



# COMPATIBILITY AND CHALLENGES OF IMPLEMENTING TOTAL QUALITY MANAGEMENT IN EDUCATION

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## Keywords:

*Total Quality Management (TQM);  
Education; Compatibility; Challenges;  
Continuous Improvement; Quality  
Culture.*



## ABSTRACT

*In many countries around the world, a good education is a major concern. Academic institutions' performance in a highly competitive education market is determined by the level of education they provide. Absolute quality management (TQM), which is recognized as an important management philosophy for performance growth, customer loyalty, and operational excellence, is attracting the attention of educators, policymakers, academics, and researchers. Since this theory was first formulated in the industrial industry, there is a lot of skepticism about whether it can be applied to education. In this regard, the primary goal of this research is to see whether TQM and education are compatible. Simultaneously, this research would attempt to recognize core problems in the implementation of TQM in education. It is expected that this research will be able to draw a concrete conclusion about the applicability of TQM in education, as well as raise awareness about the difficulties that will arise in implementing TQM in education.*

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## 1. INTRODUCTION

Total Quality Management (TQM) is a well-known management concept that is applied as a method for achieving corporate excellence. While Dr. W. Edwards Deming called for complete quality control in the late 1950s in the United States, Japan was the first country to adopt the idea to help their economy rebound after WWII. TQM is well-known in several countries around the world because of its popularity in Japan. Originally designed for industrial companies, the term has since spread to other service industries such as banking, insurance, non-profit organizations, health care, and so on (Van Der Linde, 2000). TQM is also applicable to businesses, service agencies, colleges, and elementary and secondary schools, according to Lunenburg. TQM is

now well accepted as a generic management technique that can be used in any enterprise (Avila, 2018; Sharples, Slusher, & Swaim, 1996).

Some academics are wary of the possibility of implementing TQM in higher education (HEI). For example, Chaston has described roadblocks such as a lack of trust between departments and poor morale in the capacity to handle the process: "Under these conditions, it does not seem that British universities will be able to follow TQM theory in the near future." HEIs who study and teach TQM, on the other hand, lose reputation if they refuse to accept the TQM theory and practices (Venkatraman, 2007). The most successful and comprehensive way to apply TQM to HEIs and expand

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on current partial TQM practices is determined in this paper.

Although several organizations have been active in implementing TQM, some have been unable to reap the benefits of TQM due to a lack of focus in their implementation. Some managers believe that quality is driven by internal development systems or participative management programs, which can deviate from their core market and consumer emphasis, resulting in cost overruns, while applying TQM theory to their organizations (Yusr, 2016). As a result, it is important for higher education to learn from these organizations' perspectives and to first focus on their key business operations, namely teaching and learning. In contrast to manufacturing, where mathematical quality management methods can be used when they interact with physical procedures (such as calculating the quality of goods/services based on product specifications), what happens in the classroom in higher education is subjective. As a result, higher education is faced with the major obstacle of grappling with education's intangibility (Nasim, Sikander, & Tian, 2020). As a result, TQM philosophies must be adjusted to account for intangible facets of student learning. Higher education is now facing significant pressure from its stakeholders for its inability to adapt to ever-changing business dynamics, socioeconomic conditions, and stiff competition across the world. Higher education could adapt to such a changing environment by upgrading procedures and delivering high-quality education (Bagrova, Kruchinin, & Nazarenko, 2018; Nurcahyo, Apriliani, Muslim, & Wibowo, 2019). The aim of this paper is to investigate whether TQM philosophies can be combined with teaching/learning processes to achieve the requisite reforms in higher education. The aim of this paper is to investigate whether TQM philosophies can be combined with teaching/learning processes to achieve the requisite reforms in higher education. This paper suggests a TQM system and investigates continuous teaching development as a way of effectively applying TQM in higher education systems.

Quality schooling, according to Koslowski (2006) is a big problem in this era of heavy rivalry. The need for high-quality education is growing. Since it is known that quality education is one of the basic building blocks of economic growth, all interested parties in education are strongly considering introducing TQM in education (Paul & Pradhan, 2019). Since TQM was originally designed for industrial organizations, there has been some controversy about its applicability in education. It is critical to find a solution to this problem. During the initial investigation, it was discovered that applying TQM in education poses significant difficulties. It is also important to investigate the scope of such issues so that learning institutions can take constructive steps against TQM in education.

## 2. LITERATURE REVIEW

The primary goal of this research is to determine if TQM and education are compatible. Simultaneously, this research would attempt to recognize the obstacles that may obstruct the implementation of TQM in education. While achieving these goals, this report will place a special emphasis on the word TQM so that everybody will understand the features and future benefits of implementing TQM. Education, as used in this article, refers to basic, secondary, and tertiary education, as well as technical and vocational education.

## 3. METHODOLOGY

For this analysis, qualitative approach was selected. This exploratory approach will allow us to better understand and explain the study's key issue. Data and information for this research were gathered from a wide range of sources, including detailed literature, expert interviews, and personal knowledge.

### 3.1 Total Quality Management: Definition, Characteristics and Benefits

Total Quality Management (TQM) is a management strategy that began in the 1950s and has steadily gained popularity since the early 1980s. This philosophy revolves around the concept of consistency. Scholars used the opportunity to express their perspectives on absolute quality control in a variety of ways when describing the term; as a result, we now have a range of meanings with various connotations. According to Crosby (1979), quality control is a systematic approach to ensuring that coordinated operations take place as planned. TQM, as described by Short and Rahim, is a systematic approach to ensuring consistency in the product, service, and process design, and then continuously improving it. TQM is a plan, a structured approach to ensure consistency and continuous development, according to these concepts. Deming explains TQM is a never-ending loop of improvement in the manufacturing system that can result in improved product efficiency and quality levels (Douglas & Fredendall, 2004). TQM, according to Yang, is a group of activities that focuses on systematic change, meeting consumer demands, and reducing rework. TQM is a collection of procedures and a framework directed at continuous quality management and improved market efficiency (Linderman, Schroeder, Zaheer, Liedtke, & Choo, 2004).

TQM considers a company to be a series of interconnected systems. It (TQM) is a tool for including management and workers in the continual development of products and services quality. TQM, according to Alofan, Chen, and Tan (2020) consists of continuous development practices engaging everyone in the organization in a fully organized attempt to increase efficiency at all levels. According to Calvo-Mora,

Blanco-Oliver, Roldán, and Periañez-Cristóbal (2020) TQM provides an atmosphere in which all assets are creatively and efficiently used to deliver the high-quality service that an institution requires in today's fast-paced world.

TQM is a mixture of three words, according to Witcher: Total: implying that everyone is concerned, including customers and suppliers; Quality: implying that consumer expectations are fulfilled precisely; and Management: implying that senior executives are committed. TQM, according to Kanapathy, Bin, Zailani, and Aghapour (2017) is an approach that involves the entire organization to consider each behavior with everybody at each management tier. TQM aims to combine all corporate roles (marketing, financing, design, innovation, and manufacturing, customer support, and so on) so that they can concentrate on addressing customer demands and achieving organizational goals. TQM, according to Dubey and Gunasekaran (2015), is a proactive action that focuses on controlling the whole enterprise to deliver goods or services that meet the needs of their customers by using all available resources. TQM, as described by Hietschold, Reinhardt, and Gurtner (2014), is a holistic management strategy that integrates all operational practices to meet customers' desires while still achieving overall organizational objectives.

TQM, according to Sila (2007), is a functional paradigm that emphasizes contribution to others. TQM follows the norm that companies should listen to their clients, continuously assess how well they are reacting to their wishes, and facilitate reform in order to fulfill or satisfy the customers' expectations, according to Hendricks and Singhal (1997). The point is clear: delighted customers boost company, while unhappy customers destroy it, as Beer (2003) put it. Customer loyalty is closely linked to service efficiency, according to Hung, Lien, Yang, Wu, and Kuo (2011) and it is an essential factor for service organizations. Green (2012) make a profound observation: TQM is a management philosophy that establishes a customer-driven learning enterprise dedicated to absolute customer satisfaction by continuously improving the efficacy and productivity of the organization and its processes, according to them. Customer loyalty is a significant source of market growth in TQM, and it is considered an exclusive topic.

Since market excellence is primarily dependent on the degree to which workers of a company are competent of their respective fields, TQM advocates for people advancement very specifically. As Ooi, Lin, Teh, and Chong (2012) sees it, TQM allows teamwork possible and real by using employee skills in both operations and processes. It encourages staff to develop their skills on a regular basis. TQM encourages a quality community by ensuring better product and service quality. TQM, according to Gaither, is the method of transforming an organization's fundamental culture and redirecting it

toward superior product or service efficiency. TQM, according to Nallusamy (2016), aids in the development of a culture of confidence, engagement, collaboration, quality-mindedness, passion for professional growth, lifelong learning, and, as a result, a working culture that leads to a company's success and survival. Both members of an organization engage in a TQM initiative by working to improve procedures, goods, programs, and the community in which they serve.

Aquilani, Silvestri, and Ruggieri (2016) stresses the importance of absolute quality management in improving corporate efficiency; according to him, quality efforts should extend beyond product and service; TQM should govern the whole organization, resulting in improved market performance. TQM is described as a "management doctrine and company patterns that aim to rein in an organization's human and material capital in the most productive way to achieve the organization's goal," according to the Standard (2005). TQM's essential characteristics and significant offerings, such as continuous improvement, integration of people, functions, and resources, systematic and structured approach, quality control at every level of the organization and at every step of the operating process, developing human and organizational capabilities, and efficacy, can all be easily identified from these definitions. Academic organizations are more likely to incorporate TQM into their processes to reap these advantages.

### **3.2 Compatibility of TQM with Education**

TQM, as a human-centered approach, will make significant contributions to improving educational quality and improving educational organizations. Since human beings are both the inputs and outputs of educational organizations, and human beings are the primary players at all levels and in all processes of these organizations, ensuring the efficacy of educational organizations is difficult without ensuring the happiness of human beings (both as consumers and providers). Primary schools are critical for the consistency and success of the educational system because they are the starting point of the educational process. The seeds of human growth that will shape an individual's whole life are set at the primary school level, where ideals that ensure socio-cultural identity and stability are instilled (Lunenborg & Fred, 2010). Basic attitudes and habits that impair a stable social life are learned. As a result, primary schools have a major impact on the standard of life of people and communities. Because of these factors, as well as the sequential and ongoing aspect of the educational process, primary schools have a significant impact on secondary schools. As a result, if we are to achieve a high-quality education system, we must first address the question of quality at the most fundamental level (Herman & Herman, 1995).

TQM, according to Mahmood, Hashmi, Shoaib, Danish, and Abbas (2014), can be characterized as a general management theory and a collection of tools that enable an organization to follow a concept of quality and a means of achieving quality, with quality being defined as a continuous improvement as determined by customers' satisfaction with services obtained. It emphasizes TQM's adaptability, i.e., that it can be applied to any organization and adjusted according to the circumstances. An academic university will use TQM to create its own concept of excellence, benchmarks, and quality assurance practices based on the needs of its consumers. In their survey, Altunay, Arli, and Yalcinkaya (2012) stated that economic and legislative factors are moving higher education into a new world, and that in this environment, TQM adoption is a "natural" phenomenon. TQM is a process-oriented solution to rising efficiency, lowering costs, and enhancing service quality in higher education. TQM ideas suggest that it emphasizes collaboration, seeking new ways to do things, bearing responsibility, and radically changing institutional environments, many of which are values shared by many contemporary universities and their faculties.

The conclusions of the literature on the utility of TQM in education vary, according to Ahmed and Ali (2016). Some scholars are very positive in the application of TQM in education. They assume that TQM principles are equally important in higher education, according to Srivanci. According to Usman, AR, and ZA (2020), TQM values are consistent with higher education. James and James' conclusion are noteworthy; they believe that TQM is naturally important to higher education because it is a process-oriented approach aimed at raising competitiveness, lowering prices, and enhancing efficiency. TQM, according to Deming, would aid higher education institutions in maintaining their competitiveness, eliminating inefficiencies in the organisation, focusing on consumer demands, achieving good success in all fields, and meeting the needs of all stakeholders (Hoang, Igel, & Laosirihongthong, 2010). Tribus argues that quality control will help to enhance education. TQM, according to Peak, benefits educational institutions in a variety of areas, including strengthening the educational process, making the educational experience more motivating, improving instructional instruction, speeding up training services, and lowering costs. TQM, as described by Sharples et al. (1996), is a method for achieving and sustaining excellence in higher education. Pourrajab, Basri, Daud, and Asimiran (2015) observe that, whatever the motivating factor, quality control in education has made a significant difference, as previously stated. TQM was designed in the manufacturing context, but the advantages are equally important to support organizations such as higher education institutions, according to Wibowo, Syukri, and Sukmawati (2019). TQM, according to Nawelwa, Sichinsambwe, and Mwanza (2015a), is a general management theory and a set of resources that encourage

educational institutions to follow a definition of excellence and methods for achieving it.

TQM has a significant effect on education improvement processes and outcomes, according to Safakli and San (2007), adding to a country's social and economic well-being. HEIs will benefit from TQM in a variety of ways, according to Svensson and Klefsjö (2006), including financial savings, improved morale, improved efficiency, increased flexibility, improved customer support and procedures, and the creation of a sense of teamwork. TQM, according to Green (2012), is a process-oriented solution to increasing competitiveness, lowering costs, and improving service efficiency in higher education. Universities use TQM to enhance instruction, assess student satisfaction, improve the program, measure staff satisfaction, and improve university operations, according to Svensson and Klefsjö (2006). Wibowo et al. (2019) investigated the effects of TQM on process and operation efficiency, employee service quality, employee retention, customer satisfaction, and supplier success in the service industry. TQM gains in service industries, according to Usman et al. (2020), include increased efficiency, higher customer loyalty, increased staff morale, better management-labor relations, and higher overall performance. According to Bagrova et al. (2018), proof should be given that the outcomes of TQM implementation are measurable and long-term. This proof should not be limited to organizational, economical, or business outcomes that show the outcome of previous success. It can also provide outcomes from other stakeholders that function as leading measures of potential financial/key success outcomes, such as customer happiness and engagement, employee productivity and capacity, and community satisfaction Dubey and Gunasekaran (2015).

Others assume that TQM should be used in education to some degree. According to Nawelwa, Sichinsambwe, and Mwanza (2015b), TQM principles are only marginally useful in a diverse and evolving world, which is a feature of contemporary higher education. While higher education institutions are not businesses, some of the same fundamental concepts and tools apply since they are instruments at service institutions and their governing and management boards, which are subject to the institution's academic mandate, priorities, and strategies, as Nawelwa et al. (2015a) point out. TQM has been found to be a managerial instrument in two different studies by Venkatraman (2007). TQM has been found to be a managerial instrument in two different studies by Wibowo et al. (2019).

Continuous quality growth, quality continuity, engagement of educators, students, and non-academic personnel, customer retention, and the presence of management processes that reinforce quality, according to Argyrios (2017), are all quality management systems that no one can dismiss in the field of higher education. Quality, according to Shaukat Ali, Abir Hassan, and

Sajjad Ali (2020), will foster an environment in which educators, parents, government officials, community members, and industry leaders collaborate to provide students with the tools they need to fulfill current and potential academic, business, and social needs. In higher education, Shaukat Ali et al. (2020) find that a range of TQM components, such as "leadership," "vision," "measurement and appraisal," "process management and development," "application design," "quality system enhancement," "employee participation," "recognition and reward," "evaluation and preparation," "student concentration," and "other stakeholder focus," play a critical role in process improvement. Any TQM instruments and techniques are convincingly useful in school, according to many academics. Elahi and Ilyas (2019), for example, mentions the use of quality feature implementation (QFD), which is used to integrate customer and other stakeholders' preferences in program design. Claude Ah-Teck and E. Starr (2014) explore how Six Sigma, Service Quality (SERVQUAL), ISO9000, and TQM should be used in higher education. It can provide realistic options as well as beneficial outcomes in academic and administrative roles.

TQM is credibly consistent with education, as shown by the preceding debate. However, Avila (2018) observation in this regard is very thought provoking; they state that TQM values are not uniformly applicable in all contexts but are dependent on contextual factors. It means that as used in school, TQM instruments and methods are subject to fine tuning.

### **3.3 Key Challenges in Implementing TQM in Education**

TQM has unquestionably great promise in the field of education. It should not be said that there would be no difficulties or roadblocks in applying TQM in education. Any educators claim that corporate theory would not be suitable for non-profit organizations such as educational institutions. The ethos and features of schools and other types of learning institutions are vastly different, making it difficult, if not unlikely, to incorporate a theory drawn from business. According to Kumar, Sharma, Verma, Lai, and Chang (2018), in higher education institutions, words like commodity, customer, empowerment, or even policy, reengineering do not easily correlate. The biggest roadblock could be the dedication of those involved in the educational system, especially top management, and teachers. Ng, Rungtusanatham, Zhao, and Ivanova (2015) observe that a lack of top management engagement has a negative impact on TQM efforts and is one of the key causes for TQM failure. Professors, according to Tomažević, Seljak, and Aristovnik (2016), are the most averse to quality process management because they see it as just another industry fad; a common attitude that can compromise TQM's efficacy is schooling. Individuals, especially teachers, play a more casual and less hierarchical role in traditional education. Individuals, especially teachers, play a more casual and

less hierarchical role in traditional education. Paul and Pradhan (2019), on the other hand, note that the TQM solution seems to be more administrative and bureaucratic; there is a desire to hold endless sessions, create massive volumes of paper, and postpone or avoid making important decisions.

The concept of excellence of education has long been a source of contention. According to Kanapathy et al. (2017), quality can have several different meanings in higher education, and this diversity has a significant impact on the creation of approaches and instruments for assessing quality, as well as different stakeholders for higher education institutions. Herman and Herman (1995) claims that the way consistency is defined in enterprise and industry contexts, based on the desires and preferences of consumers, is not entirely suitable for education. Overall, this term (quality) can put academic institutions in a difficult position. In manufacturing or company organizations, the word "customer" can be very simple to describe. In education, though, distinguishing and recognizing customers is a difficulty. According to Shaukat Ali et al. (2020), ambiguity in consumer identity often poses challenges in TQM implementation. According to Svensson and Klefsjö (2006), the term (customer) is prevalent in manufacturing or the business world, which is troublesome in education because it is focused on the notion of meeting consumers' desires and aspirations. There are also people who are involved in education. It is relatively simple to describe at the elementary and high school levels; parents are clients, and students are users. Customers in higher education, according to Tomažević et al. (2016), are far more complex and difficult to categorize. In the case of tertiary education, the situation is more complex. When a student pays his or her tuition fees, he or she will be both a consumer and a customer. Employer companies are also employers of the labor market. Sponsors are the clients in the case of scholarship recipients. The state is indeed a client. Quality efforts, according to Safakli and San (2007), can be easily diffused without a precise understanding of consumer and a customer priority.

Svensson and Klefsjö (2006) identified a number of reasons for TQM's failure in higher education, including resistance to change, a lack of administration commitment, a high time investment due to personal training, difficulty in applying TQM tools to higher education institutions, insufficient experience of team leaders and staff in teamwork, and higher education institutions' anxieties about TQM's implementation. Aquilani et al. (2016) cites a number of reasons, including: a lack of focus, in which TQM emphasizes non-academic activities (e.g. bill collection, check writing, admissions applications, and physical plant inventory) rather than core academic activities (e.g. curriculum development, teaching and learning style, tuition fees, student welfare, and so on) rather than core academic activities (e.g. curriculum development, teaching and learning style, tuition fees, student welfare,

and so on); resistance from faculty members. Since a wide variety of customers (such as students, parents, academics, graduates, business companies, and so on) are interested in higher education, defining customers and evaluating results are two major challenges in applying TQM in education. It is often challenging to determine who are the actual customers in education (Mushtaq & Peng, 2020).

Felestin and Triyono (2015) also list a number of obstacles to TQM implementation in education, including the lack of effective communication channels, the difficulty in measuring higher education institutions' performance, the coexistence of multiple purposes and objectives for higher education institutions, the emphasis on individualism and a high degree of internal competition, and the bureaucratic decision-making process. Ineffective leadership; obstruction of change; inconsistent policies; inadequate corporate structure; and weak control of the change process are some of the other flaws in applying TQM, according to Kumar et al. (2018). In this regard, Koslowski (2006) sees a variety of issues, including a lack of dedication from management and some employees, the school's corporate culture, weak reporting, insufficient staff preparation, and inefficient communication.

#### 4. CONCLUSION

This analysis does not include any mechanism or guidance for implementing TQM successfully in an organization; rather, it focuses on explaining what could empower an academic institute to incorporate TQM into its processes, determining how applicable and compatible TQM is with education, and determining what might obstruct TQM's effective implementation in

education. However, it can be said that for TQM to be viable, a quality culture must be created, i.e. a transition from conventional management culture to a complete quality culture is required. TQM, according to Deming, is a management theory that necessitates a fundamental structural shift in an organization from conventional management to quality improvement management (Dubey & Gunasekaran, 2015). Tomažević et al. (2016) expresses a similar sentiment, stating that TQM necessitates a shift in culture, as well as a shift in perceptions and working practices, as well as a shift in administrative management.

A quality culture is a collection of common ideals, opinions, and norms centered on delighting consumers and enhancing product and service quality over time. TQM values such as performance development, collaborative dialogue, fact-based problem solving among decision making, and others can be fostered by a quality community. Academic institutions can also take a more customer-focused approach to coping with students (Metaxas & Koulouriotis, 2014). The traditional teacher-student partnership is no longer beneficial to everyone. Professional management practices must be spread across educational institutions. In TQM, a wide variety of tools and techniques are available. TQM methods, strategies, and principles chosen at random cannot have any practical value. Instead, it is preferable to use tools and strategies that are appropriate for an academic setting. The transition to absolute consistency is a gradual and steady process that takes years to complete. But, with persistence, teamwork, and help, this transformation can be accomplished. Furthermore, each organization should be a learning agency that focuses on the learner's individual growth as well as the empowerment of all employees, as Nasim et al. (2020) emphasizes.

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