Implementation of Total Quality Management in Vocational High Schools

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Abstract—The implementation of Total Quality Management (TQM) in Vocational High Schools (VHS) can be described by the existence of the team of ISO 9001: 2008 Quality Management System manifested by the Vice Principal in the field of Quality Management whose the main task and function is to assist the duties of school principals and school supervisors. Also, policies and practices that are in line with quality standards, both national and international, will be able to provide external trust as well as building internal pride. Therefore, there needs to be an in-depth academic study as a form of evaluation in its application, supporting and inhibiting factors in the implementation of TQM in VHS. This study was designed as a descriptive study with a qualitative approach. Data collection was carried out in natural settings and on primary data sources. Data collection techniques consisted of participant observation, in-depth interviews, and documentation. The results of this study stated that each principle in TQM including (1) Customer Satisfaction, (2) Respect for people, (3) Fact-based Management, and (4) Continuous improvement, achieved the scores with good categories. There was a positive relationship between the principle of Respect for people, Fact-based Management, and Continuous Improvement in Customer Satisfaction.

Keywords: Total Quality Management (TQM), Vocational High Schools (VHS)

I. INTRODUCTION

In the era of globalization which is increasingly competitive now, every educational actor who expects to win the competition in the world of education will pay full attention to quality. Vocational High Schools (VHS) still need to pay attention to the quality of education, where quality is the main agenda, and improving quality is the most important task. One of the problems faced by education is the low quality of education at every level and unit of education. Various efforts have been made, but the quality of education has not shown significant improvement.

Several problems that detain the improvements of quality of education, which are the issues that have caused Total Quality Management (TQM) to be very crucial to be conducted are: (1) National education policy and management using an educational production function approach or input-output analysis and not paying enough attention in the education process. In fact, by thinking about the system approach, the input, process, output, and outcome of education must be considered professionally and proportionally. The input-output approach so far only considers the educational institutions function as production centers which, if filled with all inputs, will produce the desired outputs. (2) Management of national education is carried out in a bureaucratic-centralistic manner so that schools are placed as implementers of education which are highly dependent on bureaucratic decisions that have very long lines and sometimes policies that are decided are not suitable to the conditions of local schools. School as a bureaucratic subordination lost its independence, flexibility, motivation, creativity, and initiative to advance the school. (3) The participation of parents or guardians of students in the management of education has so far been minimal. School accountability to the community is very weak. Schools do not have the responsibility for the results of the implementation of education to the community, especially to parents or guardians of students. Most teachers do not have adequate professionalism to carry out their duties as referred to in article 39 of Law No. 20 of 2003 namely planning to learn, implementing learning, assessing learning outcomes, conducting mentoring, conducting training, conducting research and conducting community service. Some of the facts above become separate challenges in improving education quality, therefore TQM as a management tip focused on improving the process for customer satisfaction, which is considered successful in the industrial world in developed countries like Japan and America, is considered by educational institutions to be adapted with the aim of producing high quality "products" [1].

The implementation of quality management in education is more popular with the term Total Quality Education (TQE). The basis of this management was developed from the concept of Total Quality Management (TQM), which was initially applied to the business world and then applied to the world of education. Philosophically, this concept emphasizes the search consistently for continuous improvement to achieve customer needs and satisfaction.

In practice, the implementation of TQM has not met the expectation. This is by the opinion of Novi Priani and D. Wayu Ariani in Husaini Usman who stated that in practice the introduction of TQM implementation was not free from obstacles. The implementation of TQM is hard work and requires a relatively long time to make changes in quality culture because the essence of TQM is a cultural change. This change is to meet customer expectations. The implementation of TQM requires strong leadership, the discipline of teachers, administrative staff, and students and is an extraordinary chance for the world of education.

Fear of new methods is a major obstacle in implementing TQM. Fear of ignorance, doing things

differently, trusting others, making mistakes, and so on [3]. In addition, Hitman in Husaini Usman stated that there are five obstacles in implementing TQM in education, namely: (1) the objectives of various traditional quality improvement methods in educational institutions are only in the form of conformity to standards, (2) quality assurance standards are often set too low or too high so that educational programs will experience difficulties in achieving them, (3) the classic definition of quality assurance is too narrow, (4) a cutting-edge approach that concentrates only on teaching performance and reduces the emphasis on contributions from non-related matters with teaching, and (5) a cutting-edge approach that only emphasizes educational instructors. Success in implementing TQM in an educational institution depends on the vision used by the teaching staff and leaders. The goal is to improve the teaching and learning process by empowering students and increasing their responsibilities in the learning process [3].

The implementation of Total Quality Management in Vocational Schools can be described by the existence of the team of ISO 9001: 2008 QMS manifested by the Vice Principal in the Field of Quality Management where the main tasks and functions are intended to assist the duties of school principals and school supervisors. The policy of the existence of a vice-principal in the field of Quality Management is not just given by the local Education Office to schools that have implemented the ISO 9001: 2008 QMS.

In order to view the quality of education management based on ISO 9001: 2008 QMS certification obtained by VHS, the quality standards have a role in TQM to send actual and potential messages to customers, that institutions consider the quality seriously, and that their policies and practices are in accordance with national and international quality standards so that it provides external confidence in addition to building internal pride. Then in-depth academic studies in the form of an evaluation of the implementation of TQM are required. For this reason, this study compared the implementation of Total Quality Management (TQM) in VHS through its management education, which finally can improve the schools' competitiveness and excellence.

1.1. Total Quality Management

Total Quality Management (TQM) is a management system that focuses on people who aim to continually increase customer satisfaction at a true cost on an ongoing basis [2]. TQM is a comprehensive system approach (not a separate field or program) and is an integrated part of a high-level strategy.

Furthermore, Zikmund defined TQM as a business strategy for integrating customer-driven quality of an organization or efforts to integrate customer needs in the organization [4]. Total Quality Management (TQM) in the context of education is a methodological philosophy of continuous improvement, which can provide a set of practical tools for every educational institution in meeting the needs, desires, and expectations of customers, now and in the future [2]. In Quality Vocabulary (ISO 9000: 2005) defines Quality Management as all activities of the overall management function that determine quality policies, objectives and responsibilities, and implement them through tools such as quality planning, quality control, quality assurance, and quality improvement. Responsibility for

quality management exists at all levels of management but must be controlled by the top management, and its implementation must involve all members of the organization.

The goal of educational institutions is to create and maintain customer satisfaction and in TQM, customer satisfaction is determined by the stakeholders of the educational institution. Understanding the process and customer satisfaction helps the organization to realize and appreciate quality. All efforts or management in TQM must be directed to the main goal, namely customer satisfaction, what management does is useless if it does not result in customer satisfaction.

1.2. Principles and Components of Total Quality Management

To improve the quality of education in schools, schools must be able to carry out strategies or innovations in their implementation. In the current era of globalization, it requires openness in every component of education. The demand for schools that have high quality and integrity requires schools to always respond to customer needs so that schools can compete with other schools.

Total Quality Management in education is one of the many answers on how to alleviate the poor phenomena in the implementation of our education today. The implementation of TQME is expected to be able to meet the needs and expectations of customers. TQME is a tool to improve the quality of education.

In TQM, there are several organizational management system standards, which have been recognized nationally and internationally, including: (1) School-Based Management System (SBM); (2) ISO 9001 Quality Management System (2000 or 2008 version); (3) MBPE (Malcolm Baldrige Performance Excellence) Quality Management System; (4) Management System with a Balance Score Card (BSC) model, and so on.

According to Hensler and Brunell in Husaini Usman, there are 4 (four) main principles of TQM, which are as follows: (1) Customer Satisfaction; (2) Respect for People; (3) Fact-Based Management; and (4) Continuous Improvement [3]. Customer satisfaction, according to Gaspersz customers are all people who demand us (or our company) to meet a certain quality standard and therefore will influence our performance (or our company) [5]. Basically there are three types of customers in modern quality, namely: (1) internal customers that are people in the company and have influence on the performance of our work (or company); (2) intermediate customers who act as intermediaries, not as end-users of the product; (3) external customers who are buyers or end-users of the product, which are often called real customers. Customer satisfaction can be defined simply as a situation where needs can be met through the product consumed. If in the context of education, school customers include only 2 (two) parts, namely internal and external customers. The external customers of the school are students' parents, the government, and the community including the school committee. Internal school customers are students, teachers, and administrative staff. In another sense, schools have primary customers, namely students, secondary customers, namely parents of students, and tertiary customers, namely the government and the community. The quality produced by a company/organization is the same as

the value given to improve the quality of life of customers, the higher the value is given, the greater the customer satisfaction. The essence of TQM is that all customers in TQM must be satisfied. Respect for People means in a world-class quality school, everyone in the school is seen as having potential. People in the organization are seen as the organization's most valuable resource and are seen as organizational assets. Therefore, everyone is treated well and allowed to excel, have a career, and participate in decision making. Fact-Based Management means world-class schools are fact-oriented. Every decision is always based on facts, not just feelings or memories. There are 2 (two) concepts related to this: (1) prioritization, namely a concept that improvements cannot be made in all aspects at the same time, given the limitations of existing resources. By using data, management, and teams in an organization can focus their efforts on certain situations; (2) variations or variability in human performance. Statistical data can provide an overview of the variability that is a fair part of every organizational system.

Continuous improvement is often known as kaizen. According to Yoshinobu Nayatani, from Osaka University, Japan in Gaspersz, that the application of kaizen in quality management has a positive impact namely; (1) Everyone will be able to find the problem faster, (2) Everyone will give attention and emphasis to the planning stage, (3) Support the process-oriented way of thinking, (4) Everyone will concentrate on more important and urgent problems to be solved, and (4) Everyone will participate in building a new system [5].

A high quality work process will not arise without a well-managed organization. The organization will be in vain without the commitment of all parties involved to improve the quality. TQME will be successfully applied in schools if top managers, in this case, the principal is able to do: (1) Understand: philosophy, vision, mission, action, customer needs, and employee uniqueness; (2) Create: efficient processes; a conducive work culture, and a solid work team; (3) Encourage: data recording, improvement efforts, and morale; (4) Develop: his self, subordinates, and partners; (5) Get: common perception, commitment from superiors, peers, and subordinates; (6) Apply: participatory leadership style.

II. METHODS

This study was designed as a descriptive study using a qualitative approach. The use of this research type and approach was following the purpose of this study, which was to describe the actual situation of TQM in VHS and the factors that support and hinder the implementation of TQM. This study was more focused on the symptoms that show a comparison of the implementation of TQM in VHS. Therefore, understanding the oral language and expression language or interpreting what the school does is very necessary. Thus, data from this study were collected through the participation of researchers, so that researchers will more easily understand and interpret all spoken languages and expressions in every school management activity. The data were obtained in the form of information, observations, information and other data about the implementation of TQM in VHS.

The research subjects consisted of key informants and additional informants. The Principal and the Vice Principal

of the QMS section as key informants, while teachers, TU staff, and students as the additional informants. The research subjects were determined by considering the following points; (1) The information that will be revealed in about the implementation of TQM in VHS, and (2) The selected research subjects are those who are considered the most knowledgeable and authorized and are also directly involved in implementing Integrated Quality Management in VHS.

In the qualitative research, data collection is carried out in natural settings, primary data sources, and data collection techniques focus more on participant observation, in-depth interviews, and documentation. After the data were collected, the data were displayed and reduced. Furthermore, the interactive model in analyzing the data of this study is illustrated in Figure 1.
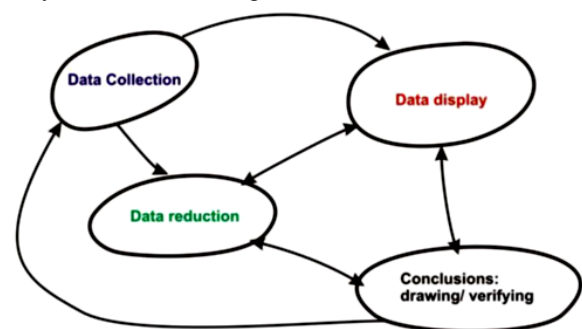

Fig. 1. Components in data analysis (interactive model)

III. RESULT

The data of this study were obtained from the education mapping report of the Directorate of Vocational Development of the Ministry of Education and Culture by using interviews and questionnaires. Research data for each VHS if summarized in a single unit can be presented in a bar diagram as shown in Figure 2.
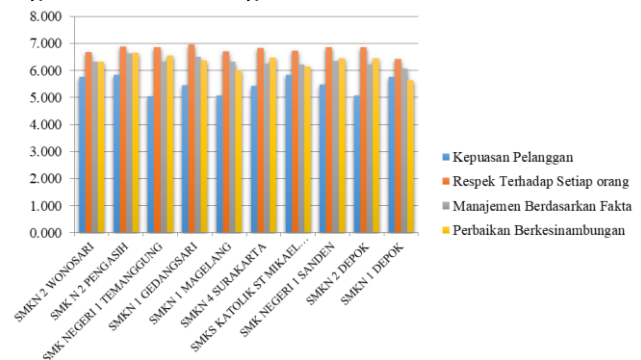

Fig. 2. Diagram of the result of TQM implementation in the Vocational High School respondents

3.1 Relationship of Respect for People with Customer Satisfaction

Based on the research data description of VHS in the area of DIY-Central Java, the principle of Respect for People has been carried out. It had the highest average score of 6.96 and the lowest average score of 6.43 during the implementation process. The data revealed that the implementation of the TQM in the principle of Respect for People in Vocational High School in DIY-Central Java had a total average of 6.78 included in the good category.

In the implementation of TQM, the principle of Respect for People contributes to customer satisfaction. Steps taken by the school include: First, the school leader respects each role of the school community as a unified whole so that a harmonious relationship can occur. That is the condition in which the learning process applies the principle that anyone is a teacher, anyone is a student and anywhere is a class so that every school member has an attitude of looking after each other. Second, school leaders should have a positive attitude and socialize well, namely where school leaders always try to provide motivation or encouragement to teachers, staff employees, and their students to work according to their fields and responsibilities. Besides, it is also meant to maintaining harmony in relationships at school and creating good cooperation and supporting activities in line with school goals. Third, school leaders try maximally and take action to improve the quality of schools by working with the community and relevant institutions both in the world of education and industry. Fourth, the school has data of all students to find out the background. If there are students who have economic difficulties, they should be provided with cross-subsidies. This school recognizes students' cultural differences and backgrounds.

3.2. Relationship of Facts Based Management and Customer Satisfaction

Based on the results of the research data description in VHS in DIY-Central Java, it was found that the principle of Facts Based Management had been carried out. In the process of its implementation, it had the highest average score of 6.62 and the lowest average score of 6.02. The data showed that the implementation of the TQM in the principle of Fact-Based Management in VHS in DIY-Central Java had a total average of 6.32 included in the good category.

In the implementation of TQM, the principle of Fact-Based Management is proven to contribute to customer satisfaction. Steps taken by the school include: First, transparency in the acceptance of both teachers, staff employees and students with the socialization of the code of conduct and all matters relating to the school. The acceptance must meet the criteria set by the school. Second, the learning process refers to a predetermined syllabus and leads to the achievement of competencies. It is expected that the customer (students) can be more active in the learning process thus it will increase creativity and soft skills. Third, every decision is always based on facts and the implementation of the system is based on data so that the decision making will be on target and be effective.

3.3. Relationship Continous Inprovement with Customer Satisfaction

The data suggested that the principle of Continuous Improvement of the TQM implementation process in VHS in DIY-Central Java has the highest average score of 6.67 and the lowest average score of 5.63. The data showed that the implementation of the TQM in the principle of Continuous Improvement in VHS in DIY-Central Java had a total average of 6.31 included in the good category.

Continuous improvement has a relationship with customer satisfaction. Therefore, the school should firstly, uses authentic assessment for the students without differentiating between those who excel or who join the organization. The teacher utilizes authentic scores for the evaluation of learning, if there are students who do not understand the lesson, it will be carried out improvements for these students. Secondly, the school leaders conduct an evaluation of the learning process on both teachers and students so that the learning process can take place conducive and smoothly. Thirdly, the school improves the usability of educators and education personnel and conduct self-evaluation and mutual openness. In this case, the teacher can accept suggestions from students with good responses and the teachers will correct their weaknesses based on the students' suggestions for a better learning process.

The results showed that continuous improvement was included in good categories and had an effect on customer satisfaction because it led to improvements in performance, monitoring work processes that had been carried out and following up the results of the monitoring. But there is a need for improvement in each dimension so that aspects of continuous improvement can be increased again to achieve the expected results. The improvement is mainly in the dimension of monitoring the work processes. The school leaders conduct monitoring in all aspects, both teachers, staff employees, and students. It is expected that with the improvement, the personnel's involvement will be improved from good to very good categories. From the research data, the overall average score for each aspect of this study is presented in Figure 3.

Fig. 3. Average Score of each TQM principle

Based on the average score, it can be stated that each principle in TQM, namely: (1) Customer Satisfaction, (2) Respect for People, (3) Fact-Based Management, and (4) Continuous improvement had good scores that indicated TQM was performed appropriately in each Vocational High School sample in this study. There is a positive relationship between Respect for People, Fact-Based Management, and Continuous Improvement in Customer Satisfaction.

The results of interviews of each principle of TQM state that the application of TQM is customer-focused in this case, the customers are the students. The teacher provides learning effectively to motivate the students. The schools' facilities are adequate because the equipment is complete and the school always updates the equipment once a year and always takes care of the workshop, for example arranging the layout, maintenance of the equipment, and painting the workshop.

Interviews related to the principle of Respect for People explained that in all decision making at school

involves each individual, usually through scheduled meetings. Because every individual has unique talents and creativity so that they had the opportunity to be involved and participate in decision making. The principle of Fact-Based Management states that every decision is always based on data, not just feelings, for example: always managing finances with careful calculations, especially for school development. Besides, the principle of Continuous Improvement explains the school activities are reported to foundations, committees, school members transparently, for example through socialization to teachers and students so that it can receive suggestions from all parties to improve performance following their respective roles - each stakeholder.

IV. CONCLUSIONS

First, based on the results of this study, it can be concluded that the application of TQM has been implemented well. This is indicated by the scores on the educational mapping report card of the Directorate of Vocational Education showed that all the principles in TQM, namely: Customer Satisfaction, Respect for People, Fact-Based Management, and Continuous Improvement have good scores.

Second, supporting factors in implementing TQM in VHS based on the results of interviews related to Customer Satisfaction is the teacher has performed the teaching-learning process effectively. The school has adequate infrastructure which is always updated and maintained. In the principle of Respect for People, it is conducted through decision making at the school by involving each individual through scheduled meetings. The principle of Fact-Based Management is performed by carrying out every decision based on data, not just on feelings. As for the principle of Continuous Improvement, it has been carried out with accountability reports of school activities which are always conveyed to foundations, committees, school members transparently.

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