

IMPLEMENTATION OF QA, QC, AND TQM: STRATEGIC SOLUTIONS FOR IMPROVING THE QUALITY OF CONTINUING EDUCATION

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Abstract

Improving the quality of education is one of the main priorities in efforts to achieve the success of the education system. The concepts of Quality Control (QC), Quality Assurance (QA), and Total Quality Management (TQM) are significant approaches in quality management in educational institutions. QC focuses on process control to ensure educational outcomes according to the standards that have been set. QA places more emphasis on designing and implementing systems to prevent errors and improve efficiency. Meanwhile, TQM adopts a holistic approach by involving all elements of the educational organization to improve quality sustainably. This article aims to explore the implementation of QC, QA, and TQM in the context of education, including the challenges faced and their impact on the quality of learning. Based on the results of the analysis, it was found that the integration of these three approaches can make a significant contribution to the achievement of superior quality of education.

Keywords: Quality Control, Quality Assurance, Total Quality Management, Education

Abstrak

Peningkatan mutu pendidikan merupakan salah satu prioritas utama dalam upaya mencapai keberhasilan sistem pendidikan. Konsep Quality Control (QC), Quality Assurance (QA), dan Total Quality Management (TQM) menjadi pendekatan yang signifikan dalam manajemen mutu di institusi pendidikan. QC berfokus pada pengendalian proses untuk memastikan hasil pendidikan sesuai standar yang telah ditetapkan. QA lebih menekankan pada perancangan dan penerapan sistem untuk mencegah kesalahan dan meningkatkan efisiensi. Sementara itu, TQM mengadopsi pendekatan holistik dengan melibatkan seluruh elemen organisasi pendidikan untuk meningkatkan kualitas secara berkelanjutan. Artikel ini bertujuan untuk mengeksplorasi implementasi QC, QA, dan TQM dalam konteks pendidikan, termasuk tantangan yang dihadapi serta dampaknya terhadap mutu pembelajaran. Berdasarkan hasil analisis, ditemukan bahwa integrasi ketiga pendekatan ini dapat memberikan kontribusi signifikan terhadap pencapaian kualitas pendidikan yang unggul.

Kata kunci: Quality Control, Quality Assurance, Total Quality Management, Pendidikan

INTRODUCTION

Education is the main pillar in the development of a country, influencing social, economic, cultural, and political development. During rapid development, the quality of education is a very decisive factor in increasing the global competitiveness of a nation.

Therefore, education quality management is becoming increasingly important to ensure that every education system can produce graduates who are competent, skilled, and ready to face the challenges of the future (Bandur, 2012). However, to achieve this goal, it is necessary to have a structured and systematic system in the management of education. One effective approach to improving the quality of education is to apply the concepts of Quality Control (QC), Quality Assurance (QA), and Total Quality Management (TQM) (Banerji et al., 2013).

Quality Control (QC) in education is a process carried out to ensure that educational products, be it in the form of curriculum, teaching materials, and student learning outcomes, meet the quality standards that have been set. QC focuses on identifying and correcting errors or inconsistencies in various aspects of education. For example, the evaluation of student exam results or teaching quality is a part of QC that can be used to detect problems in the learning process. In schools or colleges, QC plays an important role in ensuring that the educational standards set by institutions or governments can be achieved consistently (Azad et al., 2021). Quality Assurance (QA) places more emphasis on preventing errors through careful planning and management. QA is a proactive approach in education management, with the aim of maintaining the quality of education continuously. In this context, QA includes activities such as curriculum design, teacher training, development of standard operating procedures (SOPs), and periodic monitoring and evaluation of learning activities. With a good QA system, it is hoped that mistakes in education can be minimized from the beginning, and the quality of education can be ensured at all levels and aspects of education.

Meanwhile, Total Quality Management (TQM) is a more comprehensive concept and involves all parts of the educational organization to improve quality. TQM does not only focus on quality control or quality assurance, but also on the management of the educational process as a whole (Arribath et al., 2021). TQM emphasizes the importance of the involvement of all parties, both school or college leaders, teaching staff, students, parents, and the community, to contribute to the achievement of education quality goals. The basic principles of TQM, such as continuous improvement, a data-driven approach, as well as a focus on customer satisfaction (in this case, students and society), are the things that are at the heart of the implementation of TQM in education (Musolin et al., 2022).

In general, the implementation of QC, QA, and TQM in education aims to increase the effectiveness and efficiency in the learning process, as well as to guarantee that educational outcomes can meet the expected standards. However, the application of these concepts in the world of education is not without challenges. The main challenges that are often faced in the implementation of QC, QA, and TQM include limited resources, resistance to change, and a lack of understanding and involvement from various related parties. In addition, improper or inconsistent implementation can lead to failure in achieving the goal of improving the quality of education.

Based on this, this study aims to delve deeper into the application of QC, QA, and TQM in the education system, as well as analyze its impact on the quality of education produced. This research will also discuss the various challenges faced in implementing the three concepts, as well as provide recommendations to improve the existing education quality management.

METHOD

This study uses a qualitative approach with a case study design to explore the application and impact of Quality Control (QC), Quality Assurance (QA), and Total Quality Management (TQM) in education (Budianto, 2024). This approach was chosen because it aims to deeply understand the implementation of the three concepts in the context of education and explore their challenges and successes through direct experience from various related parties. The design of this study is an exploratory case study that focuses on the application of QC, QA, and TQM in several educational institutions, both at the secondary school and college levels. Case studies allow researchers to explore and understand the real situation faced by educational institutions in implementing quality management systems, as well as provide more comprehensive insights into the processes and results achieved.

RESULT AND DISCUSSION

Quality Assurance (QA) and Quality Control (QC) are two important concepts in quality management that are often used together, but actually have different objectives and approaches. QA focuses more on preventing defects or errors by improving processes, while QC plays a role in identifying and correcting defects after a product or service has been completed. In the context of education, both concepts play a vital role in ensuring that the education system runs effectively and produces high-quality graduates (Barr-Pulliam et al., 2022). Quality Assurance (QA) in education can be understood as a series of systematic actions aimed at ensuring that all processes in educational development, from planning to implementation and evaluation, are carried out per established standards and guidelines. QA places greater emphasis on preventing problems by ensuring that every step in the educational process is designed and implemented correctly from the outset. In its implementation, QA is carried out at the beginning and throughout the educational cycle, from the planning stage to implementation. This includes setting quality standards for the curriculum, teaching materials, teaching methods, and facilities and infrastructure used. In addition, QA also plays an important role in monitoring the learning process to ensure that the methods used by educators follow the guidelines set (Aman et al., 2020).

One of the main responsibilities of QA is to set quality standards. In the context of education, this means that QA is responsible for developing and implementing quality standards in the curriculum, learning methods, and evaluation systems. The curriculum must be developed based on scientific developments and market needs, and tailored to the characteristics of the students. QA also has an important task in supervising the

learning process. Every stage of the teaching and learning process must comply with established guidelines, not only to ensure the continuity of the process, but also to ensure that the quality produced is accountable. In education, QA also monitors how teachers teach, evaluates the methods used, and ensures that learning procedures are carried out under educational quality standards (Akrim, 2022).

Another aspect of QA is its focus on problem prevention. With a preventive approach, QA strives to detect potential errors early on, even before the learning process begins. This can be done by developing a regular training system for teachers, conducting initial evaluations of lesson plans, and establishing control mechanisms for educational administration processes. QA also works through structured systems and processes to ensure that every part of the educational organization runs according to standardized procedures (Al-Wafi & Fathurrahman, 2024). In this case, QA acts as a system regulator that coordinates between one unit and another to avoid errors or procedural inconsistencies. As a concrete example, QA in education can be seen in activities such as developing teaching quality standards, developing a curriculum that is adaptive to the needs of the times, and conducting training for teachers so that they can teach following established standards.

On the other hand, Quality Control (QC) focuses more on checking the final results of an activity. In education, QC comes into play after the learning process is complete. QC verifies whether educational outcomes in the form of exam scores, final assignments, or student competency assessments meet the predetermined quality standards. QC works reactively, detecting and correcting errors after they occur. The role of QC in education is crucial because it ensures that learning objectives are truly achieved and identifies any gaps between outcomes and expectations. More specifically, QC tasks in education include checking and testing student learning outcomes. This is done through the evaluation of exam scores, assignments, projects, and other learning activities. If learning outcomes are found to be inconsistent with competency standards, QC will identify the problems and provide recommendations for improvement. QC also inspects the final stages of the educational process, including teachers' assessments of students, to ensure that all activities are carried out under agreed standards. Examples of QC activities in education include evaluating exam results, auditing teaching processes, and using surveys and evaluation instruments to measure the effectiveness of learning and student satisfaction.

The implementation of QC will provide valuable feedback for continuous improvement in the education system. For example, if the evaluation results show that many students fail to meet the minimum standards in certain subjects, QC will identify the causes, whether it is due to ineffective teaching methods, material that is too difficult, or a lack of learning facilities. The results of this QC process will be used to develop improvement strategies, whether in terms of teachers, materials, or learning approaches. In addition to QA and QC, the concept of Total Quality Management (TQM) is also an important approach in improving the quality of education. TQM is a comprehensive approach that

aims to continuously improve quality in all aspects of an organization, including educational institutions. TQM does not only focus on the final product, but on the overall process and work culture. In its implementation, TQM emphasizes the involvement of all parties in the education system—from education administrators, teachers, students, parents, to the community. All stakeholders play an active role in creating quality education.

TQM also emphasizes the importance of data-driven decision making. This means that all policies and improvements in the education system are based on analysis of valid and objective data. The data collected can include student test results, teaching evaluations, parent satisfaction surveys, and the use of educational resources. With this approach, educational institutions can identify weaknesses and areas for improvement more accurately. In addition, TQM encourages continuous improvement in every aspect of education. Every learning process and administrative activity must be evaluated regularly to determine its effectiveness and identify opportunities for quality improvement. Improvement measures can include curriculum updates, teacher competency enhancement, or the development of learning technologies.

Another important point in TQM is increasing customer satisfaction, in this case, students and parents. They are positioned as the primary users of educational services, so the quality of services must be tailored to their expectations and needs (Afista & Abu Bakar, 2020). Schools and educational institutions need to establish open communication with students and parents and pay attention to their input as a basis for developing educational programs. In practice, QA, QC, and TQM complement each other in order to create an optimal education system. QA ensures that every process runs according to plan and prevents errors from occurring in the first place, QC guarantees that the results of the process meet the expected standards, and TQM integrates all elements within the educational organization to encourage continuous improvement. These three approaches, if implemented consistently and in an integrated manner, will create a high-quality educational environment that is adaptive to change and oriented towards the satisfaction and success of students. The implementation of QA in education begins with the planning and standardization of the education system. Educational institutions set quality standards for all aspects, from curriculum, teaching materials, teaching methods, to physical facilities. The curriculum is designed to be relevant to the times and the needs of the job market, while taking into account local and national aspects. Teaching methods are designed to develop 21st-century skills, such as critical thinking, creativity, and collaboration. QA also helps design a systematic and standardized learning process. Learning objectives are clearly defined, teaching strategies are selected based on student characteristics, and evaluation tools are developed to measure achievement objectively. As a result, the learning process will have a clear direction and measurable quality.

On the other hand, teacher professional development is also an important part of QA. Teachers need to receive regular training and competency development to ensure that they are able to meet the established teaching standards. This training includes

pedagogical improvement, mastery of learning technology, and understanding of curriculum changes. QA also conducts regular system evaluations to ensure its effectiveness. Evaluations are conducted by collecting feedback from various parties, including students, parents, teachers, and administrative staff. The data obtained is used to assess the suitability of the implementation and the initial plan, as well as to formulate improvement measures. On the QC side, its implementation in education begins with the assessment of student learning outcomes. This assessment is carried out through various forms of evaluation, both formative and summative. Formative evaluation is conducted during the learning process, while summative evaluation is conducted at the end of the learning period. The aim is to determine the extent to which students have achieved the learning objectives. In addition, QC also audits the educational processes that have been implemented. This audit includes a review of teaching, assessment, administration, and management of educational institutions. The audit is conducted to ensure that all activities comply with applicable standards and procedures. QC also collects feedback from students and other stakeholders to assess their satisfaction with the educational services provided. Surveys and interviews are used as tools to identify weaknesses in the educational process, which then form the basis for decision-making on improvements.

If any discrepancies or weaknesses are found in the educational outcomes, QC will take corrective action. These actions may include revising assessments, retraining teachers, or improving teaching materials. The goal is to ensure that any weaknesses identified are addressed immediately so that they do not adversely affect the overall quality of education. Thus, QC acts as the final guardian of educational quality, ensuring that all final educational products meet established standards. Overall, the synergy between QA, QC, and TQM forms a strong foundation in education quality management. The three are inseparable, as each has a specific role that complements the others. QA prevents issues from arising in the first place, QC identifies and corrects issues in the final output, and TQM ensures that improvements are implemented comprehensively and continuously. By consistently applying these three concepts, educational institutions will be able to produce graduates who are not only academically competent but also possess the skills and attitudes needed to tackle future challenges.

CONCLUSION

The implementation of Quality Assurance (QA), Quality Control (QC), and Total Quality Management (TQM) in education plays a very important role in ensuring high and sustainable quality of education. Each has a different focus and approach, but complements the other in achieving the same goal of improving the quality of education. By implementing QA, QC, and TQM simultaneously, educational institutions can create an education system that is more effective, efficient, and responsive to changing needs and the times. This approach allows for continuous quality improvement, ensuring that the education provided not only meets standards but also adapts to ever-evolving global demands. The implementation of these three concepts not only improves the quality of educational processes and outcomes but also strengthens collaboration between various

parties involved in the world of education, such as school managers, teachers, students, and parents. Thus, the application of QA, QC, and TQM in education can create a high-quality educational environment and be able to produce graduates who are competent and ready to face future challenges.

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