

An Analysis of Implementing Total Quality Management in Education: Succes and Challenging Factors

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Abstract

Quality of education nowadays is the primary concern for those who are involved and plunge into education. In recent years, TQM has been applied in the world of education to improve the quality of education since it is believed as a practical management philosophy for dynamic improvement, customer satisfaction, and organizational excellence. However, this notion has begun to be developed in the manufacturing sector. Therefore, this study used a qualitative approach through extensive literature to provide a better comprehension of implementing TQM in education. This research is expected to conclude the crucial factors supporting the successful implementation of TQM in education to reach the advantage of its application maximally. This paper also discussed the challenges faced in implementing TQM in education so that schools can take appropriate steps when actively implementing TQM in education. Besides, we explained about the implementation of TQM in Indonesia, particularly in vocational schools.

Keywords: education, quality, TQM

1. Introduction

In this intense competition era, the quality of education is the most crucial concern in a country (Koslowski, 2006). Quality education is the heart of education that influences what students learn, how well they learn, and what benefits they get from their education. Efforts to ensure that students achieve learning outcomes and obtain values and skills, helping them play a decisive role in their society are problems on the policy agenda in almost every country (UNESCO, 1998). Improving the quality of education is probably one of the most critical tasks any organization may be facing, whether private or public. Educational institutions are not foreign to this reality; on the contrary, they have also recognized the need to pursue this quest for quality and to deliver it to pupils and students (Ejionueme & Oyoyo, 2015).

Quality education is a skill to build the ability to accommodate and assimilate knowledge in the field of educational needs and the implementation of this knowledge to create a mechanism to achieve customer expectations and education services (Campatelli et al., 2011). The quality of the education system is very dependent on the educational attainment of educators because no education system is qualitatively higher than the quality and commitment of educators (Bua & Ada, 2013). Many educators provide services based only on experience, routine, and intuition, which goes well at certain times. However, from year to year, customers (students and parents) change, and so do their needs, demands, and expectations. Therefore, there is no appropriate benchmark to meet the needs of students to produce quality education. Besides, educators are not empowered with the ability and knowledge to meet these new needs, new demands, and new expectations to improve the quality of private secondary education (Gomes & Panchoo, 2017).

Through compulsion and increasing demand for quality education, stakeholders involved in education are actively deliberate for adopting total quality management in the private sector to TQM for education (Sarrico et al., 2010). The application of that consideration is based on

several factors, such as the demanding industry, the mindset information age, increased competition, and student search. To ensure education can deal with changes in markets and technology coupled with global requirements, it is vital for institutions offering schools to use appropriate curriculum, subject matters, and teaching methodologies that are not only current but also effective from the perspective of students. Exponential knowledge growth, exploding teaching technology, increasing access to crucial institutional practices, accessibility to knowledge, and globalization of education requires educators to continuously evaluate themselves and increase their effectiveness by applying the TQM concept in school.

Total quality management means management of all elements of organizational processes, practices, systems, methodologies, and all parties involved (Stanciu, 2003). The main aim of TQM is to create a climate in the organization where all resources are used creatively and efficiently, which gives staff confidence in management. TQM models based on quality teacher teaching generally involve several principles such as teamwork, top management, leadership, customer focus, employee involvement, continuous improvement tools, training, etc. (Murad & Shastri, 2010). TQM is considered more appropriate to capture the essence of quality improvement in secondary education settings because it provides a framework that promotes positive development (Ejionueme & Oyoyo, 2015; Saberi & Romle, 2015). Therefore, commitment to quality makes educators proficient and engages the student's study and work hard for progress. TQM provides guiding principles for the education reform needed (Gomes & Panchoo, 2017).

Although TQM was initially intended for the development of the industrial sector, Deming (1993) stated that management principles could be applied equally to the service sector, which also included education. On the other hand, the quality of education is becoming increasingly crucial for those involved in it. Therefore, the TQM approach in education not only involves achieving high quality but also affects all segments of the educational process, organization, management, interpersonal relations, material, and human resources, etc. According to Pratasavitskaya and Stensaker (2010), education is not only about quality and excellence, but also involving the quality of the active presence of students, teachers, systems, and stakeholders, and the relationships among each other.

Adopting the TQM factor in education is a way to improve the morale of students and educators, improve performance, provide high-quality services to customers (students and parents), and provide direction for schools (Mishra & Pandey, 2013; Wani & Mehraj, 2014). However, regarding the application of TQM in education, there is a serious debate because this concept was initially developed for manufacturing organizations. Pratasavitskaya and Stensaker (2010) mentioned that not all management theories can be applied because the industrial world has a different concept from the world of education. Therefore, schools need to pay attention to the importance of applying TQM factors to improve the process of educational institutions. Also, it is necessary to address the critical challenges faced in implementing TQM in Education so that schools can take appropriate steps proactively when applying TQM in education.

This paper talks over the development of TQM in the world of education, followed by factors that have an essential role in the successful implementation of TQM in schools. Besides, this study also provides an empirical explanation of the benefits and challenges faced by schools in implementing TQM.

2. Methodology

2.1 Objectives and Scope of the Study

This study discussed the application of TQM in the world of education. This research began by describing the development of TQM in the industry to its application in education. Then, it empirically explained the factors playing a role in the successful implementation, along with the benefits that can be obtained by schools. At the end of the session, it was explained the challenges that might arise when implementing TQM in schools.

2.2 Data Analysis

This study used a qualitative approach. This approach was chosen because it is believed to provide a better understanding of the main objectives of the study. Information used is collected through extensive literature.

3. Findings

3.1 Development of TQM

In the twentieth century, quality began to be used as a concept in management in the industry. This concept emerged with the presence of industrialization and was adopted in a scientific approach based on the division of labor put forward by F. Taylor. Deming (1993) and Juran (1993) reported that quality is the suitability of objectives to meet customer needs, both now and in the future (Blankstein, 1999; Kottler, 1994). Quality improves organizational performance by diagnosing quality problems (Ishikawa, 1986). The application of management strongly influences quality control in an organization. It is because every organization that involves management in it is successful in improving organizational performance. Management which carried out to improve and maintain quality is called total quality management (TQM), when the governance is in the top management or executive of the organization, on the other hand, the domain of management focuses on the domains below which are more operational (Nugroho, 2014). The focus is on managerial operational aspects that are typically shown in a management cycle, namely planning, building, implementing, and monitoring. Crosby (1979) revealed that quality management is a methodical way to ensure that organized activities occur as planned.

The philosophy of total quality management originates from the "Economic Miracle" discovered by Edward Deming in Japan after World War II (Blankstein, 1999). At that time, Japanese products were considered inferior so that they could not compete with European or American products in the world market. The Japanese realize that they have to do something to improve the quality of their products. Then, one of the steps they took was to make a list of services according to Edward Deming's findings. Focusing on quality management as a tool

for transformation, Deming helped Japan regain the respect of its competitors because they succeeded in producing products that were not only equivalent but often better than their rivals (Van, 2001).

In the 1950s, Total Quality Management began as a management approach then gradually popular since the early 1980s. Short and Rahim (1995) defined TQM as a proactive approach to confirm quality into products, services, and process designs and then to continuously improve it. This definition implies that TQM is a systematic plan as well as an approach to guarantee quality and continual enhancement. Deming (1993) explained that TQM is an endless cycle of progress in a production system that must change in order to obtain better performance and product quality standards. While Yang (2004) considered TQM to be practices that focus on systematic advancement, customer contentment, and reducing rework aimed at continuous quality and business enhancement. Vinni (2011) added that TQM could create an environment where all assets are cleverly and effectively used to provide quality services that need to be adopted by an institution.

TQM changes the necessary culture of an organization and directs it to a superior product or service quality (Gaither, 1996). TQM becomes a general management philosophy and a set of tools that enables institutional improvement to be ensured by customer satisfaction with the services they have received (Cardoso et al., 2018; Michael et al., 1997). According to Witcher (1990), TQM consists of three terms, namely 'total,' which means everyone involved, including customers and suppliers, 'quality' which implies that customer requirements are met appropriately, and 'management' denotes a management approach. TQM is an approach that involves the entire organization in understanding every activity of each individual at every level of management (Oakland, 2000). TQM is a strategic action that focuses on managing the entire organization to provide products or services that meet customer requirements by utilizing all resources (Escrig-Tena, 2004).

3.2 TQM in Education

The successful implementation of TQM in Japan made TQM also developed in another service institution, for instance, banks, insurance, non-profit organizations, health care, and including in education (Deming, 1993). Lunenburg (2010) commented that TQM is also relevant to companies, universities, and elementary and secondary schools. This concept can only be applied if the core of the organization changes towards high-quality products and services (Ravindran & Kamaravel, 2016). TQM is a holistic management approach that combines all organizational activities to meet customer needs and achieve mostly institutional goals (Kumar et al., 2009). Therefore, it is necessary to incorporate essential principles into the organizational model (Sirvanci, 2004). In the context of education, TQM is a model of management of educational institutions based on company management related to continuous improvement to meet the needs and expectations of customers by ensuring a set of practical tools for each educational institution, both now and in the future (Sallis, 2010). TQM follows the general definition of excellence, added value, and appropriateness of educational outcomes and experience for appropriateness of education to produce planned goals, specifications and requirements in education (Sahney et al., 2004).

There are numerous kinds of literature on the subject of TQM in education for a variety of reasons. According to Wani and Mehraj (2014), TQM needs to be applied in education is because there is pressure from the industry to improve academic standards with changing technology continuously; government schemes with funding allocations that encourage research and teaching in the field of quality; competition between various private and government academic institutions and a reduction in the pooling of funds for research and teaching. According to Crosby (1984), the goals of TQM in education can only be fulfilled if the strategy is focused on improving the quality of the teaching system. Also, according to Kaufman (1992), commitment is needed without exception from all parties, from the top-level to management, to achieve quality results and decisions based on data performance.

3.2 The Importance of TQM in Education

Educational institutions are intended to realize and maintain customer satisfaction. At TQM, customer satisfaction is determined by stakeholders so that every existing management must aim to satisfy the customer. According to Dotchin and Oakland (2006), TQM is a management strategy system that responds to any changes to improve quality and productivity appropriately, both driven by external and internal influences. TQM implies an ongoing effort to improve quality and customer satisfaction through the organization as a whole, where success is determined by management commitment (Paraschivescu, 2017).

The TQM approach in education is not only to achieve high quality but also affects all segments of the educational process such as organization, management, interpersonal relations, material, and human resources. TQM serves to meet customer demands and expectations at the maximum level by applying in all institutions or sectors, including in the education sector. TQM in education contributes significantly to principals, teachers, students, and other school stakeholders to know each other's roles and to produce customer satisfaction. In other words, TQM paved the way for producing student-oriented insights (Donlagic & Fazluc, 2015; Taşar & Çelik, 2011). Also, according to Batra, Shankar, and Kumar (2012), TQM has a direct influence on an individual enhancement that can foster more significant commitment and team spirit in managing organizations. It indirectly encourages educators to play an active role in providing quality education (Wani & Mehraj, 2014).

TQM is widely adopted in education throughout the world because, with the existence of TQM in the teaching process, it is proven that TQM can improve the performance and quality of the classroom experience for students and educators (Saberri & Romle, 2015). The TQM factor enables the educational system to review and rethink improvement processes on each stage of the organization. The TQM practice provides school stakeholders with a perspective to find out the obstacles they face and to immediately overcome these problems (Gomes & Panchoo, 2017). Aina and Kayode (2012) added that TQM could be utilized to foster excellent teaching and to learn in terms of managing, securing as well as improving the quality of teaching practices through varied teaching methods. In conclusion, applying TQM aims at focusing the needs, expectations, experiences, and difficulties of students and simultaneously use feedback for the teaching and learning continual breakthrough in secondary schools (Gomes & Panchoo, 2017).

3.4 Success Factor of Implementation of TQM in Education

Models for the TQM strategy generally lead to continuous improvement (Esene et al., 2014; Ethel & Idialu, 2013; Tenner & DeToro, 1992; Rauno Vinni, 2007). According to Dale and Oakland (2000), three principles for improving the quality of school organizations, namely the focus on customers, understanding of the educational process, and participation of school residents. Arcaro (2007) added that besides these three principles, there are other characteristics to identify schools of total quality, namely the existence of measurements (management based on facts), commitment, and continuous improvement. In line with Arcaro (2007), Sallis (2010) stated that continuous improvement, maintaining relationships with customers and determining quality assurance standards, cultural shifts, and organizational change are principles that must be considered in implementing TQM.

Meanwhile, according to Dale and Oakland (2000), the keys to implementing TQM are commitment and leadership, planning and organizing, implementing and training quality management in education, everyone's participation, teamwork, evaluation and feedback, and working together. Cokeley (2007) argued that leadership, continuous improvement, customer focus, and process focus are pillars in applying TQM to education. Sila and Ebrahimpour (2003) summarized after analyzing 347 survey articles published between 1989 and 2000 regarding TQM factors that are most frequently discussed in the literature. In general, the results of the study are the same and refer to the core values presented by Bergman and Klefsjö (1994); Kennerfalk, (1995); Kanji, Malek, and Tambi (1999) namely focus on customers, the participation of all parties, focus on the process, continuous improvement and decision based on facts.

3.4.1 Focus on Customer

In the world of education, schools place themselves as institutions that provide services by customer demand (Sallis, 2010). It is because understanding, satisfying, and exceeding customer needs and expectations is the primary goal of every organization (Meirovich & Romar, 2006). Yudof and Busch-Vishing (1996) reported that TQM holds that organizations must listen to their customers, continuously evaluate and respond to customer needs, and initiate changes to meet or exceed customer desires. Lee and Hwan (2005) said that customer contentment is closely related to the quality of service of an organization. The better the quality of the organization, the more satisfied the customer is. Conversely, the worse the quality of the organization, the more dissatisfied customers will ultimately affect business decline (Anderson & Zemke, 1998).

According to Wani and Mehraj (2014), TQM is a management philosophy that draws on customer-based learning organization aimed at overall customer satisfaction through the continual advancement of organizations and its process. In TQM, a customer becomes very important, and customer satisfaction is considered as the primary source of business success. The customer in education is someone who uses services or anyone who informs and serves the school organization (Savary, 2008). According to Bergman and Klefsjö (1994), there are two school customers, namely, internal customers and external customers. Teachers, staff, and

institutional organizers who work for schools are referred to as internal customers. In contrast, the community, government, and industry who have pressure or need for services from schools are called external customers.

3.4.2 Focus on the process

The process mediates the relationship between customers and internal and external suppliers. The purpose of a process is to provide a product that satisfies its customers and is supported by an organization consisting of adequate human resources and tools (Pall, 1987). According to Melan (1993), a process is a network of activities that are repeated over some time, the purpose of which is to create value for external and internal customers. This understanding is supported by Bergman and Klefsjö (1994). They declared that the process consists of a series of activities with an appropriate beginning and end by utilizing assistance from organizational resources that can give value to objects that can be measured from suppliers to customers.

3.4.3 Participation of all parties

Arnerup and Edvardsson (1992) stated that TQM for services depends on the creation of culture in organizations that involve everyone in quality improvement. Kotter (1996) showed that many organizations fail with work as a consequence of underestimating the importance of employee participation. To build useful work with quality improvement, it is vital to create participation and commitment for all parties. In the field of education, school quality is not only the responsibility of school leaders, but all parties have to fulfill it so that every school member must participate in improving school quality. The involvement of every school member will provide greater responsibility, creativity, cooperation, obligations, trust, and self-control for school residents (Wilkinson, 2000).

3.4.4 Continuous Improvement

Nowadays, schools refer to TQM as "new managerialism," which increases the quality and commitment of schools to strive for quality improvement in creating sustainable improvement (Davies, 2003). External demands to improve quality continue to increase, so that continuous improvement is needed. Continuous improvement encourages schools to achieve their goals and meet the expectations of all parties by analyzing school conditions and creating effective suitable ways. The continuing improvement cycle is expressed by Deming (1993) and is often called the Deming cycle. This cycle shows how the repair work can be achieved systematically. Continuous improvement starts with planning improvement projects based on the idea of what needs to be improved then test what has been planned. After that, study the results of the test and then decide on the actions that must be taken.

Continuous improvement is one of the core concepts of TQM supported by qualified teachers (Deming, 1993; Gomes & Panchoo, 2017; Ibrahim, 2014; Juran, 1993). Continuous improvement as a continuous process that focuses on improvement, building relationships with other elements, and influencing the organizational environment is key to increasing productivity (Irfan et al. 2014). When schools emphasize the ongoing process of hunting in schools, such as administration, pedagogy, lesson planning, or infrastructure, educators will

be more productive and have a positive impact on improving student performance (Gomes & Panchoo, 2017). Continuous improvement in TQM relies on everything excellent, and its value can be built up both slowly and drastically. Continuous improvement causes advancement of student performance, as well as innovation and development of secondary school organizations (Arumugam et al., 2011; Zubair, 2013).

3.4.5 Decisions based on facts.

TQM encourages organizations to collect and analyze data on an ongoing basis, so that decision making in schools is based on factual data and not on random factors. It is done to create decisions or policies that are accurate and right on target (Deming, 1993; Ishikawa, 1986).

3.5 Key Challenge in Implementing TQM in Education

Although TQM has demonstrated beneficial in education, the application of TQM in education confronts the challenge that cannot be solved only in a fortnight (Gomes & Panchoo, 2017). Quality management is not a straightforward management approach applied to educational institutions because the academic culture in these organizations is quite strong and impervious to its concepts, principles, and practices (Zabadi, 2013). Some researchers are even pessimistic about the application of TQM in schools (Gomes & Panchoo, 2017; Mishra & Pandey, 2013; Pratasavitskaya & Stensaker, 2010). Ah-Teck and Starr (2014) claimed that although TQM perceptions are appropriate and ideal in the industry; however, the feasibility and value in education still need to be debated. Some educators believe that philosophy developed for business may not be suitable for service organizations such as educational institutions (Sohel-uz-zaman & Anjalin, 2016). Educational institutions have characteristics and work ethics that are very much different from the ethos and characteristics of the industry (Brinbaum, 2000; Massy, 2003; Seymour, 1991; Sohel-uz-zaman & Anjalin, 2016). Terms such as products, clients, empowerment, or even strategies, reengineering are not easy to fit in education institutions (Rosa et al., 2012).

The biggest obstacle to implementing TQM in education is the absence of commitment from those involved in the education system, especially top management and teachers. The role of individuals, especially teachers, is often informal and less bureaucratic in the traditional education system (Massy, 2003). Over time, educators rely on intuition, routine, and experience to solve complex problems in school. However, they did not help evaluate the effectiveness of the whole school system (Arcaro, 2007). It is, in turn, impedes process improvement because there will be no improvement without management commitment.

Brown (1994) told that the lack of commitment from top management negatively affected the implementation of TQM and caused the main reason for the failure of TQM efforts. Dale, Van der Wiele, and Van Iwaarden (2007) stated that some critical obstacles such as ineffective leadership; obstacles to change; contradictory policies, inappropriate organizational structure, and poor change management processes are another drawback of implementing TQM. Correspondingly, Bayraktar, Tatoglu, and Zaim (2008) and Kosgei (2014) added that the challenges in implementing TQM in schools also stem from a lack of commitment by

management and some of the workforce, school organizational culture, poor documentation, inadequate staff training, and ineffective communication.

Quality systems in education, such as poor input, poor service delivery, lack of attention to performance and measurement standards, unmotivated staff, and neglect of student skills, can be the leading causes of failure of TQM in education (Gomes & Panchoo, 2017; King, 2013). Meanwhile, Pratasavitskaya and Stensaker (2010) mentioned that defenses against change; inadequate administrative commitment; lots of time investment for personal training; hard times in applying TQM tools to the environment of educational institutions; slight experience of team leaders and staff in teamwork which cause the failure of TQM implementation. Rosa, Sarrico and Amaral (2012) added the absence of effective communication channels; predicament measuring the results of educational institutions; shared some existence goals and objectives for institutions; bureaucratic decision-making circuit; and the lack of strong leadership, being very committed to the ideas and principles that want to be applied and being able to involve all members of the institution are also the cause of the unsuccessful practice of TQM in education.

3.6 Implementation of TQM in Indonesia

Every educational institution should have good quality to gain the trust of the community and stakeholders (Ismail Sila & Ebrahimpour, 2005). Quality problems are fundamental for schools to be able to produce useful output. The more qualified graduates produced by institution education, the higher the selling point and interest to enter the educational institution. In contrast, if an educational institution has a low quality of graduates, the interest and absorption ability to enter the educational institution will be lower. According to Ejionueme and Oyoyo (2015), one way to achieve good quality schools is by continuously improving both physical and non-physical aspects through the implementation of Total Quality Management (TQM). The goal of quality management is to develop a culture of total commitment to quality processes in vocational high schools to prevent wastage (Felestin & Triyono, 2015). Croker, Humphrey, and Wilson (1996) claimed that total quality management could be implemented successfully in organization education, especially in schools focusing on increasing the potential of students to the highest level, such as at vocational schools.

In Indonesia, some vocational schools have implemented TQM in their schools, but the application is still considered to be less than optimal. The world of education in Indonesia is still struggling with endless curriculum planning. The differences in concepts and perspectives on the objectives of national education and the efforts to implement them sometimes become a significant gap in thinking among education experts in this country. It certainly makes achieving good quality challenging to achieve. Meanwhile, build upon the publication of the Ministry of Education and Culture (2018), vocational schools have the lowest good quality index compared to other education levels, which is only 12% of 13,929 schools. It means that 88% of vocational schools do not yet have good quality. It shows that there are problems in the operational management aspects of schools, so particular strategies are needed to provide an optimal impact as an acceleration to increase the quality of vocational schools.

Instead, the vocational education system as a school that produces graduates who are ready to work is considered not to produce sufficient graduates and meet the requirements to do high skill jobs. The current vocational school system tends to produce middle-skilled graduates, while the job market has limited capacity to absorb these graduates. It can be seen from high vocational graduates who are still not working or absorbed in the industrial field. The vocational school has the highest open unemployment rate among other education levels, which are 8.63% in February 2019 ([BPS] Badan Pusat Statistik, 2020).

Thus, it is a perfect reason for implementing TQM in the education system to attain a quality educational institution. It is believed that the implementation of TQM encourages the management function in each educational institution to run optimally. Improving the quality of education will be largely determined by many aspects, such as teachers, staff, students, curriculum, teaching and learning processes, financial support, management, and others. Quality school management will be determined by how much the environment, the community, and the government in supporting educational activities. Therefore, all educational institutions must be provided by a sophisticated infrastructure, teaching staff quality, and quality management to reach the successful implementation of TQM (Wani & Mehraj, 2014). The concept must be applied fully and solely to raise the quality of the education system as time goes by.

5. Conclusion

This study analyzed guidelines regarding the factors that make TQM implementation relevant and successful in education, namely customer focus, process focus, continuous improvement, the participation of all parties, and fact-based decisions. The study also examined the extent of the role of TQM to lift the quality of education. In general, it can be said that TQM is not only to achieve higher quality but also affects all segments in educational processes such as organization management, interpersonal relations, material, and human resources. TQM has a direct influence on human improvement by fostering high commitment and team spirit in managing the organization and encouraging educators to play an active role in providing quality education. The application of TQM in schools itself has several challenges. One of the biggest obstacles is the lack of commitment from those involved in the education system, especially top management and teachers. Meanwhile, the implementation of TQM in Indonesia, particularly in vocational schools, needs to be improved by providing sophisticated infrastructure, quality teaching staff, and quality management.

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