THEORETICAL ASPECTS OF THE ASSESSMENT OF QUALITY IN HIGHER EDUCATION

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ABSTRACT
A review is made of the sources defining the term quality both in its general form and when applied specifically to the area of education. The role of the state educational requirements and standards for educational content is commented, and the need for uniform criteria for assessment of the quality of education is considered. Assessment and evaluation are the key to the process of improving the quality of education. This is one of the most reliable ways of identifying problems concerning the educational system. The question for the development of adequate approaches to assess the quality of higher medical education in Bulgaria is placed.

Keywords: quality of higher medical education, assessment, evaluation criteria

Quality is an extremely common term, used anywhere and for any reason, not only in everyday life but also in science and education. But what exactly does it mean?

The term comes from Latin (qualitas), meaning property, attribute. According to EN ISO 9000:2007, quality is defined as "Extent to which a set of inherent characteristics fulfill requirements".

Different authors at different times have given definitions according to their own vision, which shows one of the essential characteristics of quality - its subjective nature. Here's how the leaders in this field identify and interpret the concept of quality:

1. Philip B. Crosby: "**Conformance to requirements**" The requirements may not fully represent customer expectations. (1)
2. Joseph M. Juran: "**Fitness for use**" Fitness is defined by the customer (2)
3. Noriaki Kano and others, present a two-dimensional model of quality: "**must-be quality**" and "**attractive quality**". The former is near to "fitness for use" and the latter is what the customer would love, but has not yet thought about. Supporters characterize this model more succinctly as: "**Products and services that meet or exceed customers' expectations**." (3)
4. Gerald M. Weinberg: "**Value to some person**" (4)
5. Robert Pirsig: "**The result of care**" (5)
6. Six Sigma: "**Number of defects per million opportunities**" (Management strategy of the business, originally developed by Motorola) (6)
7. American Society for Quality: "A subjective term for which each person has his or her own definition. In technical usage, quality can have two meanings (7)
   a. **The characteristics of a product or service that bear on its ability to satisfy stated or implied needs**;
   b. **A product or service free of deficiencies**"
8. Peter Drucker: "**Quality in a product or service is not what the supplier puts in. It is what the customer gets out and is willing to pay for**." (8)
9. W. Edwards Deming: concentrating on "**the efficient production of the quality that the market expects**" and he linked quality and management: "Costs go down

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and productivity goes up as improvement of quality is accomplished by better management of design, engineering, testing and by improvement of processes." (9)

10. **Quality is determined by the degree to which the product or service successfully serve the objectives of the user during use, not just in the selling process** - Yuri Alkalay (10)

Philosophy and common sense tend to look at quality as related to subjective perception or objective facts. Quality of product or service is a concept which refers to understanding the extent to which they meet customer expectations. Quality has no specific meaning unless related to a specific function and/or object, and in this context it is a perceptible, subjective, and arbitrary attribute. A fundamental feature of the modern understanding of quality is to create AND-based benefits, not OR-based ones.

At the start of the 21st century the most important characteristic of quality is that it is determined entirely by the end user, and is based on the assessment of the customer experience with the product or service. Customer experience is the sum of all the interfaces that the client has with a product or service, and is by definition a combination of all of them.

Quality can be seen as the distinct characteristics and qualities of a person, object, or process, which can increase the subject's features or reduce its level of achievement or superiority. When used in conjunction with management, the term may be defined as "**conforming to certain specifications**".

Quality can be used as a measuring device of any system, as well as to estimate the subjects regarded as credible and capable of "high quality" and vice versa - individuals who are regarded as useless or "poor". The term "quality" is used most often in a positive connotation. Its antonym can be poorness, poor quality, inefficiency, etc.

Online encyclopedias and dictionaries such as One Look Dictionary, Encarta ® World English Dictionary, Compact Oxford English Dictionary, and Glossary of American Society for Quality define the term quality as (11, 12, 13, 14):

- An essential and distinguishing attribute of something or someone;
- The degree of excellence of something as measured against other similar things;
- A characteristic property that defines the apparent individual nature of something;
- A degree or grade of excellence or worth;
- General excellence: the highest or finest standard, superior grade;
- Set of functions and features of a product or service that suggests its ability to meet the established or implied needs;
- Essential identifying nature or character of somebody or something;
- A subjective term for which each person or sector has its own definition. In technical usage, quality can have two meanings: 1. the characteristics of a product or service that bear on its ability to satisfy stated or implied needs; 2. a product or service free of deficiencies.

Quality and education
Education is a conscious activity of people seeking improvement in a specific area. It covers teaching and learning of scientific knowledge and specific skills, as well as a transmission of cultural traditions between generations. Education is the foundation of economic progress and is therefore an organized activity of society. Market economy forces individuals to become self-improved and educated, and to acquire a certain level of education.

The term **education** refers to (15):
- educating: the imparting and acquiring of knowledge through teaching and learning, especially at a school or a similar institution;
- a system for educating people: the educational system of a society;
- knowledge: the knowledge or skills gained through education;
- learning experience: the experience through which information is gained;
- a result of good upbringing (especially knowledge of correct, appropriate social behavior).

State educational requirements and standards

Due to the extreme importance of education, in each country there are state educational requirements, which define the professional competencies required from educational institutions. After their adoption, they become mandatory for all institutions that have the right to organize training and teaching (16).

State educational requirements determine the necessary levels of educational and vocational training (17). They are produced by specialists and are necessary to prevent gaps in the learning process, to improve the objectivity of assessment activities, and to guide the work of educational service providers. Curriculum standards based on state requirements are documents developed by a consensus of science, technology and production experience (18). Thus created, educational standards allow for greater interoperability and communication between education systems in different countries, as well as the exchange of specialists.

Curriculum standard is defined as a "scientifically and practically justified level of implementation of the fundamental, most typical components of the curriculum needed to complete a certain level of education, reflected in the overall structure of relations (motivation and competence), knowledge and skills, and strategies for cognitive and practical activities, which corresponds to the system of education goals" (19).

Adopting standards of criteria on the outcome of medical education allows it to be assessed, and to draw conclusions about the actual level of quality. In the quality science this is known as a "PDCA" cycle or a Deming cycle**, and contains the following activities: **Plan, Do, Check, Act**.

The Deming cycle indicates that maintaining or enhancing acceptable quality can happen only if it is administered continuously (20). Once set, the standards in the field of medical education are a prerequisite for achieving high quality education. Of course, they are not sufficient, and there is a need for assessing, measuring, and evaluating the achieved quality.

Assessment and Evaluation

The assessment process is used to measure performance or effectiveness of a system or its elements. In the context of education and teaching, assessment is a systematic method of collecting information about the impact and effectiveness of teaching and learning. Assessment is often divided into formative and summative categories for the purpose of considering different objectives for assessment practices.

- **Summative assessment** is generally carried out at the end of a course or project. In an educational setting, summative assessments are typically used to assign students a course grade. **Summative assessments are evaluative**.

- **Formative assessment** is generally carried out throughout a course or project. Formative assessment, also referred to as "educative assessment," is used to aid learning. In an educational setting, formative assessment might be a teacher (or peer) or the learner, providing feedback on a student's work, and would not necessarily be used for grading purposes. **Formative assessments are diagnostic**.

It is important to notice that the final purposes and assessment practice in education depends on the **theoretical framework** of the practitioners and researchers, their assumptions and beliefs about the nature of human mind, the origin of knowledge and the process of learning.

Summative and formative assessments are often referred to in a learning context **as assessment of learning** and **assessment for learning** respectively. Assessments of learning is generally summative in nature and intended to measure learning outcomes and report those outcomes to students, parents, and administrators. Assessment of learning generally occurs at the conclusion of a class, course, semester, or academic year. Assessment for learning is generally formative in nature and is used by teachers to consider approaches to teaching and next steps for individual learners and the class (21).

Educational evaluation is the evaluation process of characterizing and estimating some aspects of an educational process. There are two common purposes in educational. Educational institutions usually require evaluation data to demonstrate effectiveness to funders and other stakeholders, and to provide a measure of performance for marketing purposes. Educational evaluation is also a professional activity that individual educators need to undertake if they intend to continuously review and enhance the learning they make efforts to facilitate.

Quality evaluation includes the process of assessment, grading, and measurement to determine the concept, development, production, process of creation, maintenance, and documentation. Assessing the quality determines any structured activity that leads to assessing the quality of the learning process and acquiring knowledge and/or research, while at the same time performing self evaluation or receiving one from an outside expert.

The attention and efforts of education specialists in general and particularly in medical education are towards the quality of the educational process as a whole and with respect to its results. Experts recognize the importance of respecting the applied strategies and the role of regulatory mechanisms, such as: choice of financial methods, assessing and certification procedures, various regulatory and incentive structures. The interest is twofold - to achieve a better understanding of the validity of education in its empirically observed specific aspects, and to help define appropriate strategies for change. The interest of improving the quality of medical education gradually moves its focus from inputs to outputs in terms of learning outcomes achieved.

Over the years, assessment and evaluation become a key to the process of improving the quality of education. It is one of the most reliable ways of identifying problems concerning the educational system, a specific school, or an individual student. However, assessment requires answers to the questions of what exactly should be measured, and how to do it. There are

reasons why measuring the change of quality over time is not always possible. Another crucial point is what should be done with the results of an evaluation. Different views exist on what is the most responsible way to use them. These questions have no easy answers (22).

William E. Deming (23), a leading specialist in quality, stresses the importance of quality assurance in education: "It is not enough to just do your best or work hard. You must know what to work on".

The evaluation of the quality of education is an integral part of the mission of each university. University departments of quality assurance focus on monitoring the quality and strict adherence to assessment systems developed by the university. The purpose of such a system for assessing and maintaining the quality of teaching is to demonstrate the capabilities of the respective university to provide an educational process and a scientific product, so to satisfy the requirements of users and stakeholders. The purpose of these systems includes continuous improvement and reduction of discrepancies. An integral element of the system for maintaining and improving the quality of education is to create a reliable basis for effective management decisions and self monitoring of teachers on issues related to the quality of teaching.

In the field of evaluation, and in particular educational evaluation, the Joint Committee on Standards for Educational Evaluation (24) has published three sets of standards for evaluations. "The Personnel Evaluation Standards" was published in 1988, The Program Evaluation Standards was published in 1994, and The Student Evaluation Standards (25) was published in 2003.

Each publication presents and elaborates a set of standards for use in a variety of educational settings. The standards provide guidelines for designing, implementing, assessing and improving the identified form of evaluation.

Standards Statements for Student Evaluation

The **propriety standards** help ensure that student evaluations will be conducted legally, ethically and with due regard for the well-being of the students being evaluated and other people affected by the evaluation results. They include:

- Service to students - promote sound education principles, fulfillment of institutional missions, and effective student work, so that educational needs of students are served.
- Appropriate policies and procedures - written policies and procedures should be developed, implemented, and made available, so that evaluations are consistent, equitable, and fair.
- Access to evaluation information - access to student's evaluation information should be provided, but limited to the student and others with established legitimate permission to view the information, so that confidentiality is maintained and privacy protected.
- Treatment of students - students should be treated with respect in all aspects of the evaluation process, so that their dignity and opportunities for educational development are enhanced.
- Rights of students - evaluations of student should be consistent with applicable laws and basic principles of fairness and human rights, so that students' rights and welfare are protected.
- Balanced evaluation - evaluations of students should provide information that identifies both strengths and weaknesses, so that strengths can be built upon and problem areas addressed.

The **utility standards** help ensure that student evaluations are useful - informative, timely, and influential. Evaluations should be c**onstructive** – to result in educational decisions that are in the best interest of the student; **carefully focused and sufficiently comprehensive**, so that evaluation questions can be fully answered and the needs of student addressed; teachers and others who evaluate students should have the necessary knowledge and skills, so that evaluations are **carried out competently** and **the results can be used with**

confidence; to identify and justify the values used to judge student performance, so **that the bases for the evaluations are clear and defensible**. The users and uses of a student evaluation should be specified, so that evaluation appropriately **contributes to student learning and development**. Student evaluation reports should be **clear, timely, accurate, and relevant**, so that they are useful to students, their parents, and other legitimate users; should include procedures for follow-up, so that students, parents, and other legitimate users can understand the information and take appropriate follow-up actions.

The **feasibility standards** help ensure that student evaluations can be implemented as planned. Feasible evaluations are practical, diplomatic, and adequately supported.

The **accuracy standards** help ensure that a student evaluation will produce sound information about a student's learning and performance. Sound information leads to **valid interpretations** and is not open to misinterpretation; has **justifiable conclusions**, it is **defensible and meaningful**; evaluation procedures should provide **reliable information, free from bias**, so that conclusions can be fair. The information collected, processed, and reported about students should be **systematically reviewed, corrected as appropriate, and kept secure**, so that accurate judgments can be made. It should be **systematically and accurately analysed**, so that the purposes of the evaluation are effectively achieved. The evaluative conclusions about the student performance should be **explicitly justified**, so that the students, their parents, and others can have confidence in them. Student evaluation procedures should have an appropriate **follow-up** and should be **meta-evaluated**. (26)

The evaluation model for assessing the quality of medical education should include five key items:

1. Expectations and goals: expectations of various stakeholders, shared goals and policy objectives of the training.
2. System of organization: liability, management system, monitoring.

3. Resources: human resources and infrastructure.
4. Process of teaching: planning, models of presenting information, assistance, and services.
5. Results and analysis: results, analysis, and recommendations for improvement.

CONCLUSION

- There is a need to develop an internal quality assurance system based on self evaluation and external evaluation.
- The focus of assessment should be on the program for medical education, rather than on a separate entity (department, discipline)
- There is a need to develop good procedures and organizational structure to assess the quality of medical education.
- All attention to quality assurance and evaluation should be based on the importance of the medical university as an institution. This will enable universities to persuade the authorities in the quality of their programs and the effectiveness of the investment that society put in the higher medical education.

Using recognized and objective criteria and evaluation systems, institutions will be able to make reasonable justification in defense of the higher medical education as a public service and promote it as a crucial sector of society in a time of a global knowledge economy.

Quality assessment and evaluation are key points in education management. As the popular saying goes, "if you can't measure it, you can't manage it". Objective criteria of measuring the quality of medical education are vital for its successful management and improvement.

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