## HISTORY OF QUALITY MANAGEMEN IN EDUCATION

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#### Abstrak.

Dalam ranah manajerial, aktivitas pendidikan dapat diakui bermutu bila memang memenuhi standar mutu sebagaimana perusahaan. Di antaranya adalah soal organisasi hingga pengembangannya. Termasuk juga, output dari pendidikan yang berupa peserta didik. Memang sudah barang tentu, bahwa proses ini seolah pragmatis. Hanya berorientasi pada mutu fisik saja. Latar belakang inilah, yang membuat pentingnya kita menelaah sejarah dari penjaminan mutu tersebut. Artikel ini secara kritis berupaya menjelaskan sejarah dari gerakan mutu bidang pendidikan. Kajian pustaka ini berupaya mengeksplorasi literatur tentang sejarah mutu, dan mengungkap beberapa tokoh kunci seperti Deming dan Juran serta lainnya. Hasilnya, bahwa sejarah kontrol mutu bidang pendidikan yang komersialistik tidaklah terlepas dari pengaruh orientasi penjaminan mutu untuk kepercayaan costumer. Dalam arti, secara historis; penjaminan mutu bidang pendidikan memang terpengaruh dari unsur manajemen bisnis modern sebagai sarana untuk meningkatkan kepercayaan konsumen bidang pendidikan; yakni dengan penerapan Total Quality Management (TMQ).

Kata kunci: Sejarah Mutu, Manajemen Pendidikan, Total Quality Management

### Abstract

In the managerial realm, educational activities can be recognized as quality if they meet the quality standards of the company. Among them is a matter of organization to its development. This includes the output of education in the form of students. Of course, this process seems pragmatic. Only oriented to physical quality only. It is this background that makes it important for us to examine the history of quality assurance. This article critically attempts to explain the history of the education quality movement. This literature review seeks to explore the literature on the history of quality, and reveals several key figures such as Deming and Juran and others. The result is that the history of commercialistic quality control in education is inseparable from the influence of quality assurance orientation on customer trust. In a sense, historically; Quality assurance in education is indeed influenced by elements of modern business management as a means to increase consumer confidence in education.

Keywords: History of Quality Management, Educational Management, Total Quality Management

### 1. INTRODUCTION

Total Quality Management (TQM) comes from the business world and especially in the corporate world. Therefore, to understand TQM must refer to its origin. This does not mean that business methods are superior to educational practice, or that education can be improved simply by adopting a commercial language. (Sulaeman, 2018) More than that, the business world can learn from the methods applied in several schools. In the contemporary era, the world of education is surprised by the existence of an industry-based education management model. The management of this model requires efforts by the management of educational institutions to improve the quality of education based on company management. (Maqbool et al., 2020)

The application of quality management in education is more popularly known as the term "Total Quality Education (TQE)", and in the world of national education it is known as School-Based Quality Improvement Management. (Mukhtar et al., 2020) The basis of this management was developed from the concept of TQM, which was originally applied to the business world. Philosophically, this concept emphasizes the consistent search for continuous improvement to achieve customer needs and satisfaction. (Sundari et al., 2020)

Total Quality Management (TQM) in education received serious attention in the National Quality Service (1991). This shows that TQM and quality issues in general attract public attention. In recent years, this issue has been increasing. People from all education sectors have now shown interest. (Ahmad et al., 2020) Some institutions are starting to put the TQM philosophy into practice. The development of this interest has provided a stimulus to the demands for publication of TQM issues in the world of education. (Marchiori & Mendes, 2020)

Seeing this, a study of the history of the quality movement in the field of education should always be looked at in detail. Especially the aspect of quality standards historically, where education began to be standardized as commercial companies made their quality standards. This article, aims to explain briefly about Total Quality Management in educational institution.

#### 2. METHODS

This paper uses qualitative research methods that take literature sources. The data, obtained from articles that discuss the history of quality in the field of education. The data, analyzed critically and presented descriptively. In particular, it reveals the historical relationship of the similarity of educational quality assurance methods to business. Which, not many have reviewed this element briefly other than just a glance.

### 3. RESULT AND DISCUSSION

#### A Brief History of TOM Development

The evolution of the total quality management (TQM) movement started from the time and motion study period by the father of scientific management Frederick Taylor in 1920, by raising the most fundamental aspect of scientific management, namely the separation between planning and implementation.(Dahlgaard-Park et al., 2018)

TQM originally came from the United States, then more developed in Japan and then expanded to North America and Europe. So TQM integrates American technical and analytical skills, Japanese implementation and organizational skills, and European and Asian traditions of expertise and integrity. (Vijai et al., 2017)

Soewarso Hardjosoedarmo said; Until now there are still many discussions about the history of TQM which is only one dimensional. In this case, many discussions only reveal experiences in Japan in the early years after World War II, where quality teachers Edwards Deming and Joseph Juran taught their theories to rebuild Japanese industry, which had been destroyed. The teachings were conveyed to Japanese manufacturing companies. The teachings of these quality teachers can be seen as the foundation or basic of TQM.(Vijai et al., 2017)

The foundation of TQM is statistical process control (SPC) which is a manufacturing management model, which was first introduced by Edward Deming and Joseph Juran after World War II to help the Japanese nation rebuild the country's infrastructure. The teachings of Deming and Juran continued to develop until it was named TQM by the US Navy in 1985. We know that TQM continues to evolve, become more mature and diversify for applications in the manufacturing, service industry, health, and today also in the field of education. (Schachter, 2017)

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## **Definition of Quality**

Quality according to Juran is the suitability of product use (fitness for use) to meet customer needs and satisfaction. According to Deming is conformity to market or consumer needs. For every institution, quality is the main agenda and improving quality is the most important task. However, there are some people who think of quality as an enigmatic concept. Quality is perceived as confusing and difficult to measure.(Umar & Ismail, 2018) Quality in one person's view sometimes contradicts the quality in another's view, so it is not strange if there are two experts who do not have the same conclusion about how to create good institutions.

We can indeed know quality when we experience it, but we still find it difficult when we try to describe and explain the one thing we can be sure of is quality is something that distinguishes between good and bad. Contrary to this belief, quality in education is ultimately the thing that distinguishes between success and failure. Thus, quality is clearly the main problem that will ensure the development of schools in achieving status in the midst of increasingly fierce competition in the world of education. Finding a source of quality is an important adventure. Educational actors realize their need to achieve these qualities and convey them to lessons and students. (Rahmawati, Nur, et al., 2021; Rahmawati, Zain, et al., 2021; Schachter, 2017)

In fact, there are many sources of quality in education, for example good building facilities, outstanding teachers, high moral values, good exam results, specialization or vocational education, encouragement from parents, local businesses and communities, abundant resources, good leadership. and effective, adequate curriculum, or a combination of these factors. Achieving quality involves having to do everything well, and an institution that must position customers appropriately and proportionally so that quality can be achieved.(D\kebowski et al., 2018) After understanding the definition of quality, it must be known what is included in the quality dimension. As quoted by MN Nasution defines eight dimensions that can be used to analyze product quality characteristics, which are as follows:

- 1. Performance or performance (performance)
- 2. Features
- 3. Reliability (reliability)
- 4. conformity (conformance)
- 5. Durability
- 6. Serviceability
- 7. Aesthetics (aesthetics)
- 8. Perceived quality (perceived quality).

### **History of Education Quality**

Dr. W. Edward Deming is recognized as the "Father of Quality". Dr. Deming earned his Ph.D. in mathematics and physics from Yale University. He first became acquainted with the basic concepts of traditional management in the late 1920s, when it belonged to the famous Western Electric, Hawthorne in Chicago. This experience led him to ask, "What is the best way for companies to motivate employees?" Deming found the traditional motivational system in use at that time unsuitable and economically unproductive. In this system, the provision of incentives is associated with the type of work in the hope of increasing worker output, which is followed by an inspection of the work process including recording items of employee work errors. (Rofiqoh et al., 2020; Schachter, 2017)

In the 1930s, Deming collaborated with Bell Telephone Laboratories statistician, Walter A. Shewhart, developed statistical control techniques that can be applied in the management process. Deming recognized that statistically controlled management processes help managers systematically determine the right time to intervene, as well as determine the right time to let the process run. During World War II Deming had the opportunity to show governments how Shewhart's methods of statistical quality control could be taught to workers and put into practice in busy armaments factories. At the end of World War II Deming left his job in government and founded a consulting firm.(Ali & Rana, 2017)

In 1947 sent him to Japan to prepare for the national census of the country. Meanwhile, American managers began to forget the teachings of quality control given in the war era and they returned to traditional pre-war management styles and practices. At the same time, Deming's involvement in quality control methods is getting a warm welcome in Japan. The Japanese attribute their economic success to the quality methodology of Dr. Deming. Philosophy Dr. Deming tends to put quality in a human sense.(Edgington, 2019)

When a company's employees are committed to a job well done and have a strong managerial process for action, quality will flow naturally. A practical definition of quality is: an expected degree of variation in a standard that is used and has low cost dependence. The core methodology of the quality management approach. Deming is using simple statistical techniques on the output of continuous improvement programs. Only through statistical verification can the manager know that he is facing a problem and find the root of the problem. Some of the main principles from Deming that can be applied in the field of education are:(Hasibuan et al., 2020; Ozberk et al., 2019)

- 1. School board members and administrators should define the educational quality goals to be achieved.
- 2. Emphasis on preventing failure in students, rather than detecting failure after the event has occurred.
- 3. Provided strictly enforced, the use of statistical control methods can help improve student and administrative outcomes.

Dr. Joseph M. Juran is also recognized as one of the "Fathers of Quality". Dr. Juran has a background in engineering and law education. Like Deming, Juran was a respected statistician. Juran calls quality "appropriate to use" and emphasizes that the basic mission of quality as a school is "to develop programs and services that meet the needs of users such as students and the community" Juran further said that "appropriate to use" is more precisely determined by the user not by the provider. (Ozberk et al., 2019)

Juran's view of quality reflects a rational, fact-based approach to business organization and mandates the importance of quality planning and control processes. The focal point of its quality management philosophy is the organization's belief in individual productivity. Quality can be guaranteed by ensuring that each individual has the area he or she needs to do the job properly. (Rofiqoh et al., 2020)

With the right tools, workers will create products and services that consistently meet customer expectations. Like Deming, Juran also played an important role in rebuilding Japan after World War II. He was recognized by the Japanese for his services in developing quality control in Japan and

facilitating the friendship of the United States and Japan. Juran's efforts to discover the basic principles of the management process led him to focus on quality as a primary goal. Some of Juran's views on quality are:(Ali & Rana, 2017; Hasibuan et al., 2020)

- 1. Achieving quality is a process that knows no end
- 2. Quality improvement is a continuous process, not a one-way program
- 3. Quality requires leadership from school board members and administrators
- 4. Mass training is a prerequisite for quality.
- 5. Everyone in school should receive training.

When the teachings of Deming and Juran have been so well received. That should be the case with both of them. Many of his ideas were adopted and adapted by various American organizations. The core of both ideas is that building quality as a basic principle for school education, its strategy and philosophy are the same as those that have proven successful in other fields. Juran had predicted the success of the Japanese in a speech to European quality control organizations in 1966 he said: the Japanese stand out in the world of quality leadership and will be a world leader in the next two decades because no one else is moving towards quality at the same pace as the Japanese.(Rofiqoh et al., 2020)

## Deming, Shewhart, and Juran Contribution to Education

The ideas of quality assurance and integrated quality arrived in the West late, although they were originally developed in the 1930s and 1940s by W. Edwards Deming. He is an American statistician who has a PhD in physics he was born in 1900. His influence as a management theorist began in the West, but Japan has taken advantage of his expertise since 1950. Deming began to formulate his ideas in the 1930s while conducting research on methods method of eliminating variability and waste from industrial processes.(Ali & Rana, 2017)

Western Electrik was also the workplace of Josep Juran, another major contributor to the quality revolution in Japan, who was also American. From Western Electric, Deming moved to work in the American department of agriculture. While working there, he was introduced to Welter Shaewhart, a statistician at Bell Laboratories in New York. Previously, Shaewhart had developed several techniques that brought industrial processes into what he called statistical control. It is a set of techniques that minimize the unforeseen elements of industrial processes, making industry more predictable and more controlled. The goal is to eliminate wasted costs and time delays. (Dahlgaard et al., 2019)

Deming's early contribution was to develop and improve Shewhart's statistical methods. Shewhart and Deming's statistical methods are now known as statistical process control (SPC), combined with the insight of the human relations movement associated with Mayo and his colleagues, who incidentally are the proponents of TQM theory. Deming visited Japan for the first time in the late 1940s to conducted a post-war census of Japan. Impressed with his performance, the Japanese Union of Engineers and Scientists invited Deming to return in 1950 to teach the application of statistical process control to industrial players in Japan. The Japanese were eager to learn from other industrialist nations. (Ali & Rana, 2017; Dubinin et al., 2018; Edgington, 2019)

He taught Japan to start the swing by knowing what their customers wanted. Deming recommended that they design their production methods and products to the highest standards. Deming believes that with this approach fully implemented, within the next five years or so companies in Japan will be able to position themselves as leaders in the Japanese market implementing the ideas of Deming, Josep Juran and other quality experts who visited Japan at that time. The Japanese had developed Juran and Deming's ideas in what they called Total Qwality Control (TQC) and they were able to become the lions of the world market. The market dominance they have achieved is largely the result of their concern for quality. Japan's national author on quality, Kauro Ishikawa, has described the Japanese approach to TQC as 'a revolution of thought in management'. (Ali & Rana, 2017; Schachter, 2017)

### **Quality Movement in Education**

The integrated quality movement in education is still relatively new. There is very little literature that contains references to this before the 1980s. Several attempts at reorganizing work practices with the TQM concept have been carried out by several universities in America and other higher education in the UK there are many ideas related to quality are also well developed by the highest educational institutions and the ideas of quality are constantly researched and implemented in schools. In a recent study conducted by Robert Kaplan of the Harvard Husine School, he found little knowledge and research on TQM in MBA and other business studies programs at twenty of America's leading universities. (Pandita & Kiran, 2020; Schachter, 2017)

There is a kind of traditional reluctance in some education in the UK to apply industry management methodologies and language. This is likely to be the cause of the distance education from the vision of the quality movement. Some educators do not like to draw analogies between the

educational process and the creation of industrial products. However, several new initiatives such as TVEI, industrial placement and the development of education and business cooperation have brought the two closer together and made industrial concepts more acceptable in education. And finally there is a growing desire from educators to explore lessons from industry. There has also been an increasing interest in education in the UK, which coincided with the passage of the education reform law in 1988. The law has placed an emphasis on supervision.(Naveed Bin Rais et al., 2021)

On the educational process through achievement indicators. Achievement indicators are references that lead to process efficiency. These indicators only provide a rudimentary measure of the quality of learning, or about the effectiveness of the institution in finding the integrity of its customers. Institutions that use performance indicators have begun to show their seriousness towards TQM as a value to improve their service standards. Quality improvement is becoming increasingly important for institutions that are used to gain better control through their own efforts. Good freedom must be matched with good accountability. Institutions that must demonstrate that they are able to provide quality education to students. We live in an era of competition that is completely unclear. We now find schools that offer vocational education. National Vocational Qualifications, previously a vocational school, was never offered directly by employees to accelerate change by introducing training credits. (D\kebowski et al., 2018; Kaiseroglou & Sfakianaki, 2020)

Other changes are occurring in various areas of education which include the extension of higher education. Higher education is financed to increase student numbers by reducing costs. The tables are created to provide information to parents so they can make comparisons and have choices. The introduction to training credits is designed to give customers the freedom to choose. Schools and universities have done this by implementing various strategic plans. Regulated education requires competitive strategies to clearly differentiate institutions from their competitors. Quality is sometimes just the only differentiating factor for an institution. Focusing on customer needs, which in fact is the core point of quality, is one of the most effective ways to face competition and survive in it.(Naveed Bin Rais et al., 2021; Ozberk et al., 2019)

The TQM concept has received official support from more than 16 educational institutions. The Board of Chancellors and Principals have also published Teaching Standards and Excellence in Higber Education in 1991, with the sub-title Developing a Culture For Quality. In the conclusion of the book, the author states that each university must develop its own Total Quality Management system. What is very surprising is why quality and integrated quality in education only gained recognition after so long the quality has been successful in the industry? However, one thing we can all be sure of is that service quality is a key issue for the entire education sector in the coming decades.(Pandita & Kiran, 2020)

#### 4. CONCLUSION

Quality is the main agenda and improving quality is the most important task. Finding the source of quality is an important adventure. Achieving quality involves having to do everything well, and an institution that must position customers appropriately and proportionally so that quality can be achieved. The idea of quality improvement and quality assurance began to emerge after the second world war. However, British and American companies only became interested in quality issues in the 1980s, when they questioned Japan's superiority in capturing world markets. The origin of the quality movement in the industry is looking for quality from a new expedition, maintaining the quality of a product, responsibility for work on product quality. So that a strict definition was born, two systems known as Quality Control were developed.

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