

Analysis of the Success of Total Quality Management in Improving the Quality of Early Childhood Educational Institutions

Raden Darojah¹⁾, Abdus Salam Dz²⁾, Iman Subasman³⁾, Jalaludin⁴⁾, Abdul Karim^{5)*},
Muhamad Ahyat⁶⁾

^{1), 2), 3), 4)} Universitas Islam Bunga Bangsa Cirebon, Indonesia.

⁵⁾ Universitas Muhammadiyah Cirebon, Indonesia

⁶⁾ Universitas Teknologi Mataram, Indonesia

*e-mail Correspondent: karim_gml81@yahoo.co.id

Received: 12-11-2024

Revised: 06-03-2025

Accepted: 14-03-2025

Info Artikel

Abstract

Keywords:

Total Quality Management,
Quality Improvement,
Early Childhood Education

Integrated quality management (TQM) is a philosophy and methodology that helps institutions manage change and respond to external factors. This study aims to analyse the successful implementation of TQM in improving the quality of early childhood education institutions, especially at Cendekia Indramayu Kindergarten. The approach is descriptive qualitative, with data collection through interviews, observations, and documentation studies. Seven purposively selected informants provided the information needed in this study. The data obtained was analysed using credibility, transferability, dependability, and confirmability test techniques to ensure validity. The results show that quality improvement strategies are carried out through empowering human resources, improving services, involving parents, and increasing cooperation with the community and related institutions. Analysis of these factors using a SWOT diagram shows a difference in strengths and weaknesses of 7.45 (x-axis) and opportunities and threats of 1.00 (y-axis). Implementing TQM at this institution has led to more systematic and holistic management. This improves the quality of learning and builds the institution's reputation through human resources that can adapt to change, innovate, and maintain high-quality standards in the long term.

Kata kunci:

Total Quality Manajemen,
Peningkatan Mutu,
Pendidikan Anak Usia Dini

Abstrak.

Manajemen mutu terpadu (TQM) adalah filosofi dan metodologi yang membantu institusi dalam mengelola perubahan dan merespons faktor eksternal. Penelitian ini bertujuan untuk menganalisis keberhasilan implementasi TQM dalam meningkatkan mutu lembaga pendidikan anak usia dini, khususnya di Taman Kanak-kanak Cendekia Indramayu. Pendekatan yang digunakan adalah deskriptif kualitatif, dengan pengumpulan data melalui wawancara, observasi, dan studi dokumentasi. Tujuh informan yang dipilih secara purposive memberikan informasi yang diperlukan dalam penelitian ini. Data yang diperoleh dianalisis menggunakan teknik uji kredibilitas, transferability, dependability, dan confirmability untuk memastikan keabsahannya. Hasil penelitian menunjukkan bahwa strategi peningkatan mutu dilakukan melalui pemberdayaan sumber daya manusia, peningkatan pelayanan, keterlibatan orang tua, serta peningkatan kerja sama dengan masyarakat dan lembaga terkait. Analisis faktor-faktor ini menggunakan diagram SWOT menunjukkan perbedaan kekuatan dan kelemahan sebesar 7,45 (sumbu x) dan peluang dan ancaman sebesar 1,00 (sumbu y). Secara keseluruhan, implementasi TQM di lembaga ini telah mengarah pada pengelolaan yang lebih sistematis dan holistik. Hal ini tidak hanya meningkatkan kualitas pembelajaran, tetapi juga membangun reputasi lembaga melalui SDM yang mampu beradaptasi dengan perubahan, berinovasi, dan menjaga standar mutu yang tinggi dalam jangka panjang.

INTRODUCTION

The world has realised how important high-quality early childhood education is (Roche et al., 2020). The globally recognised paradigm is that investment in education, particularly ECD, is critical to determining a country's ability to survive in a globalised world (Suroyya et al., 2024). Several countries worldwide now recognise how important ECD is to the future of their children and their countries. (Iskandar, 2020). However, in practice, many obstacles hinder the establishment of good early childhood education institutions. Based on national data, some of Indonesia's main issues in early childhood education show that only 23.06% of Early Childhood Education (ECE) teachers have a bachelor's degree in Early Childhood Education or Psychology. This level of education is one of the main indicators of the quality of the education program. This data is taken from a report published by (BPS, 2023) and (Kemendikbud, 2023), which highlights the importance of improving teacher qualifications to improve the quality of early childhood education (Gilliam, 2005) Low quality of Early Childhood Education institutions and programs (Forster et al., 2017). As well as the tendency to focus on tutorials in early childhood education (Rasmani et al., 2021). Therefore, it is not surprising that many early childhood education institutions in Indonesia do not meet quality standards, especially regarding language, reasoning, and interaction. (AL-Rawafi, 2020).

In the last five decades, many international documents and commitments have been agreed upon to ensure every child can access low-cost, high-quality ECD (Iskandar, 2020). Regulation of the Minister of Education and Culture of the Republic of Indonesia No. 137 of 2014 on Early Childhood Education (ECD) Standards sets minimum standards for the provision of ECD and serves as the basis for planning, implementation, supervision, and follow-up of education to realise quality ECD (Lestari et al., 2019) Therefore, leadership should continuously train and encourage all stakeholders in the education organisation. (Baskey & Roy, 2021) Indonesia must prioritise education with high-quality standards. As a demographic bonus, Indonesia's population growth is projected to be around 64% at the productive age in 2020-2035, which requires serious attention from the government to develop education. (Khasanah et al., 2023). Education helps provide an educated workforce that tends to be productive.

The management philosophy of Total Quality Management (TQM), created by Edwards Deming in the late 1950s, can be applied to improve the quality of education services. Educational institutions can achieve quality in Facts and perception by implementing a quality management system (TQM) to fulfill the quality culture (Haque et al., 2013). Militaru et al. (2013) conducted previous research emphasizing TQM as beneficial to educational institutions and its potential in the world of education. (Taskov & Mitreva, 2015) stated in their research that to encourage improvement and innovation, top management should start special initiatives by encouraging subordinates to participate in internal presentations regarding the solutions offered in TQM. (Menteşoğulları, 2023) emphasised that TQM is essential in education and that a strategic approach is needed for sustainable progress and success. (Tilman et al., 2023) in his research stated that Damea Liquitei Maubisse Primary School in Timor Leste should implement Total Quality Management (TQM) to improve the quality of education, this effort aims to improve the overall learning process, especially in teaching Tetum language, which is the national language of Timor Leste.

Some of the previous research data above shows that TQM is one of the important factors at the managerial level for achieving the success of an educational institution. Unfortunately, not many studies have shown that TQM can improve the quality of kindergarten education institutions. Therefore, this study provides a new view that TQM can effectively improve the quality of kindergarten education institutions in Cendekia Indramayu Kindergarten. Thus, this study aims to analyse the principal's strategy for improving the quality of kindergarten education institutions through total quality management (TQM). This study also aims to examine the effectiveness of TQM in developing the quality of kindergarten education institutions.

However, while these studies underscore the importance of TQM in enhancing educational quality at various levels, they mainly focus on broader educational institutions or specific subjects and regions. Notably, there is a significant gap in the literature regarding the application and effectiveness of TQM specifically in kindergarten (Early Childhood Education) institutions. This gap is crucial, as the foundational years of education are integral to a child's development. Few studies have explored how TQM could improve the quality of kindergarten education, particularly in settings like Cendekia Indramayu Kindergarten.

This research seeks to fill this gap by offering a fresh perspective on the role of TQM in enhancing the quality of kindergarten education institutions. The study aims to analyse the principal's strategies for improving the quality of early childhood education through TQM and evaluate the effectiveness of TQM in developing the quality of kindergarten education. This study contributes uniquely to the existing body of literature by providing empirical evidence on how TQM can be effectively implemented in the context of kindergarten education. It also sheds light on the potential of TQM for elevating educational standards in the early years, a crucial area that has yet to receive adequate academic attention.

Some literature emphasises the existence of Total Quality Management (TQM) in education management and its level of improvement to explain the importance of this topic. In contrast, we aim to thoroughly review the published literature and the state of the field on total quality management (TQM) of education, focusing on improving educational institutions' quality. This article provides an in-depth review of the terms used in two articles mentioning "early childhood education" and "total quality management" in their titles. This review uses four consistent and accurate indicators to determine whether the articles fall into accurate, precise, biased, or erroneous categories. Considering the facts and issues outlined above, important objectives of this study can be formulated. This study's main objective is to determine how effective total quality control (TQM) is in improving the quality of kindergarten education.

RESEARCH METHODS

This descriptive qualitative research focuses on collecting data in the form of words, images, and behaviors rather than numbers or statistical frequencies. The study employs a qualitative phenomenological approach (Zhuanh & Song, 2019), where the researcher actively engages with Cendekia Indramayu Kindergarten as both a participant and an observer. The researcher's role includes reflecting on managerial practices, interacting with educators, and assessing the implementation of Total Quality Management (TQM) strategies within the institution.

This reflective process identifies challenges and opportunities for improvement in real time while providing insights into management practices' effectiveness from theoretical and practical perspectives. (Loughran et al., 2004). The researcher uses structured reflective activities,

including regular journaling, feedback sessions with teachers and staff, and informal discussions, to assess TQM principles and identify gaps between theory and practice. The research employs a case study method, with the primary aim of analysing strategies to improve the quality of early childhood education through TQM. The study was conducted over 12 months, from January to December 2017. The sample consisted of principals, teaching staff, administrative staff, foundation managers, educational practitioners, parents, and community members, all selected purposively (Sugiyono, 2019).

Data were collected through structured in-depth interviews with the research sample, observation of the educational institution environment, review of TQM documentation, and feedback from teachers, parents, and educational practitioners. The data were then analysed using the triangulation method. (Moleong, 2017), which employs various instruments to validate the data (Olsen, 2004). After analysing the data, conclusions were drawn based on the findings.

RESULTS AND DISCUSSION

Results

Improvement of Total Quality Management (TQM) Through SWOT Analysis

TQM is closely linked to employee involvement, empowerment, and SWOT analysis, as all elements within educational institutions impact their quality (Nugraha et al., 2023). SWOT analysis helps assess various institutional conditions (Kumar & Praveena, 2023). TK Cendekia places great importance on resource quality and regularly conducts comparative studies. According to Ermawati, the principal of TK Cendekia Indramayu, “Human resources (HR) are a priority here because, as a private institution, we hold comparative studies outside the region, even abroad, to countries like Malaysia, Bali, and Malang to enhance teacher competencies and improve any gaps in our school,” she explained enthusiastically.

Observational data also reveals several strengths at Cendekia Kindergarten, including open and aspirational management, good cooperation among staff, all teachers holding bachelor’s degrees, a strategic location, a school committee focused on quality improvement, a large school area (+4800m²), adequate learning tools and facilities, excellent teacher welfare, certified teachers, a clear vision and mission, effective human resource empowerment, and understanding of the 2013 curriculum (Kurtilas). The strong teamwork within the school further supports these strengths. The IFAS (Internal Factor Analysis Summary) calculation provides additional data regarding these strengths, it produces the following data:

Table 1. IFAS Calculation on Strengths

No	Internal Strategy Factors	Weight	Rating	Weight X Rating
1	Open and aspirational management	0,05	3	0,15
2	Cooperation between personnel is quite good	0,02	3	0,06
3	All teachers have a bachelor's degree	0,02	3	0,06
4	Strategic location	0,05	4	0,20
5	The school committee is quite concerned with improving school quality	0,01	3	0,03
6	School land is quite large (± 4800m ²)	0,05	4	0,20
7	Number of learning tools and facilities as needed	0,04	3	0,12

8	Teacher welfare is very good	0,05	3	0,15
9	Trained and certified teachers	0,04	3	0,12
10	Clear vision and mission of the school	0,04	3	0,12
11	Human Resources Empowerment is good enough	0,01	3	0,03
12	All teachers understand the thirteen-year curriculum (Kurtilas)	0,03	3	0,09
13	Teamwork	0,03	2	0,06
14	The right collaboration	0,02	2	0,04
		0,43		1,23

Source: Data Collection

Based on the IFAS table calculations, TK Cendekia has significant strengths, with a total weight of 0.43 and an X Rating of 1.23. The SO strategy leverages these internal strengths while taking advantage of external opportunities. One key strategy is optimising information technology to improve learning and enhance human resource performance in management. This aims to enhance teaching quality through technology integration and streamline school administration. Success can be measured by improved teacher use of technology in classrooms and positive feedback from parents and students. Early signs of success include increased teacher participation in tech training and more use of digital learning platforms.

The weaknesses at TK Cendekia include varying levels of teacher professionalism and the lack of structured lesson and activity schedules. These issues are also highlighted in the IFAS table, it produces the following data:

Table 2. IFAS Calculation on Weaknesses

No	Weaknesses	Weight	Rating	Weight X Rating
1	Teacher competence and professionalism still vary	0,10	2	0,20
2	Learning schedule does not exist, activity schedule does	0,10	4	0,40
		0,20		0,60

Source: Data Collection

The table above shows that teacher competence and professionalism vary, with a total score of 0.20, indicating the need for improvement. Additionally, the lack of a lesson schedule in classrooms scored 0.10. The WO strategy addresses these weaknesses by utilising opportunities like professional development programs and collaboration with external institutions. The goal is to improve teacher competence and establish a clear, structured lesson schedule. Success can be measured by increased teacher certification, better curriculum understanding, and posted lesson schedules. Early signs of success include teachers' participation in annual training and more organised classroom lesson schedules.

TK Cendekia has several opportunities, such as support from the P4TK for educator development, government funding for education, good relationships with local agencies, stable socio-political conditions, and easy access to affordable technology. Additionally, strong community participation and high public interest in the school provide further opportunities for growth. The following is an EFAS table of opportunities for TK Cendekia:

Table 3. EFAS Calculation on Opportunities

No	External strategic factors	Weight	Rating	Weight X Rating
1	Assistance from the Development and Empowerment of Educators and Education Personnel (P4TK) in school development	0,01	3	0,03
2	Government pledges higher funding allocation for the education sector	0,01	3	0,03
3	Relationships and support with vertical agencies at the district, provincial, and central levels are quite good	0,01	3	0,03
4	Socio-political and security conditions are relatively stable	0,01	2	0,02
5	The development of information technology that can be accessed easily and relatively cheaply	0,02	3	0,06
6	Strengthening HR Performance in Management	0,02	3	0,06
7	Community participation is high	0,01	2	0,04
8	Public interest in attending kindergarten. Cendekia is quite high	0,02	3	0,06
9	The right collaboration	0,02	2	0,04
		0,13		0,37

Source: Data Collection

From the calculation of the EFAS table above, we can see that the value of the weighting factor for the highest opportunities is at points 5, 6, and 8, namely the development of easily accessible and relatively cheap information technology, stabilising the performance of human resources in management, and the high public interest in schools in Cendekia Kindergarten.

The ST strategy is formulated to overcome external challenges that may threaten the quality of education, such as competition with other schools and rapid curriculum changes. By utilising internal strengths, such as open management and good inter-personnel cooperation, TK Cendekia can build a stronger image in the eyes of the community and attract more interest from parents. The expected outcome is an increase in new student registrations and strengthening the school's branding at the local level. Indicators of success can be seen from the increase in the number of applicants each year and parental satisfaction with the quality of education provided. Early evidence that shows the success of this strategy is the increase in the number of students enrolling from year to year and positive reviews from the surrounding community about the reputation of TK Cendekia.

The challenges posed by Cendekia Indramayu Kindergarten include changes in the curriculum relatively too quickly, the development of science and technology which affects the demands for abilities and skills (professional staff), competition with other schools, global competition, and individualism. The following is an EFAS table of challenges for Cendekia Kindergarten:

Table 4. EFAS Calculation on Threats

No	External strategic factors	Weight	Rating	Weight X Rating
1	Curriculum changes are relatively too fast	0,01	2	0,02
	The development of science and technology			
2	That affects the demands of abilities and skills (professional personnel)	0,01	2	0,02
3	Competition with other schools	0,01	3	0,04
4	Global competition	0,01	2	0,02
5	Individualism	0,01	2	0,02
		0,05		0,12

Source: Data Collection

The table above shows that the development of science and technology affects the demands of abilities and skills (professional personnel). The development of science and technology requires teachers to keep their information up to date, and requires schools to be able to meet the needs of teachers and students, so that learning in schools is in line with the demands of the times.

The WT strategy aims to minimise internal weaknesses while addressing existing external threats. One approach that can be implemented is to strengthen teacher professionalism by providing up-to-date needs-based training, for example in terms of knowledge of technological developments and the latest curriculum. The expected outcome of this strategy is an increase in teachers' overall competence and readiness to deal with rapid curriculum changes. Indicators of success can be seen from improved teacher performance recorded in annual evaluations and positive responses to curriculum updates. Early evidence of this strategy is improved teacher competence in annual performance evaluations and more adaptive curriculum implementation.

From the results of the SWOT analysis conducted at Cendekia Kindergarten, it can be seen regarding the calculation of IFAS and EFAS analysis in the table below:

Table 5. Calculation of IFAS and EFAS Analysis

IFAS	Total score	EFAS	Total score
Total score <i>Strength</i>	8,05	Total score <i>Opportunity</i>	2,10
Total score <i>Weaknesses</i>	0,60	Total score <i>Threats</i>	1,10
S + (-W)	7,45	O + (- T)	1,00

Source: Data Collection

From the analysis results in the table above, the IFAS Strength factor has a total score of 8.05 and Weaknesses has a total score of 0.60. The EFAS external strategy factor shows that the opportunity factor scores 2.10 and the Threats factor 1.10. Strength and opportunity variables are positive, so the greater the acquisition of the calculation, the greater the influence on the school. As for the weakness and threat variables, the smaller the number calculation, the greater the influence on the school.

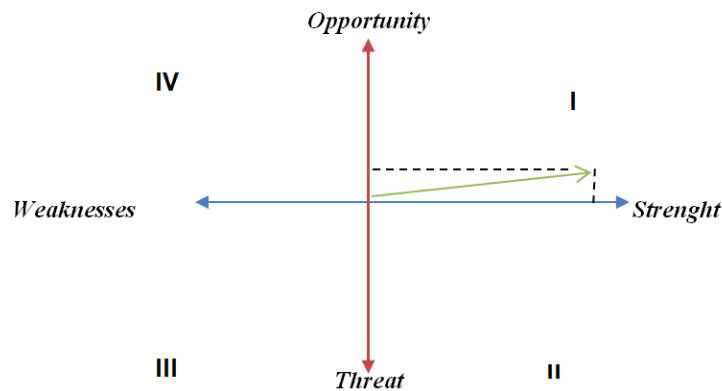


Figure 1. SWOT Analysis Diagram of Cendekia Indramayu Kindergarten

The results of identifying these factors can be described in the SWOT diagram in the figure below. The difference in total strengths minus total weaknesses = $s-w = 7.45$ (x-axis), while the difference in total opportunities minus total threats = $o-t = 1.00$ (y-axis), so that $(x,y) = ((7.45), (1.00))$.

To ensure the credibility of the findings, data triangulation was performed by cross-referencing information obtained from multiple sources, including observational data, interviews, and supporting documents. Observational data revealed key strengths at Cendekia Kindergarten, such as a strong management system and effective cooperation among staff. Interviews with the principal, Ermawati, further confirmed these strengths, particularly the emphasis on human resource development through comparative studies abroad. Additionally, teacher certifications and curriculum materials provided further evidence of the institution's commitment to quality. The triangulation of these data sources helped validate the findings. It confirmed the credibility of the research results, ensuring a robust and reliable analysis of the school's performance and strategy formulation.

Overall, the results of implementing the above strategies can be seen in the improved quality of education at Cendekia Indramayu Kindergarten, which can be measured through several indicators: (1) Improved teacher competence, measured through training, certification and performance evaluation. (2) Improved learning quality, which can be seen from student and parent satisfaction, and the use of technology in the teaching and learning process. (3) Increased number of applicants, as an indicator of success in strengthening the branding and attractiveness of the school. (4) Community and parental involvement, as measured by parental participation in school activities and support for school development programs.

Strategies for Improving Institutional Quality through TQM at Cendekia Indramayu Kindergarten

Based on the results of the SWOT analysis above, the Cendekia Kindergarten uses the formulation of the SO strategy (utilising strengths to take opportunities), WO strategy (utilising opportunities to overcome weaknesses), ST strategy (utilising strengths to avoid threats), and WT strategy (reducing weaknesses to avoid threats). Therefore, TK Cendekia in improving the quality of its institutions implements the following strategies; first, Optimize and improve the empowerment of human resources, by utilising the role of educators as an effort to improve the quality of the institution; Optimize services in all fields by using all communication networks that are easily accessible to facilitate communication with the government community and those related

to the progress and development of education; Increase the role of parents by involving in school programs through character building; Optimize cooperation and communication with the community, and government and private, as well as social media in efforts to socialise and promote schools; Increase cooperation between schools in efforts to develop and add insight for educators through comparative studies to quality and independent kindergartens.

Second, Optimize Educator Professionalism in an effort to develop superior programs to maintain and improve Brand Image; Increase Cooperation with Education networks as an effort to actualize schools in the community as a form of socialization; Optimize training and education by bringing in experts to improve management; Improve coordination and evaluation in an effort to improve conducive KBM processes; Optimize relationships with agencies in the region Third, Increase Educator Potential and Student Potential as an effort to improve quality to overcome competition; Optimize excellent service in various fields to improve the image of a disciplined and conducive school; Increase good cooperation and communication with all school residents between teachers, students, parents and stakeholders to build a conducive organizational climate; Optimize creating superior programs as a characteristic of school advantages; Increase the socialization of school activities in various media in promotional efforts and increase public interest.

Fourth, improve the competence of educators and students to improve the quality of graduates to overcome competition; improve the professionalism of educators to develop superior programs to build a brand image in increasing public interest; optimise relationships with other agencies or other institutions always to get new knowledge or information about teacher training; improve management training and evaluation as an effort to overcome the occurrence of a stagnant and undeveloped organisational climate.

To ensure the credibility of the research findings, data triangulation was conducted by cross-checking information obtained through multiple methods, including observation, interviews, and relevant documents. Observational data revealed several institutional strengths, such as effective communication and a focus on human resource empowerment. Interviews with key informants, including the principal, Ermawati, confirmed the strategies related to human resource development and external collaborations, such as comparative studies. Supporting documents, including strategic plans and teacher certifications, further validated the findings. This triangulation process strengthened the reliability of the strategies identified in the SWOT analysis, ensuring that the proposed strategies for improving the quality of the institution were based on solid and consistent data from multiple sources.

DISCUSSION

Application of TQM and SWOT in Cendekia Indramayu Kindergarten

This research shows that Total Quality Management (TQM) is implemented at Cendekia Indramayu Kindergarten, utilising internal strengths and external opportunities. The findings show that although the structure and quality of processes at Cendekia Kindergarten are already quite good, some areas require significant improvement to enhance the overall quality of education. The SO (Strengths-Opportunities) strategy at Cendekia Kindergarten, which capitalises on internal strengths such as open management and cooperation between personnel, combined with external opportunities such as the development of information technology, proved effective in improving the quality of learning. For example, the use of technology in the learning process has started to

increase, with teachers engaging in technology training and using digital platforms to manage the classroom.

However, although technology has been integrated into learning, further development in this sector is still needed to improve the quality of learning significantly. This is consistent with (Keung & Fung, 2019) Findings that fun and stimulating activities in early childhood education can increase children's curiosity. In Cendekia Kindergarten, although there have been some efforts to improve the quality of interactions between teachers and students, challenges in building deeper interactions between teachers and children are still evident. This is consistent with (Romstein et al., 2018) Who emphasises the importance of process quality, including teacher-student interactions, in improving educational outcomes.

Applying SWOT to Improve Quality

Regarding the application of SWOT analysis, the field findings show that TK Cendekia's internal strengths, such as the high level of teacher education (all teachers have a bachelor's degree), provide a good basis for improving the quality of education. However, the weaknesses found are the varied professional competencies of teachers, indicating the need for more structured improvements in teacher professional development. The WO (Weakness-Opportunities) strategy is implemented by providing ongoing training to teachers and organising comparative studies for educational institutions outside the area, such as Malaysia and Bali, to improve their competencies. This is in line with (Coste, 2020) The quality of education depends on factors such as the quality of interactions between the parties involved, namely teachers, children, and parents. One of the expected outcomes of this strategy is improved teacher competence, which is already evident from teachers' active participation in training and self-development.

Therefore, SWOT (Strengths, Weaknesses, Opportunities, and Threats) analysis best assesses educational institutions' quality management, resources, and environment. Although this analysis has become a commonly used tool in educational strategic planning, it is still the most efficient method to identify the institution's potential (Kalpande et al., 2015). Moreover, there are two types of factors that influence this tool: internal factors and external factors. Internal factors explain the institution's performance, while external factors encourage institutions to concentrate on innovations that match the market value and changes worldwide (Khalid, 2017).

Situation analysis, or SWOT analysis, is a popular strategic analysis tool. This structured analysis of an institution's strengths, weaknesses, opportunities, and threats is conducted to identify factors that are beneficial to its quality development and factors that are harmful to it. (Ma et al., 2019). In general, SWOT consists of four strategic models: Strength-Opportunity (SO), Weakness-Opportunity (WO), Weakness-Threat (WT), and Strength-Threat (ST). Figure 1 shows the structure of SWOT analysis.

However, another weakness is the absence of a structured lesson schedule in the classroom, which poses problems in time management and lesson planning. This suggests that there is room for improvement in SWOT analysis to improve the operational structure at TK Cendekia, especially in planning and implementing more organized lessons.

Application of TQM in Early Childhood Education

More practically, the application of TQM in Cendekia Indramayu Kindergarten can be seen in the improvement of management quality and the involvement of all parties, from teachers, parents, to foundation managers. According to (Motwani & Kumar, 1997), one of the main

objectives of TQM is to increase efficiency and reduce errors in every process. In TK Cendekia, this effort is seen in increased operational efficiency and decreased administrative errors, which can lead to better education services. However, applying TQM in early childhood education requires special adjustments, especially in terms of interaction and the quality of learning designed according to the child's developmental stage.

TQM in early childhood education, as described by (Akram & Siraji, 2021) It is not just about improving internal processes, but also ensuring that every aspect of education is oriented towards child and parent satisfaction. Therefore, for TK Cendekia, TQM is about efficient quality management and creating an environment that supports children's social, emotional and cognitive development. This is evident in the children's improved social interaction through systematically designed group activities and shared games.

Kindergarten, also known as preschool, is a program for early childhood supervised by licensed early childhood teachers. (Kadan et al., 2023). Kindergarten is an important step for children and is highly recommended for all children. (Licardo et al., 2023). Past research shows that kindergarten programs improve children's health and well-being, help them develop strong social skills, encourage their love of learning, and make them more likely to make a smooth transition to primary school (Prep) (Besi & Sakellariou, 2019). Children will have many fun and stimulating learning experiences and activities at a quality kindergarten program. (Keung & Fung, 2019). Experiences and activities like exploring the natural world, discovering new ideas, and solving problems will encourage your child's learning and curiosity. Children will have the ability to learn to cooperate with others and make friends through group activities and cooperative games, show their creative abilities through dance, movement, and art, improve their communication skills by listening and talking with teachers and other children, and grow in reading, writing, and math skills. (Sutapa et al., 2021).

However, this can only be achieved if the educational institution has good quality. The concept of quality in early childhood education has two dimensions: structural quality and process quality. (Romstein et al., 2018). Structural qualities relate to the materials and organisation of activities, daily routines, adult-child ratio, and lifelong learning of preschool teachers. (Melhuish & Gardiner, 2019). Process quality relates to adult-child interactions, peer interactions, and the direction of the early education program. (Howard et al., 2024). Meanwhile, according to (Coste, 2020), although quality standards do not guarantee quality education. Therefore, quality in education means the complex principles and practices used in education as a whole and each of its components, to achieve better results against set standards, with a primary focus on the satisfaction of the beneficiaries of education. (Madani, 2019).

Departing from the definition given by ARACIP, quality in education is defined as a collection of principles and practices in the educational environment oriented towards achieving superior results about standards and meeting the needs and expectations of educational beneficiaries (Coste, 2020). Therefore, (Coste, 2020) argues that many factors influence the quality of a school or kindergarten, such as the educational climate, the physical environment, and the quality of interaction between the actors involved: children, teachers, and parents. Indicators of kindergarten quality are seen in supplementary materials, methodical activities, teacher-teacher discussions, director-local government, and teacher-parent relations. Therefore, quality is very important for the progress of educational institutions, especially in the midst of competition for the quality of education (Sharabi & Davidow, 2010). Some professionals define quality as "conformity to norms and details" (Kadri et al., 2023), while other experts call it readiness for use.

Quality is key to competing with other foundations. Quality is prowess, esteem, and determination; ultimately, it meets and exceeds client assumptions (Ghobadian et al., 1994).

The era of globalisation is characterised by quality competition, where everyone in various fields, including education, always strives to be the best. (Kadri et al., 2023). As a result, the quality of education and qualified human resources is very important. (Widiawati et al., 2019). Every educational institution can implement the management process called total quality management (TQM) through long-term planning and implementation of continuous quality improvement plans that will gradually lead the company toward the fulfillment of its vision. (Dahlggaard et al., 2010). TQM is integrated quality management carried out by every level of management and every unit in the organisational system to provide satisfactory service to customers (Dahlggaard et al., 2010). TQM has entered all levels of education, including early childhood education. This construction allows the foundation's correspondence to develop further, increases the spirit of representatives, increases efficiency, improves process effectiveness, and reduces costs and errors. (Motwani & Kumar, 1997).

Teaching international students in the new era of education should be based on specialised management methods. (Macgregor & Folinazzo, 2018). All contemporary development strategies should be based on contemporary conceptual solutions. Educational success is achieved through process-based management in conditions of competition for the quality of educational institutions. (Larina, 2015a) The problem of quality management in educational institutions has attracted much attention recently. Gary Rhoades and Barbara Sporn's article presents important issues in implementing TQM in the United States and Europe. (Larina, 2015b). The instruments of the TQM system offer new opportunities in the management field. (Olabimtan & Olopete, 2024) This approach has quickly evolved from a theoretical basis to a practical planning, implementation, management, and process improvement tool.

Over the past few decades, developing and developed countries have implemented various strategies to improve the quality of their educational institutions using TQM. This method ensures that educational programs are implemented systematically while maintaining educational standards. (Akram & Siraji, 2021). Education is a process of growth in which a person shares knowledge, experiences, values, and ideas accumulated over the years in their struggle to stay alive through peers. (Darling-Hammond et al., 2020) Developing countries have recognised that experienced, skilled, and seasoned human resources are more important than physical resources for their growth. (Zaeni et al., 2021). Procházka stated that TQM includes systematic supervision and observation of core actions. (Procházka, 2019). Developing countries use TQM to gain proper awareness of how effective the teaching-learning process is through innovation techniques. Institutional growth can be recognised by using new strategies for service quality development. According to (Jabbar et al., 2020) Pakistan's education policymakers have also emphasised the importance of TQM for implementing innovations in the education sector. High-quality services are essential to improving teacher and parent satisfaction (Kashif et al., 2016).

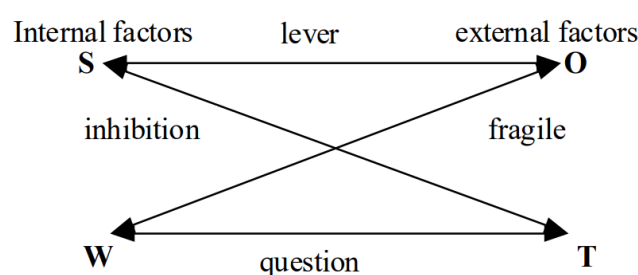


Figure 2: Swot Analysis

Source: <https://iopscience.iop.org/article/10.1088/1742-6596/1168/2/022055>

Figure 2 above shows that SWOT analysis emphasises SO factors, avoids WT factors, and produces recommendations for appropriate actions to prevent the development of the quality of educational institutions. Therefore, according to this analysis, the development of the quality of education can occur if the principal can analyse as a whole in his institution starting from opportunities, strengths, threats, and weaknesses to determine strategic and measurable steps in running an education management system which will then have an impact on the quality of the quality of an institution.

Table 6. The Summary of Discussion

Discussion Aspect	Summery
TQM Implementation	TQM focused on improving internal processes involving all parties (teachers, parents, etc.)
Internal Strengths	Strong teacher qualifications (all teachers hold a bachelor's degree), effective management structure
External Opportunities	Growth of information technology, increased use of digital platforms in learning
SWOT Strategy (SO)	Strengths (qualified teachers, open management) and Opportunities (technology, collaboration)
Teacher Competency Development	Training and comparative studies (Malaysia and Bali) to improve teacher skills
Teacher-Student Interaction	Efforts to improve interaction quality, but challenges remain in building deep connections.
Operational Weaknesses	Lack of structured lesson schedules, time management issues
Application of TQM in Early Childhood Education	Focus on efficiency and reducing errors, while considering the child's developmental needs.
Social-Emotional Development	Group activities and cooperative games designed to improve social interactions and cognitive growth
Quality Indicators	Structural and process quality indicators, such as teacher-child ratio, interactions, and materials used

Source: Data Analysis

The novelty of this research lies in integrating TQM with early childhood education, focusing on the role of teacher qualifications and open management in improving quality. It highlights the successful use of technology in learning, developing strategies to enhance teacher engagement, and introducing structured teacher development programs. Additionally, it emphasises the importance of improving teacher-student interactions and the need for better lesson planning. The research also adapts TQM principles to the early childhood context, promoting social and emotional development through organised activities, and provides a comprehensive approach to structural and process quality in early childhood education.\

CONCLUSION

This study concludes that Total Quality Management (TQM) with SWOT analysis is essential for improving the quality of early childhood education (ECE) institutions, particularly in Indonesia. The application of TQM helps enhance the learning process and overall educational quality, which is crucial for competing in the competitive educational landscape. The study highlights the importance of utilising institutional resources effectively through TQM to overcome existing challenges and improve education quality at the national and global levels.

However, this study has limitations, including its focus on a single institution, Cendekia Indramayu Kindergarten. As a result, the findings may not apply to all early childhood education institutions. Additionally, the qualitative approach does not allow for a quantitative assessment of TQM's direct impact on education quality. Further research with larger samples and more quantitative methods is needed to validate and expand these findings.

Future research should focus on adapting TQM implementation to different regional contexts in Indonesia, considering local challenges and resources. It is also recommended to explore policies that support or hinder TQM in early childhood education, such as teacher development and funding for education quality. Long-term evaluations of TQM's impact on child development and parental involvement are essential to assess the sustained effects of TQM on early childhood education outcomes.

REFERENCES

- Akram, A. R. M., & Siraji, M. (2021). The Effectiveness of Total Quality Management (TQM) Training Special Reference with Selected Manufacturing Companies in Ampara district, Sri Lanka. *International Journal on Integrated Education*, 4(6), 194–203.
- AL-Rawafi, A. (2020). Does Preschool Education in Indonesia Meet the Quality Standards? *Advances in Social Science, Education and Humanities Research*, 454(Ecep 2019), 21–26. <https://doi.org/10.2991/assehr.k.200808.004>
- Baskey, S. K., & Roy, D. (2021). Total quality management in Educational institutions. *Bilingual International Research Journal*, 11(41), 258–263.
- Besi, M., & Sakellariou, M. (2019). Transition to Primary School the Importance of Social Skills. *International Journal of Humanities and Social Science*, 6(1), 33–36. <https://doi.org/10.14445/23942703/ijhss-v6i1p107>
- BPS, B. (2023). *Jumlah Sekolah, Guru, dan Murid Sekolah Menengah Kejuruan (SMK) di Bawah Kementerian Pendidikan, Kebudayaan, Riset, dan Teknologi Menurut Provinsi, 2023/2024—Tabel Statistik—Badan Pusat Statistik Indonesia*. <https://www.bps.go.id/id/statistics-table/3/TVU5MFYwMVlaMFJ4ZW5obWJGZHNVMjFpVUhoMlp6MDkjMw==/jum>

- lah-sekolah-guru-dan-murid-sekolah-menengah-kejuruan-smk-di-bawah-kementerian-
pendidikan-kebudayaan-ri-set-dan-teknologi-menurut-provinsi.html?year=2016
- Coste, M. (2020). Quality Education In Kindergarten-The Premise For Success In School. *European Proceedings of Social and Behavioural Sciences*, 06(34), 350–357. <https://doi.org/10.15405/epsbs.2020.06.34>
- Dahlgaard, J. J., Kristensen, K., & Kanji, G. K. (2010). Total quality management and education. *Taylor & Francis*, 6(5), 445–456. <https://doi.org/10.1080/09544129550035116>
- Darling-Hammond, L., Flook, L., Cook-Harvey, C., Barron, B., & Osher, D. (2020). Implications for educational practice of the science of learning and development. *Applied Developmental Science*, 24(2), 97–140. <https://doi.org/10.1080/10888691.2018.1537791>
- Forster, M., Gower, A. L., Borowsky, I. W., & McMorris, B. J. (2017). Associations between adverse childhood experiences, student-teacher relationships, and non-medical use of prescription medications among adolescents. *Addictive Behaviors*, 68(February), 30–34. <https://doi.org/10.1016/j.addbeh.2017.01.004>
- Ghobadian, A., Speller, S., & Jones, M. (1994). Service Quality. *International Journal of Quality & Reliability Management*, 11(9), 43–66. <https://doi.org/10.1108/02656719410074297>
- Gilliam, W. S. (2005). Prekindergartners left behind: Expulsion rates in state prekindergarten systems. *Yale University Child Study Center*, April 2005, 1–13.
- Haque, A., Sarwar, A., & Yasmin, F. (2013). Teachers' Perception towards 'Total Quality Management Practices in Malaysian Higher Learning Institutions. *Creative Education*, 04(09), 35–40. <https://doi.org/10.4236/ce.2013.49b008>
- Howard, S. J., Lewis, K. L., Walter, E., Verenikina, I., & Kervin, L. K. (2024). Measuring the Quality of Adult–Child Interactions in the Context of ECEC: a Systematic Review on the Relationship with Developmental and Educational Outcomes. In *Educational Psychology Review* (Vol. 36, Issue 1). Springer US. <https://doi.org/10.1007/s10648-023-09832-3>
- Iskandar, H. (2020). Realizing Quality Early Childhood Education and Parenting in Indonesia: Pitfalls and Strategies. *Advances in Social Science, Education and Humanities Research*, 454(Ecep 2019), 1–9. <https://doi.org/10.2991/assehr.k.200808.001>
- Jabbar, M. N., Mahmood, W., & Maryam, S. (2020). Swot Analysis As Total Quality Management Tool: A Systematic Review Between Pakistan and Malaysian Public Universities. *Hamdard Islamicus*, Vol. 43 No. 3 (2020), 11-17 <https://Hamdardfoundation.Org/Hamdard-Islamicus/>, 43(May), 7.
- Kadan, G., Aral, N., & Aysu, B. (2023). Preschool Education in Türkiye from Past to Present. *Theory and Practice in Child Development*, 3(1), 138–164. <https://doi.org/10.46303/tpicd.2023.8>
- Kadri, H. Al, Widiawati, Susanti, L., Ermita, & Educational. (2023). Total Quality Management to Improve the Quality of Higher Education in the 21st Century. *Proceedings of the 2nd Padang International Conference on Educational Management and Administration 2021 (PICEMA 2021)*, 251–261. <https://doi.org/10.2991/978-2-494069-11-4>
- Kemendikbud. (2023, December 5). *Peringkat Indonesia pada PISA 2022 Naik 5-6 Posisi Dibanding 2018. Hacked by Oranggilee Feat StarGold.* <https://www.kemdikbud.go.id/main/blog/2023/12/peringkat-indonesia-pada-pisa-2022-naik-56-posisi-dibanding-2018>

- Keung, C., & Fung, K. (2019). Pursuing quality learning experiences for young children through learning in play: How do children perceive play? *Early Child Development and Care*, 191, 1–15. <https://doi.org/10.1080/03004430.2019.1633313>
- Khasanah, U., Riyanto, Y., & Setyowati, S. (2023). Total Quality Management (TQM) in Education: School Quality Management for Quality Educational Services at Senior High Schools. *SAR Journal - Science and Research*, 6(3), 211–216. <https://doi.org/10.18421/sar63-10>
- Larina, L. N. (2015a). Practical Application of Total Quality Management System to Education of International Students. *Procedia - Social and Behavioral Sciences*, 215(June), 9–13. <https://doi.org/10.1016/j.sbspro.2015.11.566>
- Larina, L. N. (2015b). Practical Application of Total Quality Management System to Education of International Students. *Procedia - Social and Behavioral Sciences*, 215(June), 9–13. <https://doi.org/10.1016/j.sbspro.2015.11.566>
- Lestari, G. D., Yulianingsih, W., & Nusantara, W. (2019). The Analysis of Early Children Education Services Quality in Increasing the Satisfaction of Students Parent in At-Taqwa Kindergarten Surabaya. *Advances in Social Science, Education and Humanities Research*, 335(ICSSHUM), 253–259. <https://doi.org/10.2991/icesshum-19.2019.41>
- Licardo, M., Mezak, J., & Evin Gencil, İ. (2023). Teaching for the Future in Early Childhood Education. In *Teaching for the Future in Early Childhood Education* (Issue April). University of Maribor, University Press. <https://doi.org/10.18690/um.pef.2.2023>
- Loughran, J., Hamilton, M., Laboskey, V., & Russell, T. (2004). *International Handbook of Self-Study of Teaching and Teacher Education Practices*. <https://doi.org/10.1007/978-1-4020-6545-3>
- Ma, S., Tang, D., & Yang, Y. (2019). The Development Research of Bicycle Systems Based on SWOT - AHP Model. *Journal of Physics: Conference Series*, 1168(2). <https://doi.org/10.1088/1742-6596/1168/2/022055>
- Macgregor, A., & Folinazzo, G. (2018). Best Practices in Teaching International Students in Higher Education: Issues and Strategies. *TESOL Journal*, 9(2), 299–329. <https://doi.org/10.1002/tesj.324>
- Madani, R. A. (2019). Analysis of Educational Quality, a Goal of Education for All Policy. *Higher Education Studies*, 9(1), 100. <https://doi.org/10.5539/hes.v9n1p100>
- Melhuish, E., & Gardiner, J. (2019). Structural Factors and Policy Change as Related to the Quality of Early Childhood Education and Care for 3–4 Year Olds in the UK. *Frontiers in Education*, 4(May). <https://doi.org/10.3389/educ.2019.00035>
- Menteşoğulları, E. (2023). Total Quality Management in Education: A Strategic Approach for Continuous Improvement and Success. *International Journal of Social Sciences*, 7(29), 184–198. <https://doi.org/10.52096/usbd.7.29.10>
- Militaru, M., Ungureanu, G., & (Crețu), A. Ș. C. (2013). The Prospects of Implementing the Principles of Total Quality Management (TQM) in Education. *Procedia - Social and Behavioral Sciences*, 93(September), 1138–1141. <https://doi.org/10.1016/j.sbspro.2013.10.003>
- Moleong, L. J. (2017). *Metodologi Penelitian Kualitatif*. Remaja Rosdakarya.
- Motwani, J., & Kumar, A. (1997). The need for implementing total quality management in education. *International Journal of Educational Management*, 11(3), 131–135. <https://doi.org/10.1108/09513549710164023>

- Olabinm, O. E., & Olopete, S. A. (2024). Total Quality Management and Organisational Performance. *British Journal of Multidisciplinary and Advanced Studies: Business and Management Sciences*, 5(1), 184–197. <https://doi.org/doi:https://doi.org/10.37745/bjmas.2022.0418>
- Olsen, W. (2004). Triangulation in social research: Qualitative and quantitative methods can really be mixed. *Developments in Sociology*, 20, 103–118.
- Procházka, D. A. (2019). Gamification in Management Education. In *Springer Proceedings in Business and Economics* (Issue May). https://doi.org/10.1007/978-3-030-11851-8_38
- Rasmani, U. E. E., Palupi, W., Jumiatmoko, J., Zuhro, N. S., & Fitrianingtyas, A. (2021). Improving Early Childhood Education Management through Problem Identification of Institutions. *Jurnal Obsesi: Jurnal Pendidikan Anak Usia Dini*, 6(1), 307–314. <https://doi.org/10.31004/obsesi.v6i1.888>
- Roche, J., Bell, L., Galvão, C., Golumbic, Y. N., Kloetzer, L., Knob, N., Laakso, M., Lorke, J., Mannion, G., Massetti, L., Mauchline, A., Pata, K., Ruck, A., Taraba, P., & Winter, S. (2020). Citizen Science, Education, and Learning: Challenges and Opportunities. *Frontiers in Sociology*, 5(December), 1–10. <https://doi.org/10.3389/fsoc.2020.613814>
- Romstein, K., Vladovic, S., & Zagar, D. (2018). Kindergarten.pdf. In *Preliminary Communication*. Faculty of Education in Osijek, Ombudsman for children.
- Sharabi, M., & Davidow, M. (2010). Service quality implementation: Problems and solutions. *International Journal of Quality and Service Sciences*, 2(2), 189–205. <https://doi.org/10.1108/17566691011057357>
- Sugiyono. (2019). *Metode Penelitian Kuantitatif kualitatif dan R&D*. Alfabeta.
- Suroyya, C. F., Tantowi, A., Kartiko, A., Labib, A., & Masuud, M. A. (2024). Developing Animated Video Storytelling Media in Indonesian Language Learning to Foster Social Awareness and Student Motivation. *ELEMENTARY: Islamic Teacher Journal*, 12(1), Article 1. <https://doi.org/10.21043/elementary.v12i1.28369>
- Sutapa, P., Pratama, K. W., Rosly, M. M., Ali, S. K. S., & Karakauki, M. (2021). Improving Motor Skills in Early Childhood through Goal-Oriented Play Activity. *Children (Basel, Switzerland)*, 8(11). <https://doi.org/10.3390/children8110994>
- Taskov, N., & Mitreva, E. (2015). The Motivation and the Efficient Communication Both are the Essential Pillar within the Building of the TQM (Total Quality Management) System within the Macedonian Higher Education Institutions. *Procedia - Social and Behavioral Sciences*, 180(November 2014), 227–234. <https://doi.org/10.1016/j.sbspro.2015.02.109>
- Tilman, A. de A., Waruwu, M., & Ismanto, B. (2023). Implementation of TQM Education in Increasing Interest in Learning Tetum as the National Language of Timor Leste. *International Journal of Social Service and Research*, 3(11), 2977–2984. <https://doi.org/10.46799/ijssr.v3i11.604>
- Widiawati, W., T, Y. S. L., & Sutarsih, C. (2019). *The Implementation of Strategic Management in Developing School*. 258(Icream 2018), 265–268. <https://doi.org/10.2991/icream-18.2019.54>
- Zaeni, N., Bahasoan, S., & Haeranah, H. (2021). Skills and Human Resources Development in Improving Employee Performance. *Jurnal Manajemen Bisnis*, 8(1), 74–83. <https://doi.org/10.33096/jmb.v8i1.669>
- Zhuanh, Y., & Song, Z. (2019). A Systematic Review of Grounded Theory Methodology: Re-Grounding in Weber Yuting Zhuang Shanghai University of Accounting and Finance. *Journal of Applied Business and Economics*, 21(9), 107–134.