Overview of education quality and education quality management

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Abstract

The quality of education serves as a cornerstone for societal development, fostering knowledge, skills, and values essential for personal and professional growth. This paper provides an overview of education quality and its management, emphasizing the theorical issues. Effective education quality management can be rearched by managing different educational quality management models, which have been more common than ever. The paper also explores innovative practices in quality assurance with other relevant factors. By synthesizing theoretical and practical insights, this overview underscores the necessity of a holistic, adaptive approach to education quality management to meet the evolving demands of learners and society

Keywords: *quality management, higher education, overview*

1. Introduction

The quality of education has become a focal point for policymakers, educators, and researchers worldwide, driven by its critical role in shaping individuals and societies. Education quality refers to the extent to which educational experiences meet the cognitive, emotional, and social development needs of learners while preparing them for the challenges of life and work. It encompasses factors such as curriculum relevance, teaching practices, access to resources, learner outcomes, and inclusivity. Effective education quality is not merely about academic achievement but also the development of well-rounded individuals who contribute positively to society.

Education quality management involves the systematic processes and practices implemented to assess, enhance, and sustain the quality of education in institutions and systems. This includes the use of quality assurance frameworks, performance indicators, accreditation standards, and continuous improvement initiatives. By integrating strategic planning and stakeholder engagement, education quality management ensures that institutions adapt to evolving societal needs and technological advancements while maintaining accountability.

Globally, efforts to enhance education quality and its management are influenced by various frameworks and benchmarks, such as the

United Nations' Sustainable Development Goal 4 (SDG 4), which emphasizes inclusive, equitable, and quality education for all (United Nations, 2015). Achieving this goal requires robust quality management systems that foster innovation, ensure equity, and maintain high standards of teaching and learning.

Studies highlight the interconnectedness of education quality and broader societal outcomes. High-quality education systems contribute to economic growth, social equity, and innovation (Hanushek & Woessmann, 2020). Conversely, deficiencies in quality management can lead to systemic inefficiencies, widening inequalities, and poor learner outcomes, underscoring the critical need for robust governance mechanisms (UNESCO, 2021).

2. Method

This review of education quality and its management can be conducted by focusing on a concise yet systematic methodology. The review begins by clearly defining its objectives, such as identifying key contnets of education quality or exploring approaches to quality assurance in educational management. Additional the contents and leveles of education quality management is synthesized by many aspects in terms of theory. More importantly, the educational quality management models are selected and studied to examine their compones and factors before reaching some conclusions.

3. Findings

3.1 Quality in education

Quality is the goal of human's continuous search, the driving force of each person's continuous efforts, something that can be recognized but is difficult to define. The concept of quality currently has many different understandings and there is no exact concept because this concept is used with many different connotations [4. The term "Quality" reflects the characteristic properties, values, and nature of things and creates a difference (in quality) between this thing and another. From a philosophical point of view, quality is a qualitative change that is the result of the process of quantitative accumulation that creates qualitative leaps in things and phenomena. In the field of production and business, product quality is characterized by factors such as raw materials, production processes and technology, and usage characteristics. Quality characteristics can be clearly expressed through technical-aesthetic indicators, product consumption levels on the market and can be easily compared with other products of the same type with different values and prices. Thus, quality can be understood as excellence, specialness, perfection, value for money, and compliance with prescribed standards.

According to the British Quality Institute (BSI-1991), from a functional perspective, quality is defined as the sum of the characteristics of a product or service that enable it to satisfy stated or potential needs. Oakland (1988), after a detailed analysis, defined quality as "the degree of conformity with the purpose and function". Sallis (1996) said that "quality is when it must do what it is supposed to do and do what the buyer expects from it". Philip B. Crosby "Quality is conformity to requirements". Thus, quality is conformity to goals and requirements; quality is excellence; quality is freedom from error; quality is the minimum threshold; quality is value for money; quality is improvement or improvement. Among the different definitions of the term " *educational quality* " by many authors, the definition of Harvey and Green (1993) is general. and more systematically. They refer to five aspects of higher education quality: quality is *superiority* (or excellence);

quality is *perfection* (results) complete, free from defects), quality is *fitness for purpose* (meeting customer needs); quality is *value for money* (in terms of worth the investment); and quality is *transformational.* The definition of Harvey and Green (1993) has been discussed, recognized and developed by many other authors. Higher education quality assurance organizations in the United States, the United Kingdom and many other countries are using the concept of "*quality is fit for purpose*". Some other organizations apply the concept of "*quality is excellence*" to compare the quality of higher education between countries or between different universities. The concept of "*quality as value added*" is used to encourage higher education institutions to pay attention to continuously improving the quality of teaching and learning.

In the countries of Southeast Asia, the accepted definitions of quality in higher education are almost uncontroversial. According to the Higher Education Reform Program in these countries (SEAMEO, 2001), the concept of quality in higher education is still not clearly defined, although the implementation of quality assurance in these countries is almost in the sense of "quality *is the fit for purpose*". However, fit for purpose is understood very differently between countries depending on their cultural characteristics, education management systems and socio-economic situations. Recently, in the "Regional *Cooperation Framework for Quality Assurance in Education",* In the article "*Quality in Higher Education*", SEAMEO (2003) used the concept of "*quality is conformity to requirements"consistent with the goal* of encouraging countries in the region to cooperate with each other.

Author Tran Khanh Duc 6believes that: Training quality is the result of training management reflected in the characteristics of qualities, personality values and labor values or professional capacity of graduates corresponding to the goals and training programs according to specific professions, or: "Training quality is assessed through the level of achievement of the training goals set for a training program" [6] .

A high-quality university is a place to train qualified and highly specialized human resources to meet the needs of the labor market. Thereby, the training quality is the result that learners achieve to meet the set goals, the result is accepted by the labor market with satisfaction. Thus, Quality in education refers to the extent to which the education system meets certain criteria and standards to ensure that students and students receive the best preparation for their future. Quality in education is not only related to the provision of specialized knowledge but also includes comprehensive development in terms of spirit, morality, culture and life skills.

A quality education system will typically have the following characteristics: (1)Quality teachers: Teachers are well-trained, professionally competent and able to motivate students; (2)Relevant educational content: Learning content reflects the knowledge and skills needed for the modern and future world, and is consistent with the needs of society and the labor market; (3)Facilities and technology: Schools need to be fully equipped with facilities, books, classrooms, libraries, laboratories and modern technological equipment to optimize the learning process; (4)Evaluation and monitoring: A system for evaluating and monitoring the quality of education needs to be established to ensure that quality criteria are met and to continuously improve the quality of education; (5)The above factors and many others play an

important role in ensuring quality in education, and improving this quality is an important goal of many countries around the world.

3.2 Approach to quality assurance in educational management

Access: The concept of "access" refers to providing equal access to and use of services, resources, or benefits for all people, regardless of gender, age, ethnicity, economic status, geography, or any other factor. In the field of education, this concept involves ensuring that every student has the opportunity to access a quality education and develop to his or her fullest potential.

Access to education 1is the creation of equitable and supportive learning environments for all students, regardless of their culture, language, family background, or learning ability. It also includes providing appropriate resources and support to help students overcome barriers and challenges in their learning. The goal of the concept of access in education is to build an equitable education system where every student has the opportunity to access and benefit from a quality education and comprehensive development. Quality assurance and quality approach are two important concepts in the field of educational management. Here is a basic definition of these two concepts:

Quality assurance approach in education management: The quality assurance approach in education management emphasizes not only ensuring that everyone has access to education, but also ensuring that the quality of that education meets standards and meets the real needs of students and society 9. This may include good implementation of elements related to the educational process, safe and positive learning environment, providing quality educational programs, assessing and monitoring learning outcomes, and ensuring the participation of families and communities in the educational process in order to have human resources that meet the requirements of labor use (meeting output requirements) 3.

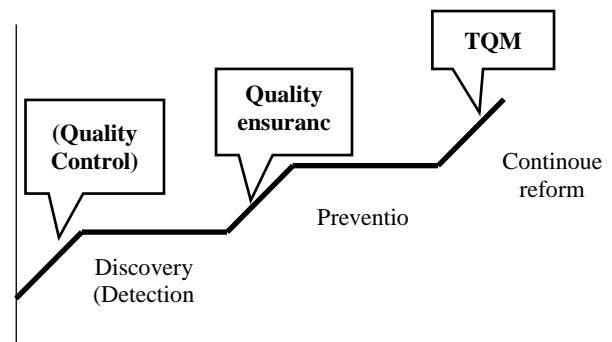### 3.3 Education quality management

Quality management has been applied in every industry, not only in manufacturing but in every field, in every type of company, large or small, whether participating in international markets or not. Quality management ensures that the company does the right things and the important things. If companies want to compete in international markets, they must learn and apply the concepts of effective quality management.

Quality management is the coordinated activities to direct and control an organization with regard to quality. Direction and control with regard to quality normally includes the establishment of quality policy and objectives, quality planning, quality control, quality assurance and quality improvement. Managing the operation of the educational process in a closed process from input to output to ensure educational quality through defining and controlling the implementation of a set of specific quality standards for training programs and universities to ensure quality. These standards include the core components of a training program, such as objectives, content, teaching methods, and assessment.

3.4 Levels of quality management in education

With the development of society, industry and services, and the increasing demand for quality, education quality management is becoming more and more important. The growth of commodity production and the increasing demand for service quality have promoted the application of quality management principles in the education field. The three common levels of education quality

management, including quality control, quality assurance and total quality management, play an important role in improving the quality of education and meeting the increasing demand for quality in this field.

Diagram 1. Levels of quality management

Quality assessment in education refers to the process of evaluating and determining the quality and standards of an educational institution or training program, as well as the process of assessing the learners themselves. In this context, the terms "review," "evaluation," and "measurement" are used synonymously to refer to the process of studying, evaluating, and measuring the quality and standards in education.

Quality Control: In the field of education, quality control focuses on providing continuous support and feedback during the educational process to help learners improve their skills more effectively. In this way, the quality of the learning process can be improved from the beginning, helping to limit the "wrong" product "not meeting the output" at the end of the educational process. This can create a more positive learning environment, encouraging development and creativity in education.

Quality assurance is a more advanced level of quality management than quality control, carried out before and during the training process. Quality assurance aims to prevent training results from not meeting educational goals. Educational products are personality and personal maturity designed to meet output requirements to ensure that output products achieve predetermined expectations. Quality assurance is a means of control to create "faultless" educational products and meet the needs of human resources, so it is necessary to standardize and ensure each stage of training. From this idea, educational managers are interested in creating a generation of products that are intellectual people with skills and personality to meet the requirements of human resources after training.

The major trends affecting internal and external quality assurance are: a shift in emphasis from inputs to outputs; a shift from intuitive assessment to explicit requirements-based testing/evaluation; a need for more information about graduates' competencies; a shift in emphasis from quality assurance for accountability to quality assurance for quality improvement; increased collaboration between external quality assurance agencies.

Quality culture is a concept related to quality assurance. In a broad sense, quality culture means that quality assurance activities are integrated into the daily life of the university and are considered a shared responsibility of all members of the academic community, staff, both professional and administrative, and students. In other words, quality culture is the value system of an organization

expressed through an environment that encourages the formation and continuous development of quality.

Total quality management is the highest level of quality management today. Total quality management is closely related to quality assurance, continuing and developing the quality assurance system. Quality management is the creation of a quality culture, where the purpose of everyone in a business or educational organization is to satisfy customers or satisfy students (in academic terms). Such places do not allow them to provide low quality products. Total quality management is the process of studying customer expectations and desires, designing products and services to best meet customer needs.

Quality management in education is the process of managing and operating educational activities to ensure the quality and effectiveness of the educational system. The main goal of quality management in education is to optimize the learning and development outcomes of students and the educational community.

Quality management in education includes the following activities:

Establishing quality standards: Identify and establish quality standards, metrics and criteria for various aspects of the education system, including educational content, teaching staff, facilities, pupils and students, and teaching processes.

Evaluation and monitoring: Conduct periodic evaluation and monitoring to ensure that quality standards are met. This may include the use of evaluation methods such as internal audits, external reviews, student and parent satisfaction surveys, and monitoring of learning outcomes.

Data and information management: Collect, process and analyze data related to educational quality to support decisions and continuous improvement.

Continuous improvement: Based on the results of evaluation and monitoring, the education system needs to continuously improve by adjusting the process, educational content, or facilities to enhance quality.

Quality management in education plays an important role in ensuring that the education system operates effectively and delivers the best outcomes for pupils and students.

3.5 Models of educational quality management
3.5.1 ISO 9000:2000 Management Model

ISO 9000 is an international standard for quality management systems (Quality Management System - QMS), developed by the International Organization for Standardization (ISO) 5. This system includes a series of standards from ISO 9001 to ISO 9004, in which ISO 9001 is the specific requirement standard that organizations can certify to.

ISO 9000:2000 is the older version of this standard, which has been replaced by later versions such as ISO 9001:2008 and ISO 9001:2015. However, the basic quality management principles remain the same across the different versions.

When applying the ISO 9001 model to educational quality management, schools or educational institutions will have to establish a quality management system that is capable of: (1) Identifying and meeting customer requirements (in this case, customers may be students, parents, recruitment organizations, educational management agencies, etc.); (2) Achieving customer satisfaction through continuous improvement; (3) Ensuring

compliance with legal and regulatory requirements related to education; (4) Controlling and improving teaching and academic management processes.

The basic steps to implement ISO 9001 in education include:

- Determine the quality policy and quality objectives of the educational organization.
- Develop educational processes and procedures to meet the quality policy.
- Implement processes and procedures through training and communication.
- Check and measure the effectiveness of the quality management system through data collection and analysis.
- Make improvements based on evaluation and analysis results

3.5.2 Total Quality Management (TQM) Model:

TQM (Total Quality Management) is a quality management model of an organization, oriented towards quality, based on the participation of all members, aiming to bring satisfaction to customers. Applying TQM in educational quality management helps ensure educational quality, increase student and parent satisfaction, and enhance the reputation of educational institutions.

The basic principles of applying total quality management in higher education include: focusing on customers (parents, students), leadership commitment, participation of all staff, processes, methods and tools, measurement and data analysis, continuous improvement...

When applying the TQM (Total Quality Management) management model in the education sector, schools need to carry out the following activities to ensure quality and operational performance:

1. Commitment from leadership: School leadership needs to have a strong commitment to quality improvement and promoting a TQM culture throughout the organization.
2. Continuous improvement: TQM emphasizes the principle of continuous improvement. Schools need to establish processes to collect feedback from students, parents and staff, and then use this information to improve teaching and learning.
3. Staff Training: Provide ongoing training to teachers and staff on quality management methods, efficient work processes, and how to approach problems from a TQM perspective.
4. Build a culture of autonomy: Encourage the participation of all members in improving quality. This can be done through the creation of multi-media working groups, regular meetings to discuss issues and suggest improvements.
5. Use of data and information: TQM requires the use of data and information to make decisions. Schools need to establish effective data collection and analysis systems to measure and improve the quality of education.
6. Building relationships with the community: Create opportunities to collaborate with parents, communities and businesses to improve the quality of education while meeting the needs of the community.
7. Establish quality standards: Identify and establish clear quality standards for teaching. teaching, school management and other educational support services. These standards need to be defined, measured and

monitored to ensure that quality is maintained and improved over time.

8. Process Management: TQM requires reviewing and optimizing work processes. Schools need to analyze and improve teaching, student management, human resource management, and other support processes to optimize performance and quality.

9. Motivation: Use incentives such as rewards, praise and promotions to motivate staff and students to participate in improving quality and performance.

10. Performance Measurement: Establish a performance measurement system and track key quality indicators to ensure that the school is moving in the right direction and continuously improving.

11. By implementing these activities, schools can reap the benefits of adopting the TQM management model to improve the quality of education and create a positive learning environment for students and staff.

3.5.3 SEAMEO's OEM management model:

SEAMEO Model - The Organizational Elements Model (OEM) of SEAMEO (South East Asian Ministers of Education Organization) provides the following 5 evaluation factors 6:

1. Input: Includes students, school staff, facilities, training programs and regulations, laws, and finances. Input levels must satisfy the set targets and objectives.

2. Training process: Includes training objectives, content, methods and processes, training management. This is the level of meeting the requirements of the teaching, learning and other training processes.

3. Training outcomes: Including course completion, achieved competencies and student adaptability.

4. Output: Including graduates, research results and other services, meeting economic and social needs. The level of achievement of output (graduates, scientific research results and other services) ensures the Criteria or compared with predetermined targets.

5. The effectiveness, training results and its impact on society are measured by the level of achievement of work requirements of students through the assessment of the students themselves, their parents, employers and society, and the level of capacity of the target students.

3.5.4 AUN-QA (Asean University Network_QA) Management Model

The AUN-QA (ASEAN University Network-Quality Assurance) model is a quality assessment system for universities in the ASEAN region. This model includes aspects related to strategy, system and tactics, all of which depend on internal and external QA, including QA (Quality Assurance) - an independent body responsible for assessing and ensuring quality in higher education.

This model is applied to ASEAN universities and is consistent with the regional and international QA frameworks, to ensure that universities in the ASEAN region comply with common quality standards and can compete both regionally and internationally. This also helps to enhance the reputation and quality of the higher education system in the ASEAN region. The AUN (Asean University Network) education quality management model is a system of standards and processes developed by the AUN-QA (Asean University Network-Quality Assurance) to assess and ensure the quality of higher education in the ASEAN region. Below are some important points in the AUN-QA model:

1. Quality Standards: The AUN-QA model defines a set of specific quality standards for training programs, training institutions and universities. These standards include the core components of a training program, such as objectives, content, teaching methods, and assessment.

2. Assessment process: AUN-QA provides a comprehensive quality assessment process to ensure that universities meet the set quality standards. This process typically includes self-assessment and assessment by independent assessment teams.

3. Quality Development: The AUN-QA model also encourages the continuous development of educational quality by proposing improvement measures based on assessment results.

4. International cooperation: The AUN-QA model also promotes international cooperation and exchange of experiences among universities in the ASEAN region and around the world.

1. The AUN-QA model provides an important structure to ensure that the quality of higher education in the ASEAN region meets international standards and contributes to the sustainable development of the region 6.

3.5.5 Process-based management model (CIPO)

With the view that training quality is a process, in 2000, UNESCO introduced the CIPO training model (Context - Input - Process - Output/Outcome), described 4as Diagram 1.

The CIPO model has the nature of controlling the training process due to all the contextual factors (Context) affecting the training process, including: Input factors; Process factors; Output factors (Output/Outcom). Therefore, training management according to CIPO is management in the direction of meeting social needs. The trend of using CIPO in training management in general and vocational training in particular is increasingly interested and seeking directions for application. Vocational training management is placed in a "moving" environment with a more comprehensive meaning, not just a matter of feedback from graduates, from employers or the issue of quality assurance of organizations or training facilities.

The CIPO model is an educational quality management model used to design and evaluate courses and programs. The model consists of the following main components: (1) Context: Context in the CIPO model refers to the external factors that influence the educational process, such as cultural, social, economic and political. This helps to define the environment and context in which the educational process takes place; (2) Input: This is the information, resources and requirements needed to initiate the educational process. Inputs can include curriculum, learning materials, facilities, human resources and requirements for knowledge, skills and attitudes of learners; (3) Process: The important part of the CIPO model, process refers to the way in which inputs are used to create learning experiences. These can be teaching methods, learning activities, assessment and student support; (4) Output: The result of the educational process, including knowledge, skills, attitudes and any other products that learners can produce after completing a course or program; (5) Process-based educational quality management: This is the continuous management and evaluation of the CIPO model, ensuring that the elements within the model are operating effectively and meeting the goals of educational quality. The CIPO model provides a comprehensive approach to the design,

implementation and evaluation of educational quality, especially in the context of applied learning.

4. Conclusion

The quality of an educational institution in general and the training process in particular is determined by its management mechanism. Quality assurance is used as a management method to maintain standards throughout the training process to continuously improve the quality of education. Therefore, in the trend of internationalization and globalization, the management of university training in general and postgraduate training in particular according to the quality assurance approach is an issue of primary concern to society.

Quality management is an advanced management method, which has been successful in the fields of production, business and service provision. In the field of education, especially postgraduate education, although it is a very diverse service field in organization as well as product supply, facing increasingly high quality requirements, the application of new management methods is becoming urgent.

Education quality and its management are pivotal in fostering equitable and sustainable development. The review highlights the importance of defining clear quality indicators, such as learning outcomes, teacher qualifications, and infrastructure, to benchmark educational success. Effective management practices, including accreditation systems, quality assurance frameworks, and robust policy implementation, emerge as critical tools for maintaining and enhancing education standards. However, disparities in resources, socio-economic conditions, and policy execution across regions underscore the persistent challenges faced by education systems globally. By addressing these gaps, stakeholders can develop strategies that promote inclusive, high-quality education for all.

The synthesis of global trends and innovative practices suggests that education quality management must evolve to address emerging challenges, such as digital transformation and the increasing demand for lifelong learning. Best practices from various contexts demonstrate the potential for cross-regional collaboration and knowledge-sharing to drive systemic improvements. Policymakers and educators must prioritize adaptability and innovation, leveraging insights from data-driven evaluations and stakeholder engagement. Future research should delve deeper into localized challenges and scalable solutions, ensuring that the pursuit of education quality remains dynamic and impactful in an ever-changing world.

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