# QUALITY MANAGEMENT IN HIGHER EDUCATION

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*Abstract: Being an indicator for organisational performance, the quality of education should be the primary goal of all educational institutions, including universities. By definition quality is the extent to which a product or service meets a complex of requirements. Thus universities should aspire to satisfy the requirements of their students, staff, stake-holders, society, and applicable regulatory requirements. The EU is aiming to become the world leader in terms of the quality of its education and training systems. As a future member country Bulgaria takes an active part in the Bologna, Lisbon and Copenhagen processes.*
*Keywords: quality management, higher education, European requirements, ISO 9001:2000*

## Introduction

Quality management in education is a vital milestone in the development of the modern and future European society. Regarded as 'one of the most conservative systems' education has reacted relatively slowly to changes 'in the ouside life'. Nevertheless it has proved to be a must in the progress of any nation. The cohesion of the requirements of students, society and university staff is the foundation of a sustainable knowledge spiral to quality education. In order to examine the problem thoroughly one should study the motivation of the parties involved in the process.

For better understanding of quality one should be faliliar with its definition. While several interpretations may be listed here, one particular stands out as the most widely acknowledged. In the ISO 9000 context, the standardized definition of quality refers to all those features of a product (or service) which satisfy the customer's requirements and comply with any regulations applicable to those products or services [5].

The ISO 9000 family of international standards is primarily concerned with "quality management". This means what the organization does to fulfil:

➢ the customer's quality requirements, and
➢ applicable regulatory requirements, while aiming to
➢ enhance customer satisfaction, and
➢ achieve continual improvement of its performance in pursuit of these objectives.

From a historical perspective quality has passed through several stages:

➢ **quality control** - processes are monitored to ensure that all quality requirements are being met and performance problems are solved;

➢ **quality assurance** covers all activities from design, development, production, installation, servicing and documentation. It includes the regulation of the quality of raw materials, assemblies, products and components; services related to production; and management, production, and inspection processes;

➢ **quality management** includes all the activities that managers carry out in an effort to implement their quality policy. These activities include quality planning, quality control, quality assurance, and quality improvement;

➢ **total quality management (TQM)** is defined as a management approach that aims to achieve and sustain long-term organizational success by encouraging employee feedback and participation, satisfying customer needs and expectations, respecting societal values and beliefs, and obeying governmental statutes and regulations [1].

S.K.Saxena gives another interesting interpretation of quality [2]. He envisions quality as a cross-section of three sub-systems- utility, worth and availability. The Venn diagram (see Fig.1) demostrates that one of the properties of quality is the intellectual worth of the product or service. In other words quality is the customer's personal perception of perfection.
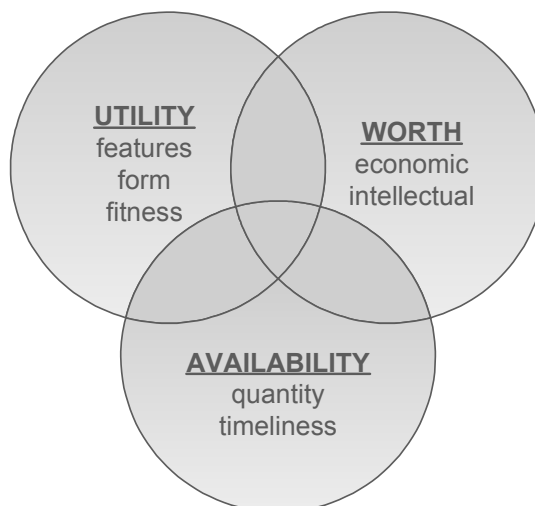


Figure1 Graphical definition of quality

**Explanation**

The question of the quality of education arises periodically. The causes for this discussion may vary, but it always attracts public attention. There is no doubt that the requirements for better education are always a step ahead of the development of the educational system. The European Association for Quality Assurance (EAQA) [3] is also struggling to catch up with the developments in the theory of quality and adhere to quality management. It has defined measurable criateria for the quality of education: policy and procedures for quality assurance; approval, monitoring and periodic review of programmes and awards; assessment of students; quality assurance of teaching staff; learning resources and student support; information systems, and public information.

The ISO 9001:2000 standard requires that all activities within an organisation are to be understood and implemented as a system of interconnected processes.

According to Deming's Cycle, the management of a process includes four crucial steps: Plan – Do – Check – Action, known as the PDCA cycle (see Fig.2).

**Planning (Set-up)** is the first step and depending on the scope and time scale must include one or more of the following: definition of the quality policy of the university, setting up long or short term goals and objectives, promotion, cooperation with other universities, faculties, departments, etc.

**Do (Implementation)** is the next step when specific activities have to be carried out in order to achieved the planned goals and objectives through teaching/learning, training, combination of internal quality systems with external practices, etc. Developing ownership and personal motivation amongst staff, trainers and trainees, are important preconditions to achieve coherence between goals, objectives and implementation.

**Check (Evaluation and Assesment)** - this phase consists of two parts- collection and processing of data and the discussions on the results which have been achieved. An important challenge is to avoid 'the biggest sin' of documented management systems, i.e. the collection of useless data. It may take a lot of resources- time, manpower, and storage

facilities in order to process the bulk of information that can be gathered in just one month of internal audits.

**Action (Feedback and Procedures for Change)** Since quality management a continuous and systematic process it must undergo constant review combining self-assessment with evaluation by an external body, processing feed-back and organising procedures for change.

Depending on the outcome of the third phase (Check) a process can be either 'good' or conforming to the requirements, or non-conforming or defective. A set of actions should be prescribed both for 'high' and 'low' quality processes. If there is a significant non-conformance immediate action must be taken. Preventive actions are suggested when a problem is reoccurring. Universities can apply benchmarking, good practices and innovative methods in order to improve their chances for prosperity.
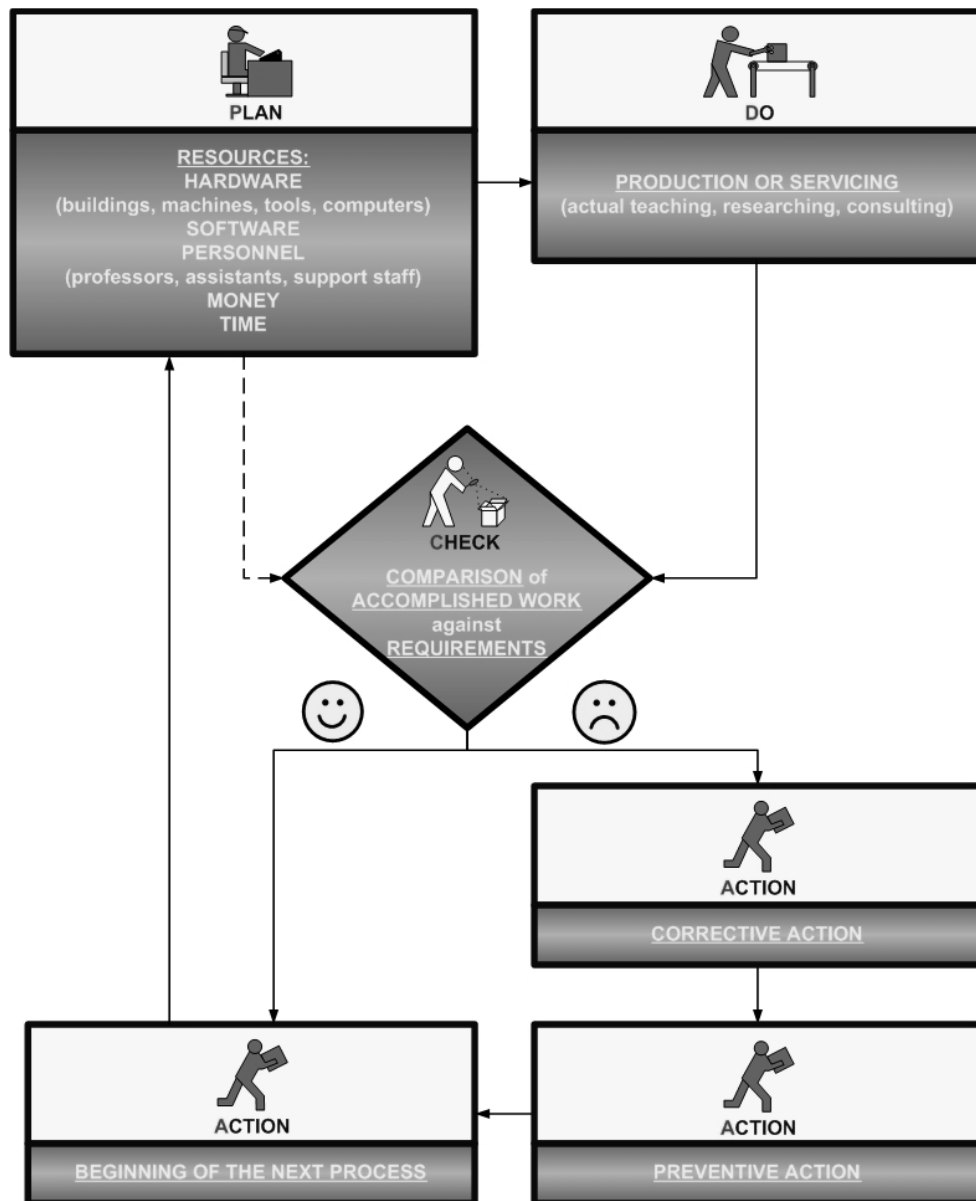


Figure 2 PDCA cycle in higher education

In order to achieve continual improvement univestities should recognise their 'customers', regard them as the primary reason for their existence and do everything possible to maintain good relationships with students, staff, companies, and society in general (see Fig.3).



Figure 3 Parties involved in the quality management of education

**Students**

The primary customers of schools, colleges and universities are students. The educational system currently implemented in Bulgaria divides the university students into three types of degrees- bachelor, master, and doctorate. In order to esimate the students' perception of the quality of education several surveys have been conducted recently and in the past. The objectiveness of the surveys is guaranteed by their anonymity. The two central questions were:

➢ What is your reason for appying?
➢ What are your expectations for your future after graduation?

The answers varied significantlly between bachelor, master and doctorate degree students of the University of Rousse.

The most frequent reason for bachelor students to apply and study in a university is to continue their high school or college education. Among the rest of the answers are: future better realisation, accessibility and contacts, as well as some relatively uncommon reasons- avoiding military service (for male students), possibilities for participation in student exchange programs (see Table 1) [4] and summer work in EU countries and the USA.

Table 1
Actual number of outgoing/incoming ERASMUS
students for the specified academic year

| | OUTGOING | | | INCOMING | | |
|---|---|---|---|---|---|---|
| | **2002/03** | **2003/04** | **2004/05** | **2002/03** | **2003/04** | **2004/05** |
| **TOTAL IN EUROPE** | 123957 | 135586 | 144037 | 123957 | 135453 | 144037 |
| **BULGARIA** | 612 | 751 | 779 | 67 | 89 | 179 |

Master degree students expect to gain competitive advantage by furthering their education, as well to specialise in a field of their interest. Some of them point out their current job placement as the main reason for their interest in the specific programme.

The doctorate students are mainly pursuing the highest educational degree in order to be able to apply for scientific work in universities or scientific institutes, or to be hired by the R&D departments of foreign-owned companies.

### Universities

The University of Rousse 'Angel Kanchev' is one of the accredited universities in Bulgaria. As part of the European orientation of the university it has been certified by BVQI for being in accordance with the requirements of ISO 9001:2000. With its 60 years of continued success the University of Rousse has policies and staff that attest for its good standing.

Nevertheless the staff are looking for ways to improve their performance. In the past few years several steps have been taken towards better satisfaction of all participants in definig the quality of education:

➢ An additional Vice Rector is responsible for the Quality Managent System of the university;

➢ Research & Development Sector, participating in national and international scientific projects;

➢ Several centers have been established: University Computing and Information Services Center, Bulgarian-Romanian Interuniversity Europe Center (BRIE), Center for Continuing Education and Career Development, and Center for International Cooperation and Mobility.

➢ ECTS information package for facilitation of the transfer and mobility of students;

➢ Close relationships with businesses from the Rousse region, as well as nationwide companies and professional organisations;

➢ Development of web-based teaching materials;

➢ Better multimedia presentation of lectures, seminars, etc.;

➢ Participation of students in scientific forums.

### Society

Even though society may seem a remote factor in defining the quality of education it serves as a wider base for ideas and improvements. In a broader sense society includes just about everyone- starting from students and administration, continuing with the parents of students, and last but not least- the university professors and instructors.

With their impressions of their student life, curriculum and job placement possibilities students affect the choice of many other potential university applicants. Naturally being that close to the university opens the students' eyes to a reality that may be different from their initial expectations. This is where a good quality measurement system would be most suitable- to estimate the 'customer satisfaction', so that any future students would have better experience and will improve the image of the university.

The parents of the students may influence their choice of profession, specialisation, or even university. More and more parents of young adults hold bachelor and/or master degrees and expect their children to follow their example. In other words society may shape the mindset of prospect and current students. As a result it may eventually affect the inputs for the process of education.

**Companies**

Companies make use of the outputs of the process of education. As a consequence of the growing needs of the market, companies seek better-educated staff at a lower price. Being pressured by their competitors they hire more competent people who can meet the requirements for more than a single position.

According to ISO 9001:2000 staff competence depends on four major factors-education, training, skills and experience. Education is the basis of that scheme. If a person lacks this first step, it would take a lot of effort, time and money to fill that void. This is the reason schools, colleges and universities are so important for businesses of any industry.

The current trend in Bulgaria shows increased interest in the cooperation between businesses and educational institutions. Having gained autonomy universities also have limited sources of funding. In order to keep up with cutting-edge technologies, devices and methods, some universities and their departments receive specialized equipment in exchange for advertising companies' products.

On the other hand businesses supply scholarships, internships and thesis topics for gifted students. Such cooperation is of mutual interest and has good perspectives for the future. In the case of the University of Rousse the role of the mediator in those activities is the Center for Career Development.

**Government and EU**

The Bulgarian Parliament has passed several laws that facilitate the improvement of education including the Law for Encouragement of Scientific Research, the Law for Higher Education, and the Law for Professional Education and Training. Some new clauses in those laws require:

➢ quality assurance of education and scientific research using an internal system for assessment and assurance of the quality of education and that of the academic staff, including studies of the opinion of students;

➢ quality control, assurance and management of education, professional fields and academic staff;

➢ partial education of Bulgarian and foreign students in a university, faculty or specialization of their choice;

➢ transfer of students from one university, faculty or specialization to another;

➢ choice of a professor and/or instructor when more than one professor teaches the same subject;

➢ implementation of the European Credit Transfer System (ECTS) for assessment of the knowledge and skills of students.

If one takes into consideration the nearing EU membership of Bulgaria, the decisions of the Government should be interpreted in the context of the EU laws and regulations.

It must be noted that chapters 17-'Science and Scientific Research' and 18-'Education and Training' are among the first ones that confirm Bulgaria's deserved place in the EU.

The exchange of Good Practices (GP) in education between the Bulgarian Government and other countries is performed by the 'European Integration and Bilateral Cooperation' Department of the Ministry of Education [6]. One of the specific tasks of that department is the coordination of the participation of Bulgaria in the Bologna Process (since 19 June 1999) and implementation of the Lisbon strategy (2000).

On 14 July 2004, the European Commission adopted a new Integrated Action Programme (IAP) in the field of lifelong learning. The aim of the new IAP is '*to contribute through lifelong learning to the development of the Community as an advanced knowledge society, with sustainable economic development, more and better jobs and greater social*

*cohesion. It aims to foster interaction, cooperation and mobility between education and training systems within the Community, so that they become a world quality reference*'.

**Conclusion**

Quality management in education is a rather comlex topic. What makes it such is the number of the parties involved as well as the intensity of changes in modern life.

What is positive about the Bulgarian educational system is the ISO 9001:2000 certification of some universities, complieance with European standards and guidelines, and its relative accessibility due to lower tuition costs compared to other European countries.

The fact that there is no Bulgarian university in the top rankings of European higher schools is a serious signal for corrective actions. In the highly competitive knowledge sphere only the fittest, best prepared and adaptable universities will survive.

If educators apply TQM principles they would plan more acurately, perform better, estimate their achievements and take all necessary actions in order to prosper and stay focused on excellence.

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