or obligatory electives) courses guaranteed by other departments integrated with other faculties. Students can choose from elective courses (up to a certain credit limit) offered by any department, unless some restrictive criteria are violated. Students can thus conveniently utilise the above-mentioned multidisciplinary approach of the University.

**Information and Database Support**

The high flexibility of curricula resulting from the credit system in combination with the inter-faculty approach of all departments represents quite a challenging task for efficient administration and the organisation of studies. The University runs its own information system for administrating studies, concentrating all data in a single University database and providing necessary information support.

**Internal Accreditation of Courses**

There is an accreditation commission in the University. The major task of this commission is to evaluate the professional guarantee of newly designed courses. The commission must make sure that courses are guaranteed by proper departments, minimizing the number of redundant courses.

**The System of Financing the Educational Activities**

The above-mentioned database includes all available data on the structure of teaching; therefore, departmental budgets are based on these data. This means that pedagogical performance provided by a department of a specific faculty to another faculty is regarded as self-service (not an external activity). The respective amount is transferred from one faculty to another under the clearing system.

**QUALITY ASSURANCE SYSTEM**

**Objectives**

The goal of the internal evaluation system is to support the continuous quality enhancement of the educational process in order to meet the demands of the University’s customers, i.e. the state, employers of University graduates and so-called ‘internal customers’, including:
1. Students.

2. Departments providing guarantee for a specific branch of study (while lecturing for some courses in the branch of study is provided by other departments).

3. Faculties being provided by lecturing of some courses by other faculties.

The term ‘customer’ therefore designates an entity representing a component of the educational process, ordering a specific form of training. The proposed system should determine to what extent the requirements of the customer have been met. It should also find out the customer’s views of the educational process. The system being discussed represents significant feedback in this regard.

From the viewpoint of the state, the system must match further development of the University with the needs of society.

From the viewpoint of employers, the contents of lecturing must be matched with practical needs.

From the viewpoint of students, the system should concentrate on enhancing the quality of the technical contents of specific courses, teaching methods (communication between students and lecturers, pedagogical method, professional level), technical and material resources for teaching (equipment of lecture halls, laboratories, libraries, textbooks, etc.), and support services and activities (study affairs departments, libraries, Computing and Information Centre, halls of residence, cafeterias, etc.).

From the viewpoint of departments and faculties, the system should clarify the scope of authority and relations between individual departments, improve links between courses, adjust the contents of courses to the objectives of specific study programmes and support systematic communication between guarantors of interconnected courses.

The Structure

Levels  The specific responsibility of instructors, academic officials and other employees must be clearly defined in order to guarantee efficient operation of the educational-process quality assurance system. The system is divided into four levels, with the effect of dividing responsibilities between specific University employees:

University Level  The quality of education at the university level is within the remit of the Rector (within the framework of his general responsibility for directing the University).
Faculty Level The Dean of the Faculty is responsible for the level and quality of all courses internally accredited by the University and guaranteed by departments of the pertinent faculty. The Dean is also responsible for the quality of obligatory courses and obligatory electives included in curricula of other faculties (being responsible to the Dean of such a faculty) as well as support activities performed by the Faculty.

Department Level The head of a department is responsible for the level and quality of all courses guaranteed by the department (being responsible to the Dean of the pertinent Faculty).

Course Level The guarantor of a course is responsible for the quality of a specific course (being responsible to the person that has entrusted him/her with guaranteeing the course – the head of a department, or the Dean).

FUNDAMENTAL TERMS To facilitate understanding of the quality assurance system being presented, we should define the meaning of some fundamental terms used below.

An inspection event entails collection and evaluation of information. Information can be acquired from students, University graduates, and employers. Various questionnaires, meetings and brainstorming methods can be used to collect information.

The Requester of an inspection event is represented by a University employee responsible for the quality of education at the pertinent sector assigned to this person. In conformity with the above-described system of organisation and responsibilities, the Requester can be represented by the Rector (or the vice-rector for pedagogical activities), a Dean, the head of a department or a guarantor of a course.

The Elaborator of an inspection event is represented by an employee authorised by the Requester. Tasks of the elaborator include information collection, processing, and delivery to the Requester of an inspection event.

The Course represents a basic unit of education. A course within the credit system at UWB is described by a code, the number of credits and other attributes constituting a part of course syllabus (the contents of lectures, the number of lectures/seminars per week, summer/winter semester, required conditions for passing the course). The contents of a course is drafted by the guarantor of the course, and submitted to the head of the department who can make changes and assume responsibility for the draft. The draft of a course is then subject to approval proceedings according to the Study and Examination Rules of the University (the draft must be approved by
the Dean, the accreditation authority of the Faculty, and the accreditation commission of the University).

*A course set* represents a collection of interconnected courses representing an integrated information base for students. Such a collection must be monitored and developed as a whole. Specialist commissions of faculties assess logical connections between courses and create new courses whenever appropriate (such as mathematics, mechanical engineering technology, etc.), appointing guarantors of such courses.

*A study programme* defines the contents, schedule and factual limitation of studies; it can be divided into branches of study. Study programmes are defined in Article 44 of the Act No. 111/1998 of the Higher Education Act. It specifies graduate profile, type, form and length of studies, succession of courses year by year, credit evaluation of courses, conditions for passing individual courses (examination, credit) and necessary personal guarantees. Each study programme is subject to approval by the scientific board of the faculty and the academic senate of the faculty. Accreditation of a study programme is granted by the Ministry of Education of the Czech Republic. The design of study programmes forming the graduate profile is proposed by external advisors from other universities, major potential employers, and graduates with several years of practical experience.

*The Cycle*

The quality assurance system is based on the periodic recurrence of individual tasks performed at required intervals. Intervals are defined by the Requester according to the relevance of the problem in the area being evaluated.

At the introductory stage it might be useful to run the cycle in shorter intervals in order to detect weak points of the area being evaluated. The Requester can adjust the interval according to the number and relevance of problems detected. Such an interval should be set, so that all problems can be detected and proper measures taken.

The cycle includes six phases:

1. Inspection event.
2. Self-evaluation.
3. External consultation.
4. Overall evaluation.
5. Recommendations.
Tasks of the Requester performed at each cycle:

- Define the scope of the event (courses, course sets, study programmes, etc.).
- Define the set of informants (students, other potential internal customers, external evaluators, etc.).
- Define the form and extent of questionnaires or other means of inspection.
- Appoint the elaborator.
- Obtain results of the inspection event.
- Get the pertinent employee acquainted with the results of the inspection event.
- Decide on the scope and method of making results of the inspection event public.

The requester may request outcomes of previous inspection events.

Inspection events include collection of data and evaluation of these data.

There are two types of data being collected – data collected prior to each evaluation, and data that are stable by nature, being updated as needed.

Data collected at each inspection event can be gathered by means of questionnaires distributed to students, employers and graduates, by means of meetings or brainstorming methods.

Student Questionnaires  

Due to the large number of students filling out the questionnaires and the variability of requesters, the system must be efficient and flexible. Therefore, the University has prepared a system of unified questionnaires for basic inspection events, allowing automatic processing of results.

There are two basic types of student questionnaires – paper and computer forms. The advantage of paper forms consists in a high rate of return and the possibility of explaining the objectives and meaning of the enquiry. Processing of paper forms can be time-consuming, though. Data collection by means of the computer network is advantageous due to automatic (i.e. fast) data processing. However, the rate of return is very low and there is no contact between teachers and students in the course of inquiry.

Upon considering all the pros and cons, we have decided to combine both forms of questionnaire. We will use traditional paper questionnaires of such a form that will allow computer processing by means of scanning.
devices and special-purpose software. Results will be analysed by various methods in order to increase their validity. A central department will be established for the whole University, creating a very efficient as well as cost-effective data evaluation system.

Great attention is paid to the scale of the evaluation, the number, and selection of questions. These problems are discussed with psychologists specialising in this field. Sets of questions included in questionnaires will consist of obligatory questions on the one hand, and questions put at the discretion of the requester on the other hand. This approach assures the required flexibility of questions put by individual departments. Sets of questions will be stored in a database, being supplemented continuously. This will facilitate forming various types of students questionnaires for individual inspection events.

**Employer Questionnaires** Information on the practical utilisation of final-year courses is very useful. A guarantor of a course or a set of courses (or the head of a department) can ask businesses to fill out a questionnaire that has been designed in compliance with the focus of a specific branch of study. Information so collected will be gathered by the guarantor of the branch of study and used for its overall evaluation.

**Graduate Questionnaires** Questionnaires submitted to graduates are used to get feedback on the utilisation of knowledge acquired at the University in real life, or possibly a lack of knowledge of some kind. Methods of acquiring such information and periods are at the discretion of the dean or head of the department guaranteeing the branch of study.

Data updated on an as-needed basis (course syllabi, data on lecturers, conditions of instruction, support activities and services) can be acquired from various sources (study affairs database, RIF database, or possibly stand-alone inspection events).

**Self-evaluation** The educational-process quality assurance system serves employees of the university in the first place, as feedback from their customers. Such feedback can inform of inadequate work and motivate for work improvements. Each employee being evaluated will be acquainted with the results of inspection events, having the opportunity to think about the causes of deficiencies, look for corrective measures and improve one’s work.

**External counselling** Experts coming from other faculties, research institutes and business can bring very helpful incentives for improving the
educational process. Selection and invitation of these experts is up to the requester of an inspection event.

**OVERALL EVALUATION**  An overall evaluation takes place at a work meeting with the participation of all stakeholders in the field being evaluated (lecturers, students representatives, possibly external experts). Such meetings are summoned by the requester of the evaluation.

**RECOMMENDATIONS**  Recommendations should lead to removing deficiencies and improving the quality of education. A proposal of recommendations is up to the requester. The requester must take into account all suggestions of the overall evaluation and realistic potential of the department.

**IMPLEMENTATION OF RECOMMENDATIONS**  The requester is responsible for implementing recommendations. The results are checked at the next overall evaluation.

**DOCUMENTATION**

A report on activities within the educational quality assurance system in an academic year is included in annual reports of faculties as well as the University. It entails an overall evaluation of the course of inspection events, conclusions made and their implementation. Correctness and completeness of documentation are inspected by a responsible employee at the pertinent level. Information and database support for all departments is guaranteed by the rector’s office at the University level.

**SYSTEM CO–ORDINATION**

A special commission will be established at **UWB** in order to administer and co–ordinate the inspection process, and enhance the quality of the educational process. The statute, composition and appointment method of the commission are defined by the rector. Administrative tasks of the commission will be provided by the vice-rector for pedagogical activities responsible for the quality of education at the University. Administrative tasks will also include technical processing, statistical evaluation and recording of inspection events. The commission will have across to information from all inspection events. Data processed by the commission are deemed confidential. Based on the results of evaluation, the commission will be authorised to suggest measures to responsible officials with the aim of improving the quality of their work.
The commission will devise and publish an annual report containing general information on the activities of the commission, summarising inspection events performed, conclusions made and implementation of these conclusions. Such a report will constitute a part of the annual report of the University.

The commission will be established as an advisory and initiative body to the Rector.

CONCLUSION

Educational-process quality assurance system presented herein should serve to improve lecturer-student communication as well as communication with other employees of the University—personnel of study affairs departments, dean’s offices, libraries, halls of residence and cafeterias. The system will facilitate transfer of information from students to University employees, representing important feedback.

Efficient use of the system is dependent on its understanding by University students and employees as well as an adequate interpretation of results. Therefore, it is necessary to explain the whole system and choose proper methods for evaluating the results of inspection events and making them public. Students must be assured that their evaluation of lecturing and other services, as well as their opinion, is taken into account. We must keep in view that students cannot have a detailed knowledge of all conditions at faculties and departments and therefore their opinion can be largely subjective. Hence, we must look for a balanced view.

Both parties must adopt the quality assurance system, being sure that it can serve them well if used properly. Otherwise, all tasks associated with operating the system will represent an unnecessary burden for students as well as University employees. Explaining the objectives and function of the quality assurance system involves a process, not a one-time task.

We can often hear that establishing a brand new education-quality assurance system is a redundant task, since ISO 9000 quality assurance standards could be used. The educational system, though, is much more complex than production, because of the significant role of the human factor. In addition, we must not forget that the University student represents a product and a customer at the same time.

We are aware of all the difficulties associated with an education quality assurance system. We were trying to reduce the burden put on students and lecturers in connection with using such a system. We select carefully the number and type of questions, the scale of evaluation, data evaluation
methods and graphical representation of results. The question of making results public is also a very sensitive one. We kept in mind that we were creating a system that would be used by University teachers, other employees of the University, students, i.e. people with a high degree of responsibility and good approach to their own work. We are aware that system will undergo further development, incorporating new elements, so that it will continue to serve well its original purpose.