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The Integrated Quality Assurance Model in the Context of Online Education

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Abstract

The purpose of this paper is to elaborate an integrated model of education quality management in accordance with the present requirements of online education. From a conceptual viewpoint, we have noticed lately a re-dimensioning of the notions related to education quality, in a direct relation with the social preoccupations, regulations and norms. The models of quality assurance within the school organization constitute an essential factor for the successful performing of education. In accordance with the most recent requirements of online education, an integrated model for education quality assurance is framed. A quality culture ranging from the student-teacher interaction to the interaction mediated by the use of the technology specific to online learning is endorsed within the education system, with the aid of the integrated model.

Key words: Integrated approach; model; quality assurance; management; online education

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1. Introduction

According to Garbutt (1996), teachers nowadays have a multitude of opportunities to "borrow" the model of quality management implementing from other fields, such as those of industry or economy. Woods (1993) also suggests that schools can learn from the industry aspects concerning strategic planning, training, delivery and ethical standards. They can, thus, adopt the philosophy of quality management and use their resources efficiently, they can maximize opportunities for students, develop their staff and respond to the needs of the local community. Schools must be reformed and transformed from hierarchical organizations into organizations based on teamwork and problem solving, self-directed towards the endorsement of staff development, decision making, staff empowerment and authorization, appreciation acknowledgment and quality leadership on all levels. Moreover, school managers should act so as to eliminate fear, destruct barriers and make individuals believe that things can improve over and over.

Garbutt (1996) examined the way in which quality management can be transferred from industry to education. She concluded that the attitudes and priorities concerning quality seem to be similar. Quality requires commitment from the school principal in order to involve the staff in its application. Moreover, the staff should feel qualified to perform a quality educational act. In the school milieu, quality should be perceived as:

- an idea of making things better;
- a positive, optimistic attitude seeking progress;
- seeking excellence in every part of the system;
- a motivation system rewarding the achievements and positive policies concerning the curriculum and other school areas, including behavior;
- a generator of pride;
- continuous appreciation of the staff which offers useful feedback;
- staff encouragement to develop abilities and methodologies meant to improve the quality of teaching.

Freeman (1994) suggests another approach to quality in secondary schools, indicating four main principles. Firstly, the focus on students and learning, and secondly, quality which must reflect the needs of the parties involved, while insisting on the idea that the parties must be essential in the quality process. The interested parties are classified according to statutory responsibilities, responsible parties (such as governors), parties involved (teachers), employees and others (such as parents or students). The actors, according to Ribbins and Burridge (1992), can be classified as external (e.g., governors and parents) and internal (students and teachers). Thirdly, quality must be demonstrated. This means that it should be a process of public liberation, especially in public institutions. Fourthly, quality is related to feedback, in the sense that the final objective of quality is the creation of a learning organization. Consequently, quality itself is a server of all of the interested parties.

2. The conceptual framework of quality in education

One of the most cited definitions is that of David Gravin (1984), from the Harvard Business School. According to him, quality represents the ensemble of eight dimensions (cited in Basu, 2004, p. 5):

- *performance*, which refers to efficiency, for example the productiveness of the investments through which the product fulfils the expected purpose.
- *features* are basic attributes leading to performance achievement.
- *reliability* refers to the capacity of the product to function constantly during its life cycle.

- *conformity* refers to fulfilling the product specifications, usually defined through numerical values.
- *durability* shows the resistance of a product.
- *serviceability* indicates the easiness of repairments.
- *aesthetics* shows sensible features, such as aspect, sound, taste and smell.
- *perceived quality* is based on the customer's opinion.

Juran (in Condrea, 2006) defines quality as the performance of the product resulting from the customer satisfaction, the elimination of the product defects so as to prevent the customer's dissatisfaction. This definition integrates four main categories: design quality, conformity quality, service availability and domain. According to Juran, quality is approached through the inspection of three main components which he calls "the trilogy of quality". The first component refers to quality planning, a step which consists in identifying customers and their needs. Moreover, it is the point where the goods and services are designed in order to establish, at the same time, the level of quality and the cost of the objectives. The establishment and measurement of quality elements follows the establishment of quality standards. In the last step, the most important role is played by the increase of quality through the improvement of the process steps which lead to this outcome.

As a follow-up of Juran's trilogy, E. Ahmed (cited in Basu, 2004) describes the quality components in a universal approach of quality administration:

- *quality planning*, comprising several steps: establishing the quality objectives, identifying the customers, determining their needs, developing the product features which address the customers' needs, developing the processes which address the customers' needs, establishing a control process, transferring the plans into operating forces;
- *quality control*, which includes the following steps: assessing the current performance, comparing the current performance with the quality objectives, acting where there are differences. Juran used the term *quality control*, without referring to the post-production control, which is often ignored in organizations.
- *quality improvement*, which involves demonstrating the necessity of quality increase, establishing the infrastructure, identifying the improvement projects, forming the project team, providing the resources to the team, training and motivating the team through diagnosing the causes and encouraging remedies, establishing control in the achievement of objectives.

According to the social and historical context, there are different meanings of the concept of quality in education (Figure 1). Quality in education is, thus, measured through the students' level of value formation (Dogaru, 2011).

Figure 1. *The evolution of the concept of quality* (after Dogaru, 2011)

Ph. B. Crosby (1979) considers that quality integrates two representative steps: *absolute quality management* and *basic improvement elements*. Absolute quality management is discerned

by several features: quality solicits conformity with requirements rather than elegance; there are no quality-related problems; a job which is well done from the beginning is always cheaper; the only way of measuring performance is quality cost – the cost of unconformity; the only performance standard is "zero fault". According the C. Potié (2001), quality is defined as the "totality of product or service features which offers it the capability of satisfying the stated or explicit needs". The author believes that this definition is complete, as it is easily understandable, given our status of customers-consumers, making it easy to accept that it is all about needs satisfaction. Another approach in defining quality is given by O. Pruteanu et. al. (1998), according to which quality is the aptitude of the rightful usage of the money spent, along with the recognition of their value, all of this with the permanent consideration of the "customer satisfaction". It results, thus, that the *quality* term has a broader meaning: it comprises a technical or intrinsec feature strictly related to the characteristics of the product or service, a degree of utiliy which refers to the extent to which it satisfies the customers' needs; there is also, obviously, an economic component determined by the costs involved and the acquisition and use of the product (Ciobanu, 1999). The essence of quality consists in the providers' fulfilment of the customers' needs at an average cost. The ability of satisfying the customers' needs is vital not only for the organization, but also for the whole information system. Time and again, it has been demonstrated that the profitability of a service is directly proportional with its quality. Therefore, the performance of a company depends on the quality of its services.

In accordance with the ISO 8402 standard, quality represents "the totality of characteristics of an entity that bear upon its ability to satisfy stated and implied needs". In the context of this definition, an entity can be, for example, either a product or a service, a process, organization, system or whatever combination between these. Quality plays a fundamental role in the performance of the modern company by the means of two basic mechanisms, which lead to value creation: the first consists in obtaining a favorable position on the level of expenses (the best ratio between perceived quality and relative price), and the second involves offering products, the perceived quality of which is valued by the consumer through a higher relative price than what he/she is willing to pay. The ISO 9000: 2000 standard brings a new perspective on the quality-specific concepts. Quality is defined as the extent to which the totality of the implied characteristics satisfies the requirements. By requirement, we understand the need or expectation which is stated, implied or compulsory, while the characteristic is a distinctive physical, sense, behavioral, temporal or functional feature.

According to E. Condrea (2006, p. 11), the definitions of the term *quality* involve two aspects (Figure 2): a formal one, according to which quality consists in satisfying the user's needs, the fulfilment of the specified or complete requirements, and an informal one, according to which quality is something we seek, but which can never be fully implemented.

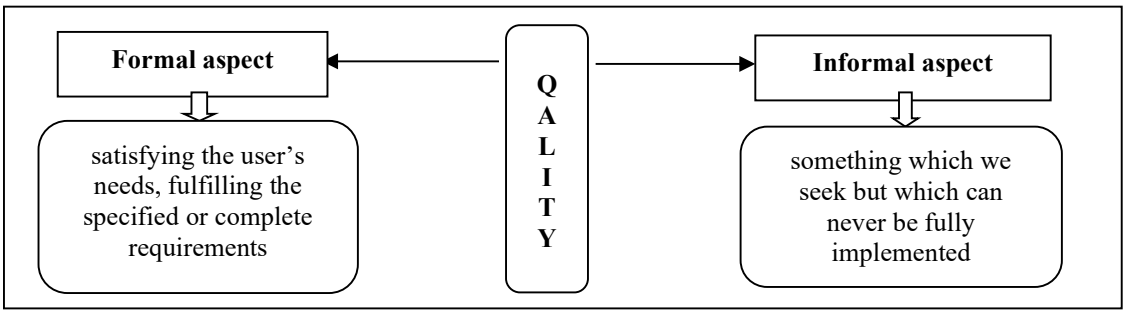

Figure 2. *Main aspects of the quality concept definitions*

Together with the basic concept of the paper, namely the term *quality*, complex concepts are defined, such as quality assurance in education, improvement of quality in education, evaluating quality in education, quality control in education. Although the existing links between quality and the variables that influence quality are difficult to interpret, they help to obtain a more complete understanding of the concept of quality.

Quality in education refers to an "ensemble of characteristics of a study programme and its provider, through which the expectation of the recipients is satisfied, together with the quality standards" (apud Iosifescu, 2011). In order to understand the notion of quality in education, several key concepts are analyzed: quality assurance in education, evaluation of quality in education, quality control in education, improvement of quality in education.

Quality assurance in education is a part of the school organization management, together with planning, control and improvement. It represents the "capacity of a providing organization to offer education programmes in accordance with the announced standards; it is carried out through an ensemble of actions which develop the institutional capacity of devising, planning and implementing study programmes" (apud Răduț-Taciu, Bocoș, Chiș, 2015, p. 530). Moreover, quality assurance in education is carried out through an ensemble of actions which develop the institutional capacity of devising, planning and implementing study programmes which encourage the recipients' trust that the education providing organization fulfils the standards of education. Creţu and Nicu (2009, p. 23) also mention that quality assurance in education is "carried out through an ensemble of actions which develop the institutional capacity of devising, planning and implementing study programmes". Quality assurance is a combination of several essential processes which are representative in the field of quality: a controlled turning to generate progress, a standardization of each new step on the basis of this cycle; and the fulfilment of the requirements concerning the quality of the educational products. The first step of quality assurance in education performed by a school is to identify the expectations of the students' parents. Usually, they desire a high quality of didactic activities with low costs and a curriculum adapted to the students' needs and interests. Teachers and educators need to recognize the primary role of families as initial educators, to encourage and stimulate the affection between parents and students. The second step in quality assurance in education seeks to address the expectations of the staff (Duşe, 2006, p. 120): "financial motivation, a promotion system which motivates performance and performance standards, together with evaluation criteria clearly defined for all sorts of activities". The final purpose of all quality assurance procedures is to improve quality. "The foundation and functioning of a quality assurance system constitutes a way of improving the practice of developing a quality culture and an endorsement of the staff" (Garbutt, 1996).

Quality improvement in education involves "assessment, analysis and continuous remedial action from the education providing organization, based on selecting and adopting the most appropriate procedures, as well as choosing and applying the most relevant standards of reference" (according to a Romanian Government Emergency Ordinance from 2005; also cited in Creţu and Nicu, 2009, p. 23). The process of quality improvement in education is complex, as it involves the "continuous evaluation, analysis and remedial action, carried out by the education providing institution, based on the selection and adaptation of the most adequate procedures, and on the selection and application of standards of reference" (apud Potolea, Neacșu, Iucu, 2008, p.53). The quality improvement of the educational products and services offered to the recipients requires that their features conform to the recipients' requests. A frequently used instrument in quality improvement is the PDCA / PDSA (plan, do, check, act / plan, do, study, act) cycle, or the "circle of continuous improvement". Quality can be continuously improved, during time, with the help of the continuously repeated PDCA cycle of periodic consolidation of the results obtained through the standardization of the way of acquiring improved quality.

The evaluation of quality in education "consists in examining, on several criteria, the extent to which the education providing organization and its programme fulfil the standards of reference" (after Creţu and Nicu, 2009, p. 23). When the evaluation of quality is carried out by the organization itself, it becomes internal evaluation. When it is done by a specialized national or international agency, then it becomes external (according to the Romanian Government Emergency Ordinance from 2005).

Quality control in education "involves operational activities and techniques, systematically applied by an inspection authority designated to verify the accordance with the pre-established standards (Romanian Government Emergency Ordinance from 2005, also in Creţu and Nicu, 2009, p. 23). Quality control includes operational activities carried out in order to fulfil the quality requirements through performance regulation. Thus, it is a process of standard maintenance rather than creation. The primordial objective of quality management is to assist the organization in all of its creative development enterprises, which are necessary for financial viability in the increasingly dynamic competition framework of world economy (Avasilcăi, Huțu, Van der Wiele, 2001). The quality of the education process in a school is determined by the quality of the processes and products, by the organizational system of the institution and by the quality of services offered to the students (Guțu, 2013)

Quality is often defined as the satisfaction of the customer's needs, but it often tends to become cautious in addressing the customer's needs, and from this point develops the competition between high quality offering organizations. We lately notice a reshaping of the notions referring to the quality of products and services, in a direct relation with social preoccupations, regulations and norms. As I. Ioniță (2002) also points out, quality is no longer an organizational matter, but an individual matter as well, an element of education and culture which offers a better understanding of its necessity and knowledge of what is best in the world.

The analysis of the definitions of quality given by different authors leads to the finding of the fact that the term is defined differently, according to the approach: quality as satisfaction of customer needs; quality as aptitude of being conform for use – when approached from the product or final result perspective; and finally, quality as a way in which the customer is willing to pay for the result obtained and capitalized.

3. Quality management in the context of online education: a new integrated model

The models of quality assurance in education constitute an essential factor for the successful fulfilment of education. We notice that there is a raised attention for identifying quality models in education and in general. These models represent efficient instruments for the school management, as long as they are rightfully implemented. A successful model of quality in school management focuses on the relationship between students, teachers and curriculum and the external influences gravitating around them, exerted by society, family, labor market requirements and needs of competence and lifelong learning. Cheng and Tam (1997) developed a multidimensional model of quality in education, which motivates leaders and educators to choose certain models in tight connection with the specific situation. In order to explain quality implementation, the authors introduced seven models of quality in education. From this perspective, quality in education is a multidimensional concept and cannot be easily assessed by the means of a single indicator. Generally speaking, quality in education can be perceived differently by different people using different strategies of doing it. The models offered by Cheng and Tam (1997) are presented in table 1.

Table 1. Models of assuring quality in education (Cheng and Tam, 1997)

Specification model	- Achieving stated institutional objectives in accordance with the given specifications
Resource entry model	- Obtaining resources necessary for the institution
Process model	- Easy and useful learning experience
Satisfaction model	- Satisfying all of the difficult situations
Legitimacy model	- Obtaining a legitimate position and situation for the institution
Problem absence model	- Absence of problems in the institution
Organizational learning model	- Adaptation to changes in environment and internal barriers standing against continuous improvement

The authors have also suggested that all of the seven models of quality in education should be important in long term planning in order to achieve total quality in education. Cheng (2003) offers a new classification of quality assurance in education, dividing it into three: internal quality, interface quality and future quality. The first reform wave concentrates on internal efficiency, so as to improve internal performance, with a focus on the teaching and learning methods and processes in schools. The second reform wave addresses the importance of structures, organizations and practices in different levels of education when responding to the interested parties' needs and expectations. The third reform wave highlights the future efficacy concerning the relevance of the new approach in education to contextualized multiple intelligences and individualization. The author believes that the schools which assure internal quality, interface quality and future quality can obtain total quality in education. The efforts towards quality in education should include all of the three types of quality in order to obtain total quality in education. Despite the different constraints and problems which obstruct the simultaneous development of all of the three types of quality, schools should struggle, on a long term, to learn and become efficient in providing services and in a high internal quality.

The integrated model for quality assurance in the context of online education is based on valorizing all of the composing elements of the education process in strict relation with the integration of educational technologies. A student-centered pedagogy is promoted, as the curriculum will be adapted according to the requirements and needs of the main recipients; it will also be linked to the external environment. The purpose of the integrated model is to promote a quality culture within the education system, from the traditional student-teacher interaction, to the technology-mediated interaction which is specific to online education. There is an implicit relation between the student and the teacher, as the former progresses under the guidance of the teacher, while the latter gains experience and evolves along with the student. The student also interacts with all of the components of the curriculum. The student-teacher-curriculum triad becomes an indivisible whole, as we encounter a reciprocal determination relation and continuous exchange between the parties. There is a focus on separating four distinctive directions:

- general and specific quality assurance, in relation with problems concerning technology;
- determining the impact on behavior;
- highlighting the influence of cultural factors;
- evaluating experience in order to establish the future actions concerning online education;

The integrated model includes a holistic view of both internal factors of the education system, i.e., the school environment, and external factors. This model of quality assurance approaches the internal and external factors of education equally; there is a reciprocal determination established between the two. Education management, as an engine of the functioning of the whole mechanism, will direct the education process towards the labor market requirements. The labor market is the one which determines, in its turn, the orientation and study

programmes of the primary, secondary and higher education, thus generating the competences required by society. Family is the main component of society, and the quality of living depends directly on the development level of the society. The integrated model offers both advantages and a series of disadvantages. A major benefit consists in the general vision of all of the categories of factors involved in education quality management. A disadvantage of this model stems from the lack of particularization of the instruments through which the connection between the internal and external factors can be established, a connection on which the function of the model itself depends.

4. Conclusions

The grounding of a quality management model in the context of online education is an essential condition for improving the quality control system in schools, so it becomes essential in offering a new vision of global education. There is a reciprocal determination relation between education quality and quality of living. Education management plays the role of regulating the education process in order to better respond to the current and future requirements of the external environment.

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