



## USING QUALITY MANAGEMENT PROCEDURES IN EDUCATION: MANAGING THE LEARNER-CENTERED EDUCATIONAL ENVIRONMENT

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**Abstract.** Now, the role of quality management in education is increasing. Managing for quality is now one of the major issues for educational organizations. One of the key tasks for education managers is to provide the learning process participants with an effective and motivating educational environment. Management of the educational environment presupposes giving a particular attention to students' needs and requirements in order to improve educational practice and enhance educational quality. Among other things having their impact on the educational environment effectiveness is to what extent it motivates students for further studies. In this context, we regard student motivation as an essential factor for the educational environment quality improvement. This paper considers some quality management procedures that can be used by education managers to provide qualitative changes in the educational environment. To improve the quality of the educational environment we may use several management tools, regular educational environment evaluation being one of them. It includes collecting student feedback, which is a valuable source of analytical input in the process of the environment quality enhancement.

**Keywords:** quality management, education, learner-centered educational environment, evaluation, student feedback.

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### 1. Introduction

In recent years, knowledge has been considered as the major instrument for economic value creation (Ali 2001). In the knowledge-based society, technology, creativity and innovation are of fundamental importance for the economic development of any country. The Lisbon Strategy requires the European Union to become the most dynamic and competitive know-

ledge-based economy in the world; for achieving this ambitious objective, it is not enough to bring about a radical transformation of the European economy, but it is also vital to “implement a vast programme for modernizing the social security and education systems” (COM(2005) 24 final).

The knowledge-based society creates significant challenges for higher education institutions in various aspects: pedagogical, technological, economic, etc. Today, higher education institutions are working in the competitive global environment. As said by Sahney *et al.* (2008), they are made to improve their outcomes, become more effective and customer-centric, so as to be able to stay competitive. Many educational reforms and school reorganizations have been continuing in different parts of the world since 1990s; they are all aimed at improving educational quality (Cheng and Cheung 2003).

However, European education experts admit that the educational environment offered by the European universities is less attractive compared to American universities, especially when it comes to attracting and retaining the best talent from all over the world (COM (2003) 58 final). So, the burning questions, which are topical for education managers today, are the following: *Are European universities able to attract and keep young talents? How to motivate students to study? How to create the educational environment that will stimulate their interest and desire to learn?*

Therefore, one of the key tasks for education managers is to provide the learning process participants with an efficient and attractive educational environment. Among other things having their impact on the educational environment effectiveness, is to what degree it motivates students for further studies. We assume that having highly motivated students is crucial for the educational environment quality enhancement. To provide qualitative changes in the educational environment is vital for the successful performance of an educational organization. So, the role of quality management in education is continuously increasing.

This paper considers some quality management procedures that can be used by education managers to provide qualitative changes in the educational environment. To improve the quality of the educational environment, we may use several management tools, regular educational environment evaluation being one of them. Student feedback is now commonly used by educational organizations. By analyzing the factors, which influence student satisfaction and student motivation, education managers will be able to evade the gap between students' expectations and the university's real offering. This way, they will be able to obtain their internal customers' perspective about the educational environment quality.

## **2. Educational environment as an integrated learner-centered system**

What drives student motivation? How to create a favorable educational environment, which will encourage students for learning? We would like to address these questions regarding the educational environment as a complicated multilevel system.

The educational environment contains a diversity of subsystems; they are interconnected and interdependent. As said by Montello and Wimberly (1975), such system can be defined as a supersystem. This supersystem, being a non-linear structure, has a multilevel configuration.

On the one hand, the educational environment of an educational organization may be regarded as a sum of all organizational resources; they are *tangible, semi-tangible, non-tangible* and can be categorized as (Stukalina 2008):

- *Physical and technological environment* that includes buildings, lecture rooms, laboratories, libraries, etc.
- *Instructional environment* that includes regulative documents, teaching materials, etc.
- *Executive environment* that is associated with conducting lessons and delivering lectures.
- *Psychological environment* that is associated with the psychological atmosphere in the university.

On the other hand, the educational environment of an educational organization may be regarded as a community of people united by common goals; they are *the intellectual capital* bearers. Educational organizations, being social institutions, function on the relationships shaped between people who comprise these organizations (Calabrese 2006). The embodied intellectual capital is the link that “*cements*” various levels of the educational environment (Fig. 1).

Since we regard the educational environment as a multilevel structure, we have to take this fact into account when discussing the factors that influence student motivation. We suppose that student motivation can be considered at two different levels: students as the learning process participants and students as the intellectual community members.

Therefore, for motivating students as the learning process participants we can use a set of pedagogical instruments. In addition, employing a number of management tools we can promote student motivation as the intellectual community members. Collecting student feedback we have to take it into consideration.

The internal educational environment is not just a compilation of independent elements. To be efficient it must work as an integrated system; subsystems should be more incorporated and interconnected. The highly integrated educational environment is characterized by the following features:

1. *Integrity*. The higher the integration between the educational environment subsystems, the more efficient is the entire system’s operation. The main task of an education manager then becomes to synergize the educational environment resources so that they will support the “*quantity – quality*” transition.

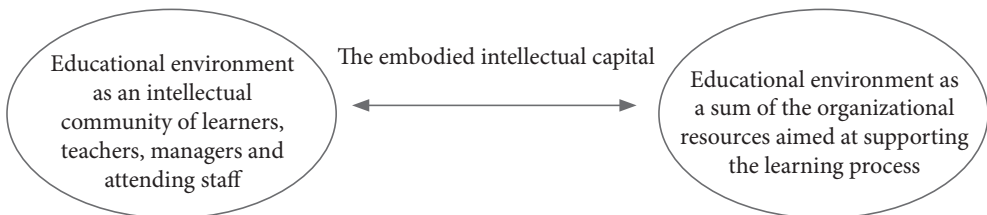


Fig. 1. Educational environment as a multilevel structure

1. *Increased performance.* The environment, which provides the resources integration, is supposed to be contributing to performance, efficient performance being related to the *qualitative changes* in the educational environment.
2. *Diversity of resources.* A variety of organizational resources – tangible, semi-tangible, non-tangible – are aimed at sustaining the organizational performance and providing *qualitative changes* in the organizational environment.
3. *Controllability.* All educational environment subsystems must be well-coordinated. Qualitative changes in one subsystem leads to *qualitative changes* in other subsystems, since all subsystems are interrelated and mutually dependent.
4. *Adaptability and flexibility.* The highly integrated educational environment must operate as a well-coordinated and flexible *network* based on collaboration. Managing and redistributing the organizational resources within the entire network education managers can adapt the internal educational environment to the constantly changing global environment introducing *qualitative changes* in good time.
5. *Learner-centeredness.* A major aspect associated with the *educational environment* conducive to performance is *student motivation*. On the one hand, we must encourage students for active and explorative learning. On the other hand, we should also engage students in the process of managing the educational environment; management of the educational environment presupposes giving a particular attention to the students' needs and requirements. We consider student motivation to be an essential factor for the educational environment *quality improvement*.

### 3. Quality management in education

Kettunen (2008) defines the management process as a sequence of management activities: “strategic management and the updating of strategic objectives, the planning of operations and resources, the operations and steering and the reporting of results”. The complexity of the problems that must be solved by education managers demands employing the interdisciplinary approach for solving them. Educational management now attends to the issues, which traditionally were addressed by other disciplines. To manage the integrated educational environment successfully, education managers have to utilize a variety of management instruments that are now at their disposal. We must take every advantage of traditional management practices, as well as new approaches to education and management.

According to Rowley (2000), modern higher education institutions are “in the knowledge business, since they are involved in knowledge creation and dissemination and learning”. So, knowledge management tools can support educational institutions in creating a collaborative educational environment, which will lead to the enhanced knowledge environment of the educational organization. However, Soliman and Spooner (2000) point out that knowledge management is most useful as an integrated system bringing together numerous disciplines. Therefore, knowledge management instruments are supplemented by of a variety of management practices: human resource management, information management, fact-based management, total quality management, project management, etc., *total quality management*

(TQM) being one of the most important tools for an educational organization (as an intellectual community) to develop.

For every organization, it is essential to measure and manage quality in all kinds of business settings (Fleming *et al.* 2006). Managing for quality is one of the most significant challenges that educational institutions face. Sahney *et al.* (2008) accentuate that quality management in education is now a priority issue for research and analysis. They propose to discuss education quality from two perspectives – “the process model that views quality as an internal process of transformation and the satisfaction model that views education quality as the satisfaction of expectations of the various customers and stakeholders” (Cheng and Tam cited in Sahney *et al.* 2008).

Töremen *et al.* (2009) define TQM as “a management process and a set of disciplines that are co-ordinated to make certain that the organization constantly meets and exceed customer needs”; they emphasize that TQM involves all units and all levels of the organization, evaluatory and developmental processes being its indispensable practices. They also point out that TQM, being a human-focused approach, can make an essential contribution to enhancing quality of education and improving educational organizations.

As said by Kettunen (2008), quality management in education “has evolved and taken varying forms in terms of stakeholder accountability, customer satisfaction and issues of assessment, accreditation, ratings and rankings”; the focus is essentially on understanding the customers’ needs. Although we acknowledge that students are “customers” in complete sense of this word, being also citizens of the intellectual community, we have to be responsive to their varying interests and needs. The fact that without students, there would be no need for an educational organization is indisputable (DeShields Jr *et al.* 2005).

#### **4. Managing the educational environment:**

##### **What marketing metaphors to employ?**

In total quality management, the quality improvement process should start and finish with customers (Senge 1990 cited in Töremen *et al.* 2009). Therefore, one of the central principles of TQC (Total Quality Control) is *the customer focus*, which stresses the service relationship between an educational organization and its customers (Varnavas and Soteriou 2002). As said by Sahney *et al.* (2008), education is now becoming much more of a “product”, and there are enormous pressures on educational institutions to become more responsive to customer needs, that is to become more customer-centric. In fact, the majority of definitions of service quality are customer focused, and service quality is defined as the “extent to which a service meets customers’ needs and expectations” (Dotchin and Oakland; Asubonteng *et al.* cited in Sahney *et al.* 2008).

For managers, customer centrality is not just a slogan. Selden and MacMillan (2006) call a customer-centric system a precondition for sustainable growth. Education being a service industry (Garrick and Clegg 2000), we may adopt some marketing metaphors for describing the tools education managers use in their work. However, we admit that “the customer model” should not be directly transferred from business area to the university environment.

Some educators associate students with customers saying that without students, there would be no need for colleges; they suggest placing more emphasis on satisfying the needs of the customers (DeShields Jr *et al.* 2005). According to Marzo Navarro *et al.* (2005), in the university environment, the concept of customers is not clearly defined. Others do not agree that students are customers; they call them “citizens of the society (university)”, but not customers (Svensson and Wood 2007).

From the educational management perspective, the problem is if we can associate the learner-centered educational environment with the customer-centric business organization. However, modern educational institutions have adopted marketing terminology and concepts; marketing metaphors have become common for the academic vocabulary. It is obvious, that we should not directly identify our students with customers of business organizations. On the other hand, educational organizations are now operating in the competitive global environment, so a set of marketing metaphors might help managers better describe both the multi-level relationship between the external and internal educational environments and within the internal educational environment. Though, according to Denzin (1970), “a careful line must be followed in the use of these metaphors”; they have to remain “a powerful strategy of illumination”. In this paper, we will use a number of marketing metaphors to illustrate the principles of the learner-centered educational environment quality enhancement: the “value” metaphor and the “customer” metaphor.

Let us assume that educational institutions are supposed to deliver value (knowledge) to customers (students), in the process creating new value (new knowledge). The detailed knowledge of customers that an educational organization attracts, as well as their requirements, is an essential factor for our success. The question that education managers must answer is the following: *How can we attract and retain students (customers)?* To answer the question, we must have clear understanding of what students need today. We think that the educational environment should be evaluated against students’ needs and against their learning objectives. We presume that such feedback can drive the educational environment *quality improvement*. So, we have formulated one of the main principles of the learner-centered educational environment quality enhancement: *to manage through student (customer) feedback (their experience in education)*.

## **5. Creating the learner-centered educational environment:**

### **What drives student motivation?**

In a customer-centric system, managers try to measure customer satisfaction. It is customer experience that encompasses every aspect of a company’s offering being “the internal and subjective response customers have to any direct or indirect contact with a company” (Meyer and Schwager 2007). We presume that as the success of a product depends on how well it is received by its intended audience (Berry *et al.* 2004), so the efficiency (successful performance) of an educational environment depends on how well it is accepted and evaluated by students.

Management’s job is to create an environment conducive to performance (Harper and Porter 2004); the educational management’s task is to create an environment conducive to learning. That is why many of the educational management’s concerns must be focused on

student motivation. It is connected with the so-called *paradigm shift in learning and teaching* (Cheng and Ching Mok 2007). The educational environment becoming increasingly student-centered, teaching is intended to assist students to construct their own knowledge, to ensure their constant self-development, and to help them become self-motivated.

We assume that to motivate students means to integrate them into the educational environment as inspired and enthused members of the intellectual community. In the learner-centered educational environment, we have to allow students to “interact with their environment in an active, critical and reflective way” (Asher 2005). According to Cheng and Cheung (2003), the practice of participative decision-making may help build up “a sense of ownership” among school members participating in this process, and the resulting action plans will have a better chance of successful execution.

It should be mentioned that motivation is just the beginning; motivation with no support “becomes hollow and pales quickly” (Scholes 2004). So, we have to address the following question: “*What does this support come from?*” We assume that employing a variety of managerial instruments education managers can create a motivating education environment conducive to learning. Thus, in a learner-focused educational organization, it is essential for managers to search for beneficial feedback from students. Student feedback is now widely used as by educational organizations (Darby 2008; Douglas *et al.* 2008). By analyzing the factors, which form student experience in education, education managers will be able to evade the gap between students’ expectations and the university’s actual offering; they will be able to outline what educational environment aspects have the biggest impact on student satisfaction and, as a result, on student motivation. This way, they will be able to obtain their internal customers’ perspective about the educational environment quality. This information is then used by education managers for developing their strategy with the aim to provide qualitative changes in the educational environment. This way, we engage students in *to decision-making*.

Most managers recognize the benefits of motivation, but at the same time, they acknowledge that “it is often a very difficult process to manage and understand” (Katz 2006). Let us assume that motivation “drives” can be analyzed identifying the basic determinants of student satisfaction. We view student satisfaction as a precursor of their *motivation*. The question we would like to address now is the following: *How to get students engaged in the educational environment as active and motivated intellectual community members?*

An efficient environment must be collaborative. As said by Bentley (1998), “it’s vital to establish, maintain and develop social relationships.” Being a study group (team) member student is also an intellectual community (university) member, at the same time he (she) remains a society member. Thus, all the time, student interacts with the environment, in the course being in a close contact with other educational process participants. Social relationships that are created in the educational process contribute much to the successful performance of the organization. The educational environment should be developed into a community of shared concern, motivation being one of its “head stones”.

According to Bentley (1998), “motivating young people to take their place in the world with intelligence and consideration for others depends on allowing them to take responsibility for what they do”. Thus, to delegate students some responsibilities in relation to making decisions about running the school can become one of the efficient educational management instruments. Students being also “citizens” (Svensson and Wood 2007) of the community,



the student-university relationship are crucial for a constructive educational environment development.

One of the most significant issues for management is managing human resources. We suppose that creating a collaborative environment, managers should concentrate their efforts on motivating all people in the organization to work on close cooperation to achieve common goals. Total quality management presupposes including everybody and everything in an organization (Sallis cited in Töremen *et al.* 2009), so we should employ motivation strategies aimed both at increasing worker motivation and student motivation.

As said by Badawy (2008), ultimately motivation comes from within; it depends on different external and internal factors. However, he states that we can “create favorable conditions that will stimulate motivation, the motivational environment being characterized by close links between motivational effort, job performance, and organizational awards”.

In their routine work, managers employ a variety of management tools for motivating their workers: these tools can be successfully used for motivating university workers in a collaborative educational environment (Table 1).

**Table 1.** Traditional incentives used for motivating workers (According to Badawy 2008)

Organizationally oriented	Professionally oriented
Merit salary increases	Encouragements to publish
Promotions within career ladder	Time off for professional meetings
Rewards for suggestions	Paid transportation to professional meetings
Improved office space	Better technical equipment
Increased technical or clerical assistance	Tuition or other educational aid
Increased challenge in job assignments, etc.	Participation in company seminars, etc

We suppose that for motivating university students in a collaborative educational environment education managers might use an assortment of special incentives (motivation strategies) intended on engaging students in the educational environment as real intellectual community members making them self-motivated active learners (Table 2).

**Table 2.** The proposed incentives for motivating university students (Adapted from Badawy 2008)

Organizationally oriented tools	Professionally oriented tools
Scholarship increases	Encouragements to take part in educational or professional conferences and seminars
Student-friendly physical environment	Encouragements to publish
Enhanced technological environment	Enhanced use of ICTs for training and self-development
Increased support from teaching staff	Opportunity to participate in professional activities (practice)
Increased technical support from attending staff	Appropriate guidance from educators in relation to professional activities
Participative decision-making in the form of student councils	Participation in international student exchange programmes
Participative decision-making in the form of regular <i>educational environment evaluation</i>	



Professionally oriented tools are employed to encourage students as self-motivated learning process participants; organizationally oriented tools are employed to increase students' motivation as the intellectual community members giving them a good opportunity to take responsibility for what they do. We think that management of the learner-centered educational environment should become a more participatory process than it used to be. Participative decision-making can be realized either in the form of student councils, or by means of collecting and utilizing *student feedback* through regular educational environment evaluation.

## **6. Educational environment evaluation as an efficient quality management tool**

Management of the learner-centered educational environment must comprise finding relevant data and information to assist planning and decision-making. Managers have to use a vast variety of data from multiple sources in order to understand the context they are operating in. According to Pfeffer and Sutton (2006), “only then managers can practice their craft more effectively, when they are routinely guided by the best logic and evidence – and if they relentlessly seek new knowledge and insight, from both inside and outside their companies”. Managers then use the obtained knowledge to achieve continuous improvement in their organizations, knowledge of a particular situation being employed to modify the original knowledge base (Emison 2004). Today, when modern educational institutions are in the course of constant evolution, they are also striving for permanent improvement that is associated with qualitative changes in the organizational environment. As said by Miles & Eckholm cited in Fiddler (2002), “school improvement is a systematic, sustained effort aimed at change in learning conditions and other related internal conditions”. Therefore, we need to collect plenty of information to support the so-called “hypothesize-test-observe-reflect-change sequence” (Emison 2004) in order to guarantee subsequent qualitative changes in the educational environment.

For this purpose, we can use various managerial instruments, the educational environment regular evaluation being one of them. Organizationally oriented motivation strategies mentioned above include participative decision-making in the form of regular educational environment evaluation that presupposes collecting student feedback – students' perceptions of the educational environment and their learning experience. Collecting student (customer) feedback is a procedure that is aimed at obtaining knowledge. According to Dewey cited in Emison (2004), the value of this knowledge “relies on its validation by application, which required a specific purpose”, and customers serve as the source of such purpose.

As said by Kettunen (2008), in the context of the philosophies of quality assurance, the management needs to be able to identify strategic objectives and to develop the “internal processes and structures of the organization” to achieve them; it is also necessary to define the indicators used to describe the achievement of these objectives. He states that “you cannot manage if you cannot measure” (Ibid). We assume that if we can't evaluate the quality of our environment, then we can't manage it properly. The problem then is to find a set of *quality-related dimensions*, since business and education traditionally have focused on different issues. In business, economists typically use a set of performance measures to carry out

regular *quantitative assessment* of their environments. Measurement is sometimes defined as “the process of quantifying the efficiency and effectiveness of action” (Neely *et al.* 2005). Economists use a set of performance metrics to quantify the efficiency of actions: purchase price, productivity, salaries, expenditures, etc. Thus, the emphasis is on measuring the amount, capacity, size, strength or extent.

Assessing business environments experts make use of the terms *effectiveness* and *efficiency*. According to Neely *et al.* (2005), effectiveness refers to the degree to which customer needs are met, efficiency being a measure of how economically the organizational resources are employed. We think that education managers have to perform customary qualitative assessment of their environment aimed at evaluating the educational environment quality in terms of both effectiveness and efficiency. In this paper, we focus on the “effectiveness” perspective.

Assessing the quality of the educational environment in terms of its effectiveness raises a few methodological problems that are related to the criteria to be utilized for evaluation. We suppose that the educational environment evaluation is carried out as *educational research*.

In the social sciences, quantitative and qualitative approaches to research are repeatedly opposed to each other (Cropley 2002), though they both can be successfully used in education. To describe empirical observations of concepts scientists make use of different variables; a quantitative variable represents a concept that “can take on various values” (for example, the age of respondents), whereas qualitative variables (or attributes) “differ in degree or quality” (Denzin 1970).

The qualitative research model concentrates on people’s direct experience; an idealized qualitative approach is “a non-experimental design in a real life setting, involving collection of verbal reports describing respondents’ construction of the situation in question, and content based analysis of these reports” (Cropley 2002). In fact, performing the educational environment evaluation we are interested in discovering how our students assess the settings they are studying in; in other words, how they describe their experience in education. For this purpose, qualitative measurements seem to be more suitable. We also believe that social relationships created in the educational environment as a community can be better examined and explained using qualitative methods. Using qualitative methods would give us a good opportunity to examine different aspects from diverse perspectives, to make the educational environment more collaborative – to establish, maintain and develop social interaction.

So, we assume that the learner-centered environment evaluation model, which takes into account *students’ viewpoint* about the quality of the educational environment, should focus on *qualitative attributes* rather than on quantitative characteristics. Though, it should be mentioned that qualitative and quantitative characteristics may complement each other in some piece of research.

It should be also mentioned that the educational environment being an integrated system, it can be evaluated from two perspectives:

1. In relation to supporting the learning process in general.
2. In relation to supporting the learning and teaching of a particular subject.

Supporting the learning and teaching of a particular subject involves employing a variety of organizational resources to sustain the learning process. It is a synchronized procedure that among other things includes social relationships creation; any subject integrated in the

curriculum requires substantial support from managers. Therefore, we should always evaluate the educational environment in a complex even if our goal is to assess the support that educational environment provides for teaching and learning one subject. This will enable us to utilize the available resources in the most effectual manner.

The process of the learner-centered educational environment evaluation goes through the following phases:

1. First, education experts make a list of the basic educational environment aspects that must be assessed.
2. The second step is to identify the basic indicators that are associated with these aspects and can be used for evaluating the environment quality.
3. Then we have to work out a set of data collection procedures and then collect data by means of appropriate methodological techniques.
4. Finally, education managers analyze the collected data in order to identify the strategic areas, which demand more attention from educational management in the context of the educational environment quality enhancement.

Therefore, the main questions that we would like to address are the following:

- *What educational environment aspects to assess?*
- *What assessment criteria (indicators) to use?*
- *What data collecting procedures to employ?*
- *How to use the obtained information most effectively?*

*Step 1: What aspects to assess?*

In the integrated educational environment, which is a learner-centered system, our every effort is bent to use the internal resources more effectively in order to sustain the learning process with the aim to prepare our graduates for the changing global job market. We assume that our attention should be focused on the learners' requirements, defined in terms of

- Content – *what to learn* – information, skills and competences, etc.
- Opportunities – *how to learn* – learning conditions, technological support, psychological climate, etc.

The learner-centered educational environment aspects that we have to evaluate must be related to all educational environment subsystems, since only the symbiosis of all educational environment resources (tangible, semi-tangible and intangible) can produce the desired effect. In fact, there is a mix of factors that have their impact on students' perception of the educational environment; we suppose that they are associated with the physical and technological environment, instructional environment, executive environment and psychological environment.

*Step 2: What indicators to use?*

A particular indicator (indicators) is related to a certain educational environment aspect. An indicator is "a parameter or a value derived from parameters, which points to provide information about the state of phenomenon/environment/area" (A Glossary of Indicator Terms/gdrc.org).

Evaluation indicators are associated with various parameters of the education quality; the concept of the education quality, according to Cheng and Cheung (2003), includes “the input, process, output and multiple constituencies of a school”. Every indicator used for the educational environment evaluation must provide some information about the environment subsystems’ quality as perceived by learners.

The basic educational environment aspects and the proposed indicators are summarized in Table 3.

**Table 3.** The basic educational environment aspects and the proposed indicators for performing their assessment

Evaluation aspect	The related indicator
1. Executive environment	<i>Indicator 1:</i> Quality and availability of information <i>Indicator 2:</i> Quality of acquired skills and competences <i>Indicator 3:</i> Quality of conducted lessons
2. Physical and technological environment	<i>Indicator 4:</i> Laboratory equipment facilities <i>Indicator 5:</i> Library services
3. Instructional environment	<i>Indicator 6:</i> Study course content <i>Indicator 7:</i> Teaching materials quality and availability <i>Indicator 8:</i> Availability and quality of the Internet/intranet instructional resources
4. Psychological environment	<i>Indicator 9:</i> Environment safety and comfort <i>Indicator 10:</i> Collaboration with other students (teamwork) <i>Indicator 11:</i> Support from managers, teachers and attending staff

The evaluation indicators embody some attributes, which are abstract in nature and symbolize the educational effects we expect to perceive from the educational environment, which is supposed to be learner-centered and student-friendly (motivating). The suggested eleven indicators are conceptualized for customer requirements, customer requirements referring to the expectations of students. Using these indicators regularly in the process of the educational environment evaluation we can address their immediate concerns and identify the factors, which students consider to be particularly important for the learner-centered educational environment quality improvement.

They are applicable as to assessing the educational environment on the whole as for evaluating learning conditions in relation to teaching a particular subject. For example, we believe that an ESP (English for Specific Purposes) course evaluation should include a set of indicators that are either directly or indirectly associated with the course delivery, since the learning process is carried out as a complex multiform procedure. It is obvious that for supporting language teaching and learning it seems most rational to assess the quality of conducted lessons. The quality of conducted lessons is supposed to be directly related to the quality and availability of the instructional materials, which are stored in the library in the

form of books, or electronically in the organizational database. However, other factors may influence the learning process indirectly, for instance the educational environment safety and comfort, possibility to work in collaboration with other students, psychological support from teachers, attending staff and managers. Subsequently, the more aspects learners can assess the more proficient analysis of the cause-effect relationships in the environment can education managers perform.

*Step 3: The data collecting procedures employed*

Once we have established a set of basic evaluation aspects and indicators, it is time to decide on *data collecting procedures*, which will be applied in our research. These procedures are based on the interaction between the researcher and the respondent so that “the information provided by the respondent constitutes the data” (Cropley 2002). In education, there exist a wide variety of methods for systematic collection of data – participant observation, case studies, etc. The most popular method used in education is regular student surveys.

A student survey is an insightful methodological technique that presupposes “the systematic collection of data from populations or samples through the use of the interview or the self-administrated questionnaire”; the main method of data collection is interviewing and/or questionnaires (Denzin 1970).

To guarantee qualitative changes in the educational environment associated with learning conditions we have to evaluate the educational environment on a regular basis; it should be done either every semester, or at the end of each academic year. Thus, every time the environment assessment is carried out in a particular situation. Such survey design is characterized by Denzin (1970) as “one-shot case study”; our respondents are “exposed to a series of critical events”. In our case, they are supposed to assess the learning conditions they have been studying in for a certain period of time. In our view, student surveys provide the necessary information on the educational environment evaluation. In the learner-centered educational environment, this method implies the active involvement of customers for a clear understanding of customer needs and requirements. At the same time learners can be engaged in participative decision-making.

Student questionnaires are commonly used in education. In our research, the dimensions of student satisfaction and motivation can be measured with assessments using a certain scale. Such abstract concepts as the quality of conducted lessons (or environment safety and comfort, etc.) must be explained in student questionnaires. For this purpose, the questionnaire is organized in the following manner: a certain indicator is described by a set of items – statement or questions. For example, statements that focus on the executive environment quality may include the following:

1. *The course met my professional needs*
2. *The course enhanced my language skills*
3. *The course enhanced my teamwork skills*
4. *The course enhanced my problem-solving skills*
5. *The course enhanced my presentation skills*
6. *I was able to use what I had learned in class*

7. *I am satisfied with the quality of acquired skills*

8. *The acquired skills have stimulated my motivation for further studies.*

Every item (statement, question) should reflect the respondent's attitude to a particular evaluation aspect; "the more favorable a respondent's attitude, the higher his expected score for the item" (Denzin 1970). The items then are grouped under eleven constructs – the eleven evaluation indicators. In the questionnaires, the researcher can apply a certain scaling technique (the method of summated ratings): Likert, Osgood, Guttman, Thurstone, etc. The choice depends on the purpose and complexity of the research.

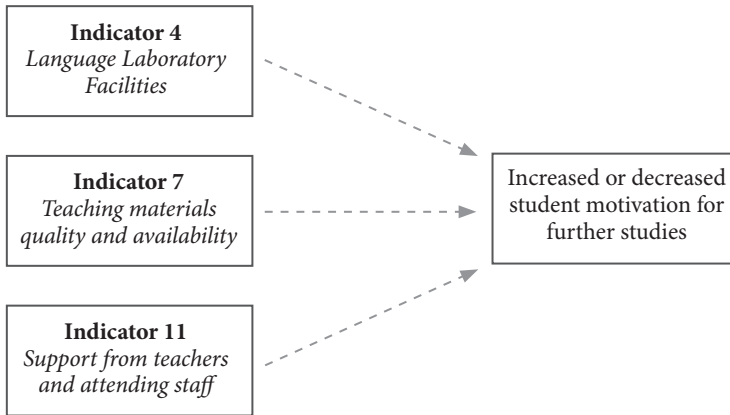
The basic principles of a questionnaire design for the educational environment evaluation are summarized below:

1. For every educational environment aspect there must be designed a set of indicators that are associated both with a certain pedagogical dimension; that are allow us to examine different aspects from diverse perspectives.
2. The questionnaire is structured in the following style: a certain indicator is described by a set of items - statements or questions.
3. The researcher can make use one of the basic scaling techniques, which best suits his requirements.
4. Questions for a survey must be formulated so that they would evoke a thoughtful and creative response in order to encourage our respondents. The questions should help managers focus on their customers' needs and purpose rather than promoting solutions that worked "last time" (Benson *et al.* 2006).

*Step 4: How to use the obtained information most effectively?*

According to Emison (2004), TQM is characterized by three important features: a focal point on customers, an accent on permanent improvement, and *fact-based analysis*. When the necessary data have been collected, it is time for carrying out the appropriate fact-based analysis of the integrated educational environment. Careful examination of the cause-and-effect relationships within this complex supersystem will help education managers to use the obtained information most effectively. The influence diagrams may afterward be created on basis of the cause-and-effect relationships; they show how several variables influence outcomes (Govindarajan and Trimble 2004).

In our context, a few influence diagrams can be made to indicate how a particular indicator used for the educational environment evaluation eventually affects the student motivation for further studies. Suppose that students are not satisfied with the learning opportunities offered by the computer laboratory. Perhaps, we should not only re-equip the laboratory with up-to-date devices, but revise the quality of the teaching materials used in the laboratory, as well as strengthen the support from laboratory instructors and teachers. That's why it seems reasonable to evaluate the language laboratory facilities together with the quality of teaching materials and the support that the learners receive from teachers and laboratory instructors (Fig. 2). Such assessment is assumed to help us create motivating educational environment contributing to language teaching and learning.



**Fig. 2.** Impact of some factors associated with the educational environment quality on student motivation

Actually, analysis of the cause-and-effect relationships can be part of the so-called *strategic analysis* that according to Fiddler (2002), involves internal resource audit and environmental scanning -SWOT (strengths, weaknesses, opportunities and threats) analysis as well as culture and values. The data education managers have collected must be analyzed as for assessing their previous strategy as for identifying their future strategy – that is to make the right decisions.

Knowledge that has been developed through data examination and analysis of the cause-and-effect relationships must be kept either in regulative and instructional papers, or electronically in knowledge repositories. As said by Hicks *et al.* (2007), it is essential that explicit knowledge that has been captured and stored in computer environment may be shared by applications and users. Thus, education managers have to encourage knowledge distribution and knowledge review within and across all environment subsystems. This way, the educational environment evaluation becomes the process of accumulating and sharing the intellectual capital. We assume that the emphasis on the intellectual capital is an essential factor for ensuring the educational environment integrity and effectiveness.

## 7. Conclusions

The present paper has discussed the importance of assessing and managing the quality of the educational environment that is supposed to be learner-centered. Today, when role of quality management in education is growing, total quality management practices can be successfully employed to provide qualitative changes in the educational organization as an intellectual community. Managing for quality is now a major challenge that educational institutions face.

Management of the educational environment presupposes giving a particular attention to students' needs and requirements in order to improve educational practice and enhance



educational quality. One of the key tasks for education managers is to provide the learning process participants with an effective and motivating educational environment. Qualitative changes in the environment must lead to school improvement. Managing school improvement includes performing the strategic analysis. To carry out the strategic analysis education managers may use several management procedures, regular environment evaluation being one of them. The educational environment evaluation can become one of the most important management instruments, which supports decision-making process and quality enhancement process. In this paper, we have concentrated on the learners' assessment of the educational environment quality. The educational environment should be evaluated against students' needs and expectations. The assessment includes collecting student feedback (students' perceptions of the educational environment and their learning experience), which is a valuable source of analytical input in the process of the environment quality enhancement.

Collecting and using student feedback through regular educational environment evaluation might also become a means of engaging learners in participative decision-making. This, in turn, might help us create a collaborative and motivating educational environment, student motivation being an essential factor for the educational environment quality improvement. Thus, one of the main principles of the learner-centered educational environment quality improvement is to manage through student (customer) feedback.

For performing the educational environment evaluation we have suggested using a set of qualitative indicators. Using these indicators we will be able to examine various aspects of the educational environment from diverse perspectives: the physical and technological environment, instructional environment, executive environment, and psychological environment. The eleven evaluation indicators are associated as with different educational environment aspects as with various parameters of the education quality. We hope that the suggested evaluation indicators may help education managers construct their own system for the educational environment assessment.

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## **KOKYBĒS VALDYMO PROCEDŪROS TAIKYMAS MOKYMUI: Į MOKINIŲ ORIENTUOTOS MOKYMO APLINKOS VALDYMAS**

**Y. Stukalina**

Santrauka

Kokybės valdymo svarba švietimui pastaruoju metu išaugo. Ji yra viena iš pagrindinių švietimo organizacijų uždavinių. Svarbiausia švietimo vadybininkų užduotis – mokymo proceso dalyviams sudaryti veiksmingą ir motyvuotą mokymo aplinką. Remiantis mokymo aplinkos valdymu, manoma, kad norint pagerinti mokymą ir pakelti mokymo kokybę reikia atsižvelgti į studentų poreikius bei reikalavimus. Vienas iš svarbiausių veiksnių, darančių įtaką mokymo aplinkos efektyvumui, yra studentų skatinimo toliau mokytis lygis. Remiantis šiuo kontekstu studento motyvacija laikoma esminiu veiksniu, padedančiu pagerinti mokymo aplinkos kokybę. Norint pagerinti mokymo aplinką, galima naudoti keletą valdymo priemonių. Viena iš jų yra įprastos mokymo aplinkos įvertinimas. Ją sudaro mokinių grįžtamasis ryšys, kuris yra vertingas šaltinis mokymo aplinkos kokybės gerinimo procese.

**Reikšminiai žodžiai:** kokybės valdymas, švietimas, į moksleivį orientuota mokymosi aplinka, švietimas, mokinių grįžtamasis ryšys.

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