Chapter #8

THE QUALITY CHAIN IN EDUCATION – A GRID APPROACH

Dimitrios A. Giannias, & Eleni Sfakianaki

School of Social Sciences, Hellenic Open University, Greece

ABSTRACT

The increasing demand to provide students-and learners in general-with an effective and motivating educational environment has increased the demand for quality management to deliver high-quality results and thereby meet the growing requirements of "customers". The adoption of total quality management in education is a relatively recent manifestation and has been treated with enthusiasm by a number of researchers and with scepticism by others. One of the difficulties in a service-oriented environment such as education is the complexity of its stakeholders, process and, consequently, the definitions and interpretations of different relationships within the educational organization. The present review defines the quality chain in education by examining the basic stakeholders of the educational sector: the teachers and the learners. It then proposes a methodology based on the managerial grid model developed by Blake and Mouton (1964a), which is based on a concern for people as well as for production. Additionally, it explores the ways in which this model can be applied in the quality chain of education while using basic principles of total quality management. Ultimately, the aim is to examine the potential for improving the educational quality chain and also to provide a personal improvement tool and thereby enhance the overall concept of continuous improvement.

Keywords: quality chain, education, total quality management, grid model, continuous improvement.

1. INTRODUCTION

Today's economy is globalized, competitive and knowledge-based. Education is in the midst of a reform in which it endeavours to rediscover itself, to develop and test new methods and techniques and to produce standards and processes that will meet the objectives of the new era. Education professionals seek to produce students that can learn how to learn, are capable of solving problems and of thinking critically while synthesizing without prejudices, are able to work in teams and, consequently, are able to meet the demand for an efficient and dynamic workforce that includes the entrepreneurs of tomorrow, as well as those individuals who will comprise the larger working communities. Educational communities, such as schools and universities, are complex organizations based largely on a number of interrelated systems and relationships; thus, various parties may have different needs, attitudes and goals which do not always converge (Saiti, 2012). These differences are quite likely to prevent the smooth functioning of the educational process; in this respect, the role of quality management in education is expanding. As Stukalina (2010) maintains, one of the major issues in educational organizations is that of managing for quality. Indeed, as the author explains, education managers are faced with the challenge to provide learners with an effective and motivating educational environment. This means that each student-or learner, in the broader context-is a unique individual that needs to be given particular attention to his or her needs in an attempt to improve educational practice and to enhance the quality of education.

A number of questions surface at this point. Is the current educational system adequately preparing students for work and for life outside school? Can we improve the ways in which we prepare students for the challenges they will face in any and all circumstances?

Does the educational environment motivate students to continue learning in a lifelong learning context, and do students appreciate knowledge as a commodity? Understandably, addressing all the above issues in this review would be far too ambitious. In the following sections, the review will consider and investigate, from a narrower perspective some quality and total quality management (TQM) issues and will focus on strategies that can be used by teachers and education managers to better understand the relationship between the educator and the learner. Human behaviour must be regarded as an important element for the improvement of any educational environment and as a part of the wider set of quality objectives. In order to improve the quality of the educational environment and provide qualitative changes, it is important to observe and to understand different attitudes and be ready for change and evolution.

2. TOTAL QUALITY MANAGEMENT AND EDUCATION

Quality in general has been a popular idea for a long time, now, and its continuous development over the years has been driven largely by the growing requirements of customers. As Weckenmann, Akkasoglu and Werner (2015) claim, to constantly improve and satisfy the requirements of the quality triangle (cost, quality and time), the perspective of quality management has to be constantly widened. In this respect, there is a shift in perspective from what *is* done to *how* it is done. The evolution of quality management over the years has given rise to total quality management (TQM) as a wider application being implemented not necessarily by market pressure but by the imperative to deliver high-quality results. Consequently, the concepts of quality and TQM have found application in areas with no direct competition but which have an urge for self-improvement, such as education and public administration (Weckenmann et al., 2015).

The concept of TQM can be defined as a systematic management approach to long-term success through customer satisfaction by the commitment of all members of the organization to participate in the continuous improvement of processes, products, services and the culture as a whole (Deming, 1986; Juran, 1999). Although the idea of continuous improvement is clear and perhaps easy to comprehend, it must not be overlooked that TQM is a system; as such, it is a holistic approach that requires the development of a system-wide culture (Doherty, 2008). In such a holistic culture, everyone, irrespective of roles and positions in the organizational hierarchy, is responsible for the management of his/her contribution to the whole, which justifies the term "total". Indeed, a large number of researchers support the idea that one of the most significant impacts of TQM is on the human resource dimension rather than on machines or other technical components (Deming, 1986; Mullins, 2007; Weckenmann et al., 2015). As such, it is a profoundly integrated management philosophy that promotes the employee dimension and enhances collaboration. Understandably, in this way, the human resource becomes the asset of the organization. It is therefore effective human resource management and quality management that combine to converge on total quality, which essentially provides, amongst other benefits, a challenging and satisfying working environment, personal development through training, active involvement and the participation of all parties involved (Crawford & Shutler, 1999; Deming, 1986; Mullins, 2007; Saiti, 2012). The need imposed by TQM for the commitment of all employees within an organization to high standards of quality recognizes the importance of relationships between leadership, employees, processes, customer satisfaction and business results (Weckenmann et al., 2015).

The correlations of TQM and business excellence have formed several models and standards that have subsequently led to a number of awards. Some of the well-known quality awards and standards include the Malcolm Baldridge Award (United States), the Deming Prize (Japan) and the European Quality Award, developed by the European Foundation for Quality Management (EFQM). On a more international level, there is the International Standard ISO9000 series. All of these awards have been introduced in recent years to promote quality and excellence in a wide range of industries and services. Indeed, winners of awards, such as the Baldridge or EFQM, represent world-class organizations in which quality has been rigorously assured but also which have been acknowledged by their peers to be outstanding (Doherty, 2008).

As mentioned previously, the adoption of TQM is relatively recent in the education sector. Considering that in the past few years, educational units, in one form or another, have been required to examine and to review practices to ensure that they offer quality services, TQM seemed to be an obvious solution. Much of the work with respect to TQM in education started in 1990 in the United States and in the United Kingdom (Sallis, 2005). Although TQM concepts were developed by Deming (1986) and Juran (1999) to increase industry's productivity, as Deming argued, TQM principles could equally be applied to the service sector, including education (see also Militaru, Ungureanu & Chenic, 2013). As Saiti (2012) further claims, considering that the vast majority of organizational activities depend on the capabilities of human resources, there is no obvious reason for not applying TQM to a school system. Ah-Teck and Starr (2014) further demonstrate that TQM may be an appropriate framework for change and improvement in the school environment.

The quality criteria in education necessary for the development of a productive education system have been investigated by a number of researchers. These criteria may include the following: educational leadership commitment and the support of educational leaders in the quest for quality; quality consciousness by establishing a vision and objectives that encourage a commitment to the school's mission; leaders' and teachers' continued training and development and motivation of educators and learners to ensure high standards and continuous improvement (Crawford & Shutler, 1999; Deming, 1986; Hargreaves, 2009; Leithwood, Day, Sammons, Harris, & Hopkins, 2006; Saiti, 2012; Sallis, 2005). As Crawford and Shutler (1999) accurately observe, a school that adopts total quality aims not only to continuously improve the learning process but also the school management's aim to support the school processes.

Although there is much discussion on the importance of TQM and its contribution to education, as examined in the previous paragraphs, a number of researchers have been acknowledged as remaining sceptical about its application in school units. One of the arguments advanced by these researchers is that this is a philosophy originally developed for the business sector, and, as such, its acceptance in education seems inappropriate (Ah-Teck & Starr, 2014). Another argument developed by Reed, Lemak and Mero (2000) questions whether the absolute reduction of mistakes and errors, although feasible in an industrial production context, is equally applicable in an educational environment. In contrast, Ah-Teck and Starr (2014) claim that a strong movement towards quality processes in education, since, as demonstrated by the Organisation for Economic Co-operation and Development (OECD; 2011a, 2011b), education needs dynamic quality models, which may be provided through TQM. Such models will allow for a well-structured, interconnected and integrated education system which enables management, evaluation, motivation and improvement in student performance, as well as self-awareness of all stakeholders through the continuous improvement concept (Sallis, 2005).

2.1. The quality chain in TQM and education

One of the main principles that lie at the heart of TQM is the collection and analysis of data to investigate initially and act consequently over time on the needs and expectations of all parties involved in the process (Ah-Teck & Starr, 2014). As Deming (1986) said almost 30 years ago through his PDCA cycle (plan-do-check-act), applying your plan and understanding where it needs to be modified by obtaining data and acting upon feedback is considered to be a major difference between TQM and other management theories (Sallis, 2005). One of the difficulties in applying TQM in education is the intangibility of the service provided and the transformation towards the client-oriented culture-and thus the definition of the parties that constitute the quality chain. Despite the many and different definitions, it can be said that, in education, the product/service is the education, advice, assessment and guidance that are offered to the pupils/students/learners; the supplier, depending on how wide the system examined is, is the school or the educational unit in general, the teacher or the educator, the head of the unit and the administrative staff. Finally, the client is, again depending on how wide the system under examination is, the student or learner, the parents, sponsors, employers and the society in the wider context. The concept of the customer-supplier chain in the education sector is debatable since it has a commercial tone that is not considered to be appropriate for such an area. Thus, as Doherty (2008) explains, it is the word "stakeholder" that is preferred, as it raises fewer objections and is a milder approach to the receiver of service. Irrespective of the terminology, however, it is clear that educational organizations have a diverse range of stakeholders with diverse, and sometimes conflicting, expectations.

Further discussion on the distinction between primary and secondary customers, internal and external customers and stakeholders is beyond the scope of the present review. What is important, however, is to understand the importance of the role of the teacher in the quality chain and, consequently, the impact of his or her behaviour on the educational environment. The significance of teachers to the structure of the learning environment and to students' achievement has been consistently reinforced (Harford, 2010; Saiti, 2012). As Chong (2014) explains, if there is a will to improve the quality of the education system, it is important to ensure that the teachers are well prepared and assisted in their self-awareness and that the overall strategy is designed by the leader of the school and the rest of the stakeholders. It is the essence of the relationship between the basic stakeholders-the teacher and the learner-that, in the present review, we wish to evaluate in an attempt to improve, ultimately, the educational quality chain while providing a framework for personal improvement. First, however, theories, models and styles that describe teachers' behaviours and leadership attitudes will be examined as important elements of quality.

3. TEACHERS' BEHAVIOURS AND LEADERSHIP ATTITUDES

Modern educational reforms confirm the idea that there is a strong relation between leadership and school improvement (Harris, 2004). This view is further supported by Saiti (2012), who reports that the effectiveness of the school unit is frequently linked to the quality of its leadership. Over the years, there has been a significant turn towards what is called "distributed leadership", where leadership is shared or distributed among teachers, students, parents and other stakeholders in the school environment, as a sustainable means of building the type of a learning-focused school climate (Spillane, 2006). Although there has been considerable research on the actual implementation of school leadership and its contribution towards sustaining improvement (see, for example, Harris, 2004), there is little evidence with respect to the kinds of leadership that can be distributed across the stakeholders of a school

unit, such as teacher leadership, although the concept is not new and has been well accepted in the United States and Canada (Harris, 2003).

Teachers might wonder about the applicability of management and leadership theories in the area of education. Understandably, a teacher is the leader of his or her class and, in part, a leader of the school community. As Burns (1979) claims, leadership is leadership wherever you find it, and power and leadership are not concentrated in a few but are widely distributed. The author continues that leadership can be taught in the sense that great teachers are leaders and, vice versa, are joint seekers of truth. Taking this view, leadership is about learning together and constructing meaning and knowledge collectively and collaboratively (Harris, 2003). Despite the resistance to the idea of teachers being viewed as leaders, strengthening the teachers' leadership role within and outside the classroom can only positively reflect on the effectiveness of the school and its improvement (Bennett, Wise, Woods & Harvey, 2003; Fullan & Stiegelbauer, 1991; Harris, 2003).

Historically, Lippit and White (1943) have distinguished three leadership styles in the classroom: the democratic, which creates a positive atmosphere and brings positive results even in the absence of the teacher; the authoritarian, which creates a hostile climate but entails productivity; and the delegative (laissez-faire), which creates friendly relations in the group but does not lead to the effective achievement of objectives. Later, Bales (1951) defined two orientations of the educational leader (work and emotion), stressing, however, that the leader cannot accommodate both orientations simultaneously. This view was overthrown by Stogdill (1981) and by Sorrentino and Field (1986). McLaren (1993) distinguished teachers in despotic that teach from the front of the classroom; entertainers, who do not really care about learning but focus on how students will spend time pleasantly, and critics, who emphasize quality teaching and encourage student self-motivation as well as the development of their critical thinking.

A plethora of management and business models are currently being applied in the educational context (see, for example, Harris & Muijs, 2002). Some of the well-known models include the X and Y theory of McGregor (1960), the effectiveness theory of Fiedler (1967), the transformational leadership models of Burns (1979) and models by Lewin (1997) and Likert (1967). However, many of these and others theories, not illustrated herein, are founded in the classical theory of Blake and Mouton (1964a).

The managerial grid model developed by Blake and Mouton (1964a, 1964b, 1968) is a situational leadership model which originally identified five different leadership styles based on a concern for people as well as for production. The grid theory continued to evolve and developed into two additional leadership styles that feature a new element: resilience (Blake & Mouton, 1984, 1985). The managerial model is represented as a grid with a concern for production as the x-axis and a concern for people as the y-axis; each axis ranges from 1 (*low*) to 9 (*high*). The resulting original leadership styles, which are shown on the grid, are

- the indifferent style (1,1): evade and elude;
- the accommodating style (1,9): yield and comply;
- the dictatorial style (9,1): control and dominate;
- the middle-of-the-road style (5,5): balance and compromise;
- the sound style (9,9): contribute and commit.

The opportunistic style (exploit and manipulate) and the paternalistic style (prescribe and guide) were added to the grid theory at a later stage (Blake & Mouton, 1984; Blake, Mouton & McCanse, 1989).

Through this managerial model, an analytical approach has been developed that is suitable for a variety of contexts (e.g. sales, supervision, media and marriage). Practically,

this approach can be applied in any human activity that concerns at least two persons and the production-supply of a product or service. It is further acknowledged that there are a large number of leadership styles, models and theories that interpret human behaviour, as mentioned previously. It is the intent of this review to focus on the grid model and examine further its applicability and implications in the educational sector. The implementation proposed by the present research is demonstrated in the following section.

4. RESEARCH METHODOLOGY

The aim of the present review is to examine the potential for improving the educational quality chain but also to provide a framework for the personal improvement of the basic stakeholders of the educational quality chain: the teachers and the learners. Considering the complexity of the school environment and the variety of stakeholders involved, it is important to further understand the needs and attitudes and to try and move towards a common vision. Giannias and Sfakianaki (2015) introduced and defined teachers' styles within a grid framework based on the methodology initially proposed by Blake and Mouton (1964a). Understanding teachers' styles is clearly important and useful for the overall evaluation and strategy of a school. Thus, the methodology provides interest, as well as the opportunity to define the learners' respective behaviours through the use of the same grid and, consequently, the interaction of the different behaviours of teachers and learners.

This behavioural approach is used to help evaluate the relationship and thus improve the relationships of those comprising the quality chain. It can then be used as a tool for educational managers and other leaders who can align/plan together with teachers (or class leaders) with respect to the school mission and objectives: do (implement); check and act upon feedback (PDCA cycle) in the context of the continuous improvement of any quality management process.

5. IMPLEMENTATION

5.1. The GRID model in education: the teachers' perspective

To present our model, we take the view that "teachers" and "learners" are involved in the education quality process. Both terms are used in their widest sense and are specified according to the level of education considered. For example, if the model is applied at the third (university) level education system, the "teachers" are professors, and the "learners" are students. Following a behavioural approach, Giannias and Sfakianaki (2015) introduced the characteristics of successful teachers and identified two fundamental drivers of teachers' behaviour:

- concern for providing education (getting the job done)
- concern for the learners (as people)

These two fundamental drivers of teachers' behaviour imply the classification, which is illustrated in Table 1. A teacher's type is specified by a pair (x and y) of numbers (scores), where x is a measure of a teacher's concern for education, and y is a measure of a teacher's concern for learners. Both x and y scores range from 1 (low) to 9 (high). In our model, x and y specify types of teacher behaviour. Given that the x and y values range from 1 to 9, there are 81 (= 9x9) combinations of types, which are shown in Table 1. Each cell of Table 1 represents a specific x-y combination. Table 1 illustrates the five representative types (1,1), (1,9), (9,9), (9,1) and (5,5), as well as type (9,2).

 1,9
 9,9

 5,5
 9,2

 1,1
 9,1

 1
 2
 3
 4
 5
 6
 7
 8
 9

 Teachers' concern for education

Table 1. The Teachers' Grid.

Giannias and Sfakianaki (2015) identify the five types of teachers' behaviour that are discussed in the following paragraphs. The bottom right corner of the grid represents a (9,1) style of teaching-maximum concern for the efficient accomplishment of education but minimum concern for human relationships with learners. This pattern corresponds to the old style of authority-based teaching, which is characterized by command and control of the class.

The dictatorial (9,1) style of teaching finds learners' needs unimportant; teachers who practise this style provide learners with a great deal of educational material and expect performance in return; they also pressure students to learn through the use of rules and punishments. Teachers who practice other teaching styles usually use a (9,1) approach when they realize that their primary style is unsuccessful.

The (1,9) style (top left), in contrast, focuses on human relations with learners at the cost of efficient education and has been called the "nursery school" style of education. The (1,9) style is based on the principles of yield and comply. This style has a high degree of concern for people and a low degree of concern for production. The (1,9) type of teachers pay much attention to the security and comfort of learners in hopes of increasing their performance in class. The resulting atmosphere in a class with a (1,9) teacher is usually friendly but not necessarily very efficient in terms of education.

The (1,1) teaching style (minimum concern for either production or people) is characterized by a desire to avoid responsibility and to exert minimum effort. The indifferent style (1,1) of teaching is characterized by the terms "evade" and "elude". In this style, managers have low levels of concern for both people and production. Accordingly, teachers use this style to preserve their jobs and their job seniority while protecting themselves by avoiding getting into trouble. The main concern of the manager is not to be held responsible for any mistakes, a strategy that results in less innovative decisions or activities.

The (5,5) teaching type attempts to maintain a balance between both concerns. The status quo, or middle-of-the-road, style (5,5) is characterized by balance and compromise. Teachers using this style try to balance the goals of education with learners' needs. By giving some concern to both learners and education, teachers who use this style hope to achieve suitable performance; doing so, however, gives away a bit of each concern so that neither education nor learners' needs are met.

The (9,9) type of teaching integrates maximum attention to both learners and education and is put forward as the most effective approach. The sound, team style of (9,9) teaching is characterized by contribution and commitment. In this style, a high degree of concern is paid both to learners and to education. A teacher choosing to use this style encourages teamwork

and commitment among learners. This method relies heavily on making learners feel themselves and being constructive parts of their class.

Using standard, grid-based analytical-methodological approaches, the five representative types of Table 1 can be studied in depth to clarify their advantages and disadvantages, as well as for their comparable evaluation. This information is valuable at both personal and organizational levels for the following reasons: A teacher using grid tools (e.g. a personal self-evaluation test) identifies his or her type as, for example, (9,2). This implies that among the five representative types, the (9,1) style is closer to his or her teacher-behaviour and effectiveness. Thus, a thorough study and understanding of the five representative types can be a useful tool (methodology) for self-development. For example, if this teacher has realized that the best type for him/herself is (5,5), he/she cannot be satisfied with a (9,2) positioning on the grid. In this respect, the grid tool, in essence, suggests those personal changes the teacher must develop in order to change his or her position on the grid and to thus achieve self-improvement. Further, in an organization such as a school, a grid-based research, as will be further explained in section 5.3, can identify what the best/ideal type of teacher is for the organization. Given this, a plan can be designed to help and to motivate the teachers of the school (each of which has his/her own type) to move towards the best/ideal type of the organization and thereby enhance the school's mission and objectives. As Filiz (2013) states, it is important for teachers to receive feedback on their work and on the level of service they provide. Equally important for the teachers is an understanding of how their work is acknowledged and perceived by the head of the unit, learners and other colleagues.

5.2. Classroom behaviours: the learners' perspective

Teachers cannot predict the specific behavioural issues they will need to address in class. In some instances, they may experience few disruptions or problems, and in others, it may seem as though every learner is devising a way to distract, disturb, disrespect or otherwise cause problems for their fellow classmates and teachers. McKeachie and Svinicki (2014) identify the following four types of students, characterized by the challenging behaviours they may exhibit in a classroom:

- Attention-seeking, discussion-dominating students: students who want to be heard and heard often.
- Inattentive students: students who are apt to drift off into their own thoughts, stare into their smartphones or talk with classmates in the middle of a lecture.
- Unprepared students: students who make a habit of skipping the reading, viewing, listening or other assignments intended as pre-class work.
- Uncivil and disrespectful students: students who disrespect the time, feelings and thoughts of their teachers and their fellow students; their rude behaviour has a negative impact on the entire class.

The effectiveness of each type of teacher with respect to managing the learners' classroom behaviours, as provided by McKeachie and Svinicki (2014), constitutes an interesting subject that needs to be studied further through empirical research, which is not within the scope of the present review. Towards this direction, however, a grid-based typology of learners' styles, as is presented in the following section, might be equally appropriate.

5.3. The learners' grid

Following the grid approach discussed in section 5.1, the learners' grid is presented in Table 2; in this grid, also, the x-axis represents a concern for education, and the y-axis represents a concern for teachers.

Learners' concern for education

 1,9
 9,9

 5,5
 9,1

 1,1
 9,1

 1
 2
 3
 4
 5
 6
 7
 8
 9

Table 2. The Learners' Grid.

More specifically, the two variables of *concern for education* and *concern for teachers* are plotted on a grid (Table 2) showing nine degrees of concern for each, with 1 indicating a low level of concern and 9 indicating a high level of concern. Five positions on the grid represent five differing behaviour patterns of learners. In Table 2, the following learners' styles are identified as follows:

The (9,1) style (the push education orientation): This approach (lower right corner of the learners' grid) involves complete concern for education, with little or no regard for the teacher.

The (1,9) style (the teacher orientation): This approach (upper left corner of the learners' grid) involves little or no concern for education and maximum concern for the teacher

The (1,1) style (understand it or leave it): This approach (lower left corner of the learners' grid) involves little or no concern for either education or for the teacher.

The (5,5) style (the educational routine orientation): This approach (middle of the learners' grid) involves an average level of concern for education and average concern for the teacher.

The (9.9) style (the problem-solving orientation): This approach (upper right corner of the learners' grid) involves maximum concern for education and maximum concern for the teacher.

Using the grid typology for teachers and learners that was introduced above, the effectiveness of teachers' types can be identified within a school environment, as is explained in the following example. Suppose that in a specific school, a grid-based research has identified the effectiveness (using as a criterion the final objective, which is education) of each type of teacher on each type of learner. The results of this research are presented in Table 3, in which the following coding is used:

- (+1): A rather effective combination
- (0): Neither an effective or ineffective combination
- (-1): A rather ineffective combination

Table 3. The Effectiveness of Teachers' Types.

TEACHERS' GRID	LEARNERS' GRID				
	1,1	1,9	5,5	9,1	9,9
9,9	1	1	1	1	1
9,1	-1	-1	1	1	1
5,5	0	0	1	1	1
1,9	-1	-1	0	-1	1
1,1	-1	-1	0	-1	1

After incorporating in the analysis all relevant cost aspects, the information in Table 3 indicates what the best type of teacher is for the specific school; (9,9) is shown to be the best type of teacher for the school. However, this type of teacher may be too expensive to hire or maintain and the school management may decide (after taking into account all cost aspects of the alternative choices) to take the necessary actions for hiring or maintaining in the school teachers of type (5,5). Naturally, in public schools, there is no real choice as to the type of teacher that will be employed, since in most countries they are appointed directly by the state; however, even in this case, the head of the school can, together with the teachers, work out a policy towards which the school wishes to move. Ensuring that the teacher is compatible with the school policy and is willing to work towards implementing the school strategy can only affect him or her positively, thereby representing a significant aspect of job satisfaction, which in turn affects, implicitly, the learners (Reilly, Dhingra & Boduszek, 2014).

6. CONCLUSIONS

Education institutions of all levels are being pressured to become more efficient and responsive to their "customers" needs by offering an effective and motivating educational environment. With a variety of stakeholders and relationships in educational environments, integrating different needs and attitudes is a challenge. Quality is vital and can contribute significantly through its focus on continuous improvement. In the present review, the model proposed by Blake and Mouton (1964a) was employed in the context of the quality chain, as defined in education, between the basic stakeholders: the teachers and the learners. In the analysis, the teachers' and learners' styles were examined separately and were also viewed in relation to each other.

Human behaviour, an important element in the improvement of any environment, is also an important element of TQM. There are meaningful lessons that can be learned from the present review, even if one does not adhere (at least not completely) to a TQM approach. The advantage of the proposed grid-based approach has several applications. It can be used by educational management teams to review and assess an overall educational strategy and provide feedback to the teachers. Teachers can obtain a realistic assessment of their work and what is expected of them. The grid-based approach can also be used as a self-assessment tool for the teacher and the learner and provide feedback with respect to a personal PDCA cycle. It can be used by the teacher to improve the quality of learning within the class. In conclusion, the grid-based approach can improve the quality chain as defined in this chapter, since it capitalizes on existing knowledge (originated from management) to develop diagnostic tests for identifying (through empirical research) the teachers' and learners' types within a specific educational environment. The next step in this evaluation process is to collect empirical data in order to test, verify and modify the proposed methodology.

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AUTHOR(S) INFORMATION

Full name: Dimitrios A. Giannias

Institutional affiliation: School of Social Sciences

Institutional address: Parodos Aristotelous 18, Perivola Patra 26335

Short biographical sketch: Dimitrios Giannias is a Professor at the School of Social Sciences at the Hellenic Open University in Greece. He is the editor of the EAST-WEST Journal of Economics and Business. His areas of expertise include business administration, industrial organisation, microeconomics, business economics, quality of life, economic analysis, environmental economics, marketing, business communication, networking. Dimitris Giannias has published widely (more than 220 articles in referred journals and books), including articles in: Applied Economics, The Hudson Valley Regional Review, Journal of Urban Economics, Environmental Monitoring and Assessment, Environmental and Resource Economics, Journal of Environmental Management Journal of Interdisciplinary Economics, Canadian Journal of Regional Science, Economic Notes, Ecological Economics, Journal of Transforming Economies and Societies, Regional Studies, Urban Studies and many others. He has also published in several conference proceedings, books and has organized more than 10 conferences. He has also worked extensively in research projects and has coordinated a large number of them.

Full name: Eleni Sfakianaki

Institutional affiliation: School of Social Sciences

Institutional address: Parodos Aristotelous 18, Perivola Patra 26335

Short biographical sketch: Eleni Sfakianaki is an Assistant Professor at the School of Social Sciences at the Hellenic Open University, at the undergraduate program of Business Administration. Her areas of expertise include quality management and education, total quality management, teaching and learning in higher education environmental management, sustainability, life cycle assessment, decision analysis. She has also worked as a consultant in the project and environmental management of large scale projects.