APPLICATION OF TOTAL QUALITY MANAGEMENT (TQM) IN TERTIARY EDUCATION

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Abstract. This article explores the application of Total Quality Management (TQM) principles in higher education institutions. TQM is a management philosophy emphasizing continuous improvement, customer satisfaction, and employee involvement. The study analyzes the implementation of TQM in the higher education system, its benefits, and the challenges encountered. The findings, based on a case study approach, indicate that when effectively implemented, TQM principles can significantly enhance the quality of education and institutional management. However, successful implementation requires strong leadership, cultural change, and stakeholder engagement.

Keywords: total quality management, higher education, education quality, continuous improvement, organizational effectiveness.

OLIY TA'LIMDA UMUMIY SIFAT MENEJMENTINI (TQM) QO'LLASH

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Annotatsiya. Ushbu maqolada oliy ta'lim muassasalarida umumiy sifat menejmenti (TQM) tamoyillarining qo'llanilishi o'rganiladi. TQM – bu sifatni uzluksiz takomillashtirish, mijozlar ehtiyojlarini qondirish va xodimlarni faol jalb qilishni ta'minlovchi boshqaruv falsafasidir. Tadqiqotda TQM'ning oliy ta'lim tizimida joriy etilishi, uning afzalliklari va duch kelinadigan muammolar tahlil qilinadi. Case-study yondashuvi asosida olib borilgan tadqiqot natijalari shuni ko'rsatadiki, TQM tamoyillari samarali amalga oshirilsa, ta'lim jarayoni va boshqaruv sifatini sezilarli darajada yaxshilashi mumkin. Shu bilan birga, bu jarayon kuchli rahbariyat, madaniy o'zgarish va manfaatdor tomonlarning ishtirokini talab qiladi.

Kalit so'zlar: umumiy sifat menejmenti, oliy ta'lim, ta'lim sifati, doimiy takomillashtirish, tashkilot samaradorligi.

ПРИМЕНЕНИЕ ВСЕОБЩЕГО УПРАВЛЕНИЯ КАЧЕСТВОМ (TQM) В ВЫСШЕМ ОБРАЗОВАНИИ

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Аннотация. *В данной статье рассматривается применение принципов всеобщего управления качеством (TQM) в высших учебных заведениях. TQM – это управленческая философия, основанная на непрерывном совершенствовании, удовлетворении потребностей клиентов и активном вовлечении сотрудников. В исследовании анализируются внедрение TQM в систему высшего образования, его преимущества и возникающие проблемы. Результаты исследования, основанного на методе кейс-стади, показывают, что при эффективном внедрении принципы TQM могут значительно повысить качество образовательного процесса и управления. Однако для этого необходимы сильное руководство, культурные изменения и вовлечение заинтересованных сторон.*

Ключевые слова: *всеобщее управление качеством, высшее образование, качество образования, непрерывное совершенствование, эффективность организации.*

Introduction.

Total Quality Management (TQM) emerged in the 1950s as a systematic approach to quality enhancement. Initially utilized in the manufacturing industry, it has since been adopted by service industries, including education. The primary goal of TQM in tertiary education is to align institutional practices with global quality standards, fostering a student-centered learning environment and achieving operational efficiency.

Higher education institutions operate in a rapidly evolving landscape where quality assurance has become a key determinant of institutional success. With increasing competition among universities, accreditation requirements, and the growing expectations of students, the implementation of TQM has become a strategic imperative. TQM principles emphasize continuous improvement, stakeholder involvement, and a culture of excellence, making it an ideal approach for addressing the dynamic challenges of modern higher education institutions (Deming, 1986). By integrating TQM methodologies, universities can enhance student learning experiences, improve faculty engagement, and ensure that educational offerings align with industry needs (Juran, 1992).

Tertiary education institutions face increasing pressure to deliver high-quality education, improve student outcomes, and remain competitive in a globalized environment. Total Quality Management (TQM), a systematic approach to improving processes and outcomes, offers a framework for addressing these challenges. Originally developed in the industrial sector, TQM focuses on continuous improvement, customer satisfaction, and employee involvement. In the context of tertiary education, "customers" include students, employers, and society at large.

This study investigates the application of TQM in tertiary education, examining its potential to enhance institutional performance. The research questions guiding this study are:

How can TQM principles be effectively applied in tertiary education?

What are the benefits and challenges of implementing TQM in this context?

What strategies can institutions adopt to ensure successful TQM implementation?

Literature Review.

The implementation of Total Quality Management (TQM) in higher education has been an area of growing interest among researchers and practitioners. TQM, originally developed for the manufacturing and service sectors, has increasingly been adapted to improve the quality and efficiency of educational institutions (Sallis, 2014). The objective of TQM in tertiary education is to enhance academic and administrative services to ensure continuous improvement and stakeholder satisfaction.

Total Quality Management is a management philosophy that emphasizes customer satisfaction, continuous improvement, and total employee involvement (Deming, 1986). In the context of tertiary education, students, faculty, administrative staff, and employers are considered primary stakeholders, and the application of TQM seeks to optimize processes to meet their expectations (Owlia & Aspinwall, 1996).

Several models have been proposed for implementing TQM in higher education. For instance, the Malcolm Baldrige National Quality Award (MBNQA) framework provides a structured approach to quality assessment, including leadership, strategic planning, and student focus (Kanji & Tambi, 1999). Additionally, the European Foundation for Quality Management (EFQM) excellence model has been used as a benchmark for quality enhancement in universities (Pratasavitskaya & Stensaker, 2010).

Methods.

A qualitative case study approach was employed to explore the application of TQM in a selected tertiary education institution. Data were collected through semi-structured interviews with administrators, faculty members, and students, as well as document analysis of institutional policies and reports. The institution chosen for the study had implemented TQM principles for at least five years, providing sufficient data to assess its impact.

The TQM framework used in the study included key principles such as:

Understanding and meeting the needs of students and other stakeholders.

Regularly assessing and improving processes.

Engaging faculty and staff in decision-making.

Streamlining administrative and academic processes.

Using data to inform improvements.

Data were analyzed thematically to identify patterns and insights related to the implementation and outcomes of TQM.

Results.

Total Quality Management (TQM) emerged as a management approach in the 1950s and gained prominence in the early 1980s. The concept of "quality" is central to this philosophy. Various scholars have interpreted and defined TQM differently. Crosby (1979) describes quality management as a systematic method ensuring that planned activities are carried out as intended. Short and Rahim (1995) define TQM as a proactive approach to embedding quality in products, services, and processes while continuously improving them. These definitions indicate that TQM is a structured strategy aimed at quality assurance and ongoing enhancement.

Deming (1986) describes TQM as a perpetual process of improvement in production systems, ultimately enhancing performance and product quality. Yang (2005) views TQM as a set of systematic practices focusing on customer satisfaction and reducing rework. Thus, TQM is fundamentally a structured framework for continuous quality improvement and enhanced business performance.

TQM regards an organization as an interconnected system of processes. It involves both management and employees in the ongoing enhancement of goods and services. Goetsch and Davis (1994) state that TQM involves persistent improvement efforts engaging all members of

an organization in a unified approach to enhancing performance. Similarly, Vinni (2011) highlights that TQM fosters an environment where all resources are optimally utilized to deliver quality service, ensuring institutions remain adaptable in a rapidly evolving world.

According to Witcher (1990), TQM integrates three key elements: 'Total'—involving all stakeholders, including customers and suppliers; 'Quality'—ensuring customer expectations are precisely met; and 'Management'—reflecting the commitment of senior executives. Oakland (2003) defines TQM as a holistic approach where the entire organization actively participates in understanding each process at every management level. This perspective aligns all organizational functions—such as marketing, finance, design, engineering, and customer service—toward achieving customer satisfaction and organizational goals. Escrig (2004) considers TQM a strategic initiative that harnesses organizational resources to deliver products and services fulfilling customer requirements.

TQM prioritizes customer satisfaction as a fundamental principle. Spanbauer (1995) views TQM as a practical model centered on serving others. Yudof and Busch-Vishniac (1996) argue that organizations should continuously listen to customers, assess their responsiveness, and implement changes to exceed customer expectations. Anderson and Zemke (1998) stress that customer satisfaction is critical to business success, while Lee and Hwan (2005) emphasize the strong correlation between service quality and customer satisfaction in service industries. Wani and Mehraj (2014) define TQM as a management philosophy that cultivates a customer-centric learning organization committed to achieving total customer satisfaction through continuous improvement (Utkirov, 2024).

TQM also emphasizes employee development, recognizing that business excellence is closely linked to workforce capability. Schargel (1994) asserts that TQM integrates employee skills across all activities, fostering collaboration and professional growth. Additionally, TQM promotes a quality-driven culture, ensuring better product and service standards. Gaither (1996) describes TQM as a transformative process that reshapes an organization's culture to prioritize superior quality. Yusof and Aspinwall (2000) highlight that TQM fosters trust, participation, teamwork, continuous learning, and enthusiasm for improvement, ultimately contributing to organizational success.

According to Ishikawa (1985), TQM extends beyond products and services, encompassing the entire organization to enhance business performance. The British Standard Institution (Zakuan et al., 2012) defines TQM as a management doctrine that optimally utilizes human and material resources to achieve organizational goals.

Michael, Sower, and Motwani (1997) define TQM as a general management philosophy and a set of tools that enable institutions to define and achieve quality, with continuous improvement based on customer satisfaction. This reflects the adaptable nature of TQM, which can be customized to suit any organization, including educational institutions. Meirovich and Romar (2006) note that the literature presents mixed perspectives on TQM's applicability in education. Srivanci (2004) asserts that TQM values align well with higher education, a view supported by Helms and Key (1994) and Venkatraman (2007). James and James (1998) emphasize that TQM naturally fits higher education because of its process-oriented nature, enhancing productivity, reducing costs, and improving quality.

Deming (1993) believes that adopting TQM in higher education enhances competitiveness, eliminates inefficiencies, aligns with market needs, and improves overall performance. Tribus (1993) argues that education benefits from quality management principles, while Peak (1995) notes that TQM enhances curriculum development, learning environments, and operational efficiency in education. Eriksen (1995) sees TQM as a pathway to excellence in higher education, while Dobyns and Crawford-Mason (1994) highlight its significant impact wherever applied. De Jager and Nieuwenhuis (2005) assert that although TQM originated in manufacturing, its benefits extend to service organizations like higher education institutions (Utkirov, 2025).

However, some scholars express reservations about TQM's applicability in education. Koch and Fisher (1998) and Houston (2007) suggest that TQM principles require modifications to suit the dynamic nature of higher education. Dill (1995) and Harvey (1995) recognize that while higher education institutions differ from businesses, TQM principles can still be adapted. Venkatraman (2007) and Peat et al. (2005) identify TQM as a managerial tool for improving services and strategies in academic institutions.

Despite its potential, implementing TQM in education poses challenges. Some educators argue that a philosophy developed for business may not fully align with academic institutions (Birnbaum & Deshotels, 1999; Brinbaum, 2000). Rosa et al. (2012) note that business-oriented terminology such as "product" and "client" does not always translate well into educational settings.

One significant barrier is a lack of commitment from key stakeholders, particularly top management and faculty members. Brown et al. (1994) highlight that insufficient leadership commitment hinders TQM initiatives. Massy (2003) observes resistance from faculty members who perceive TQM as a business-driven trend, undermining academic values. Additionally, defining "quality" in education is complex due to its multiple interpretations (Sarrico et al., 2010). Houston (2008) notes that customer-focused definitions of quality in business do not always apply to education.

Identifying customers in education is another challenge. Ali and Shastri (2010) argue that ambiguity in customer identification creates obstacles in TQM implementation. Srivanci (2004) warns that without a clear definition of customers, quality efforts may lack direction. Seymour (1991) and Koch (2003) highlight additional barriers such as resistance to change, bureaucratic processes, and difficulties in measuring educational outcomes.

Table 1.

Key TQM Principles and Their Application in Tertiary Education

TQM Principle	Application in Tertiary Education	Example
Customer Focus	Prioritizing student and stakeholder needs	Improved student support services
Continuous Improvement	Regular evaluation and enhancement of processes	Faculty development programs
Employee Involvement	Engaging staff in decision-making	Collaborative curriculum design
Process-Centered	Streamlining administrative and academic workflows	Simplified admissions process
Data-Driven Decisions	Using data to inform institutional improvements	Analysis of student feedback for course design

table compiled by the author

The findings revealed several key outcomes of TQM implementation in the institution:

TQM principles led to the streamlining of administrative processes, reducing bureaucracy and improving service delivery. For example, the admissions process was simplified, resulting in faster response times and higher applicant satisfaction.

Faculty members reported that TQM encouraged a culture of continuous improvement in teaching practices. Regular feedback from students and peer reviews helped identify areas for improvement, leading to more effective teaching methods.

By focusing on student needs, the institution was able to improve support services, such as counseling and career guidance. This contributed to higher student satisfaction and retention rates.

The implementation of TQM fostered a culture of collaboration and accountability among staff and faculty. Employees felt more empowered to contribute to decision-making processes.

However, the study also identified challenges, including resistance to change, the need for ongoing training, and the difficulty of measuring qualitative outcomes such as student learning and satisfaction.

Table **2.**

Benefits and Challenges of TQM Implementation

Aspect	Benefits	Challenges
Administrative Efficiency	Faster processes, reduced bureaucracy	Resistance to change
Teaching Quality	Improved teaching methods, faculty development	Need for ongoing training
Student Satisfaction	Higher retention rates, better support services	Measuring qualitative outcomes
Organizational Culture	Collaboration, accountability, employee empowerment	Sustaining cultural change

table compiled by the author.

Discussion.

The application of TQM in tertiary education has the potential to transform institutional processes and outcomes. By focusing on continuous improvement and stakeholder satisfaction, institutions can enhance their competitiveness and relevance in a rapidly changing educational landscape. However, successful implementation requires strong leadership, a clear vision, and a commitment to cultural change.

The findings align with previous studies that highlight the importance of aligning TQM principles with the unique context of tertiary education. For example, the emphasis on customer focus must be adapted to prioritize the needs of students while also considering the expectations of employers and society.

One limitation of this study is its focus on a single institution, which may limit the generalizability of the findings. Future research could explore the application of TQM in diverse institutional contexts, including universities in different regions and with varying resource levels.

Conclusion.

This study demonstrates that TQM can be effectively applied in tertiary education to improve administrative efficiency, teaching quality, and student satisfaction. While challenges exist, the benefits of TQM implementation outweigh the difficulties, particularly when institutions adopt a strategic and inclusive approach. Tertiary education leaders should consider TQM as a viable framework for achieving continuous improvement and meeting the evolving needs of their stakeholders.

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