

Implementation of Quality Management Systems in Framework for Quality Improvement of SMK Graduates: Case Study at State Vocational School 6 Malang-Indonesia

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ABSTRACT: The purpose of this study is to: (1) describe the application of the quality management system at SMK Negeri 6 Malang; (2) analyzing the effect of the application of the quality management system on the quality of SMK Negeri 6 Malang; and (3) analyze the factors that are supporting and inhibiting the implementation of the quality management system at SMK Negeri 6 Malang. This type of research is a descriptive study using qualitative analysis techniques. Data collection techniques carried out through observation, documentation, and interviews with informants selected by purposive sampling.

The study found: (1) State Vocational School 6 Malang has not been able to implement the ISO 9001: 2015 Quality Management System, optimally and consistently, but the school has succeeded in applying the three principles contained in ISO 9001: 2015 including the principle of customer focus, the principle of improvement and the principle relationship management; (2) the implementation of the ISO 9001: 2015 Quality Management System at SMK Negeri 6 Malang is supported by several factors, namely: (a) efforts to increase competitiveness and values of excellence owned by schools; (b) improving the management system so that it is more structured; and (c) convincing partners that the school has tried to meet the competency standards held by students to provide the highest quality service. So that the application of the ISO 9001: 2015 quality management system in every part of the school organizational structure can be optimum, the existing human resources need to be increased, work in one section needs to be reduced so that staff can focus, it is necessary to increase the knowledge of educators about the new management system, and there needs to be punishments, if the teaching staff does not carry out existing work procedures.

KEYWORDS: ISO 9001: 2015, Quality Management System, SMK Quality

I. INTRODUCTION

To accelerate the improvement of the quality of education in Indonesia, there are three important things that must be a concern, namely: (1) human resources (HR); (2) facilities, and (3) curriculum and educational material. In this regard, a quality management system is needed that regulates procedures for maintaining the quality of education in Indonesia by using the International Standards Organization (ISO) 9001: 2015.

According to Patterson (2010: 3), ISO is a worldwide federation that was founded in 1946 to raise world standards for production, trade, and communication consisting of member institutions of about 90 countries. ISO 9000 as one of the most important standards, produced by the International Organization for Standardization in Geneva, Switzerland. ISO 9000 can be defined as a set of universal quality system standards (Tjiptono, 2003: 88).

The term ISO 9000 usually refers to a set of standards which includes ISO 9000, ISO 9001, ISO 9002, ISO 9003, and ISO 9004. This standard refers to quality design, quality management, and quality assurance for a variety of different types of work. ISO 9000 standards include a discussion of risks, costs, benefits, management responsibility, quality system principles, and other blocks that help promote quality standards in accordance with real situations (Patterson, 2010: 23).

ISO 9001 is the most comprehensive ISO part. ISO 9001 applies to work that designs, develops, manufactures, installs, and provides services for products or services to customers that determine how the product or service should perform. ISO 9001, the most commonly used production work that designs its own products.

Since it was first published in 1987, ISO 9001 has undergone four changes, namely in 1994, 2000, 2008, and finally in 2015, which is in force today. ISO 9001 is a standard that contains requirements for a quality management system that helps schools to be more efficient and customer satisfaction, in this case students and guardians of students increase (ISO 9001: 2015). Schools must understand the requirements contained in ISO 9001: 2015 and know how to apply them, and be able to survive on a system that has been implemented so that these requirements can be continuously met. This standard is used to ensure that schools have conducted supervision and guarantees in their operations, which will affect the quality of the vocational school concerned. With the implementation of ISO 9001: 2015, it is expected that the quality of SMK Negeri 6 Malang will be better.

II. THEORY STUDY

1. ISO 9001: 2015 Quality Management System

The purpose of the quality management system is to convince consumers that the quality of graduates produced by schools is able to meet the expectations of parents of students. According to the International Organization for Standardization, a quality management system is a way for schools to control mutually related activities (both directly and indirectly) to achieve the desired results.

Rothery (2000) states that "ISO 9000 series is a quality management system that is first and foremost, in a global system to optimize the quality effectiveness of an organization/work, by creating a framework in order to improve quality continuously". ISO 9000 series includes several standards, namely ISO 9001, ISO 9004, and ISO 19011.

Since it was first published in 1987, ISO standards have undergone four changes. All ISO standards are regularly reviewed and revised to ensure that the requirements therein remain relevant to market conditions. The latest ISO version that is currently in effect is ISO 9001: 2015, replacing the previous version, ISO 9001: 2008. This revision aims to make ISO 9001: 2015 standards applicable to all types of organizations/work/schools.

The change seen in ISO 9001: 2015 compared to the previous version is that the structure of ISO 9001: 2015 is adjusted to the structure in Annex SL, namely the High-Level Structure (HSL) which is the basic reference for all quality management system structures issued by ISO, so make it easier for schools to use other quality management systems. In addition, the articles contained in ISO 9001: 2015 focus on risk-based thinking, where schools are expected to be able to understand risk-based ways of thinking in more detail and can realize it in the implementation and improvement of the quality management system and the improvement process SMK quality.

The ISO 9001: 2015 Quality Management System contains: (1) emphasis on leadership involvement; (2) structuring the risk and opportunity of schools; (3) using language, structure, and terms that are general and simple, making it easier for organizations that use multiple management systems; (4) direction of more effective supply chain management; (5) easier to use for schools engaged in services and knowledge.

The International Organization for Standardization says there are 7 indicators that underlie the ISO 9001: 2015 Quality Management System, which are customer focus, leadership, people involvement, process approach, improvement, decision making based on evidence, and relationship management.

2. Quality of SMK

According to the term, the word quality means quality, which is the level of good or bad things (Ministry of National Education, 2002) but many experts define quality according to their respective perspectives, as according to Deming (Suharsaputra, 2010) a predictable level of uniformity and dependence on low cost and according to the market. According to Vincent (2013) that quality is the totality of characteristics of a product (goods or services) that support its ability to satisfy the specified needs, whereas according to Sallis (2006) that the quality of education is usually measured in terms of internal customers, namely the principal, teachers and education staff, while there are three external groups of customers namely: (1) students (primary external customers); (2) parents and government leaders (secondary external customers), and the labor market, government and the wider community (tertiary external customers). In line with the above opinion. Sagala (2010) argues that successful schools are determined by many factors including (1) teaching and learning activities; (2) teacher and education personnel competencies; (3) learning facilities and equipment; and (4) extracurricular activities.

Furthermore Sagala (2010) states, that the indicators of the quality of vocational education are as follows: (1) the effectiveness of the learning process is not just a transfer of knowledge, but rather emphasizes the internalization of the development of cognitive, affective and psychomotor learning outcomes and independence; (2) the principal's leadership will encourage the realization of the vision, mission, goals and objectives through programs that are implemented in a planned, gradual, creative, innovative, effective, managerial ability; (3) effective management of the teaching force; (4) the school has a quality culture; (5) schools have compact, intelligent and dynamic team work, because educational output is a collective result (not an individual result) in order to obtain competitive quality; (6) the school has independence, that is, the ability to

work optimally without being dependent on instructions from superiors and having potential human resources; (7) high school community and community participation, based on a sense of responsibility through loyalty and dedication as stakeholders; (8) schools are transparent; (9) schools have the will to change, towards a better direction in improving the quality of education; (10) the school evaluates ongoing improvements and is a refinement process towards improving overall quality, which includes organization, responsibilities, procedures and human resources; (11) schools have accountability as responsibility for the success of school programs; and (12) school output emphasizes independent and fulfilling job requirements.

III. RESEARCH METHODS

This research is a descriptive study with a qualitative approach. In this study, entities will be analyzed from the application of the ISO 9001: 2015 Quality Management System in its effect on the quality of SMK Negeri 6 Malang.

1. Research Focus

- a. Analyzing the Implementation of ISO 9001: 2015 Quality Management System at SMK Negeri 6 Malang, which includes: (1) analysis of the application of the seven ISO 9001: 2015 principles, namely customer focus, leadership, people involvement, process approach, improvement, decision making based on evidence, and management relationship; and (2) analysis of School Management Systems in improving the quality of SMK Negeri 6 Malang.
- b. Analyzing the effect of the implementation of ISO 9001: 2015 on the activities of improving the quality of SMK Negeri 6 Malang, which includes: (1) strategy to improve the quality of SMK; and (2) policies in realizing better SMK quality.
- c. Supporting factors and obstacles faced by SMK Negeri 6 Malang in implementing ISO 9001: 2015.

2. Research Location

The research was conducted at State Vocational High School 6 Malang with its address at Jl. Ki AgengGribig No.28, Madyopuro, Kedungkandang, Malang City, East Java Postal Code 65139. This location was chosen based on the consideration that the school has the data needed to support this research, namely regarding the implementation of the ISO 9001: 2015 Quality Management System which applied by schools in supporting school quality improvement.

3. Data Collection Techniques

Data collection techniques used in this study are: literature study, observation, and interviews, with research instruments that include researchers, interview guides, recording devices, cameras, stationery, and Focus Group Discussions (FGD).

4. Data Analysis and Validity

Analysis of the data used in this research is descriptive analysis, which includes the presentation of data, focus group discussions (FGD), verification, and drawing conclusions.

IV. RESULTS and DISCUSSION

1. Implementation of ISO 9001: 2015 Quality Management System.

State Vocational School 6 is officially certified ISO 9001: 2015 Quality Management System. The implementation of ISO 9001: 2015 Quality Management System at SMK Negeri 6 Malang is an attempt by schools to improve management systems that are not yet structured. This is done so that school management is neatly organized, so that the achievement of school goals is easier. However, based on interviews with school staff, schools have not been able to implement the ISO 9001: 2015 Quality Management System properly and consistently.

Based on the results of interviews that the implementation of ISO at SMK Negeri 6 Malang, has not been maximized. Many staff are not yet involved. The implementation of ISO at SMK Negeri 6 Malang has not gone according to existing standards, and there are still many forms that have not been filled (interview with Rudy Zulkifli as Deputy Chair of ISO 9001: 2015 Quality Management at SMK Negeri 6 Malang on Wednesday, November 25, 2017, at 10: 40 WIB).

In connection with the foregoing, the initial step taken by the school is to provide awareness to educators and education personnel, regarding the importance of maintaining school quality, so that the existence of the school is maintained. Awareness and knowledge of ISO for each individual involved will make the procedures and responsibilities of each party in the school's organizational structure more clear.

2. Obstacles to the Implementation of ISO 9001: 2015 Quality Management System

Some obstacles experienced by State Vocational School 6 Malang in implementing ISO 9001: 2015 Quality Management System, (although they already have ISO 9001: 2015 certificate since mid 2017), the school has

not been able to implement the principles contained in it fully. Based on the results of the interviews, these obstacles include: (1) limited human resources; (2) the organizational structure is clear, but there is too much work in one division so that the focus of the teaching staff and education staff is fragmented; (3) there is no punishment from the school, if certain sections do not run a quality management system; (4) lack of knowledge of educators and education staff regarding the new system; (5) teaching staff and education staff do not carry out procedures that are given consistently, some even do not carry out these procedures at all; and (6) work procedures are still unclear, because they are less detailed.

Often the obstacles experienced by schools are seen as minor problems and are often considered not to affect staff performance. Some evidence shows that educators lack awareness of the sustainability of schools. These factors hinder the implementation of the ISO 9001: 2015 Quality Management System at SMK Negeri 6 Malang. Therefore it takes a strong commitment from each party involved in the school and firm action from top school management. These barriers need to be overcome immediately by making planning and control in order to continuously improve the quality of schools.

3. Analysis of the Implementation of ISO 9001: 2015

There are seven principles in the ISO 9001: 2015 Quality Management System that must be applied, namely customer focus, leadership, overall staff involvement, process approach, improvement, evidence-based decision making, and relationship management, which can be described as follows:

a. Customer Focus

State Vocational School 6 Malang prioritizes the needs related to the education quality improvement program. This is done by paying attention to each proposed criteria so that the school can always meet the needs and expectations of its customers. The School always monitors and reviews the requirements of work partners such as the world of work and the industrial world. The requirements provided by these customers are obtained from the results of research and the results of meetings with students. Furthermore, these criteria are expected to be met and used as a standard for school services. By focusing more on customer needs, the school will be able to maintain its reputation and cooperation with partners well for many years.

b. Leadership

The head of Malang State Vocational School 6 has set one goal that must be carried out by every staff in the school section, to produce the best quality of services, with the aim of creating agreement and involvement of each section in the school's organizational structure in order to align the strategies and policies used. With this provision, every activity in the service process has a standard that must be obeyed so that each part can meet the desired target.

In the overall application of ISO 9001: 2015, the ranks of school leaders (vice-principals and study program heads) do not have a strong commitment. Therefore, the school has conducted training to develop the knowledge of teaching staff and education staff about the importance of quality management of a school. However, there is no direct monitoring from the Principal, and there is no regulation that requires every part in the school to implement ISO 9001: 2015 quality management. It is important to realize that the principal's performance directly influences staff performance. The results of several studies indicate that the leadership variable has a positive and significant effect on performance and job satisfaction (Rustamaji et al., 2017). While research Narsa et al (2003) and Mardiyah&Listiyarningsih (2005) provide empirical evidence that the practice of Total Quality Management (TQM) has a positive and significant effect on managerial performance including school performance.

c. Staff involvement

Educators and education personnel do not fully understand the importance of quality management. On the other hand, because human resources in each section are still limited, the application of the ISO 9001: 2015 quality management system is less than optimal. In fact, if quality management is implemented properly, in every part of the school, as well as activities to improve the performance system and cooperation between departments, it will produce a comfortable, conducive, and optimum working environment.

Optimum performance is the hope of all organizations, including schools. Performance is a function of competence and commitment (Atmosoeparto, 2000). Competence is a function of knowledge and skills, while commitment is a combination of one's self-confidence and motivation. According to Trisnarningsih (2007), commitment is an attitude and behavior that reinforces each other (reinforce) with one another. Employees who are committed to the organization will show positive attitudes and behaviors towards the institution will have the soul to keep defending the organization, trying to improve performance, and have a certain confidence to help realize the goals of the organization. Employee commitment to the organization is employee loyalty to the organization, which will foster loyalty and encourages employee involvement in making various decisions.

d. Process approach

State Vocational School 6 Malang has not been able to implement this principle fully. Even though it has been explained in the job descriptions of each section in the school, the process of improving the quality of schools, in general, has not yet run in a structured manner, because the workload is unbalanced and human resources are still lacking. Although not yet able to run in an interrelated process, each section needs to work as much as possible in order to continue to produce satisfactory output and meet planned targets.

e. Improvement

In accordance with the principles of ISO 9001: 2015, successful schools certainly have a focus for continuous improvement. Improved performance of educators and education personnel is sought with the help of management consultants.

Improvement efforts are also carried out by expanding work partners (the business world, and industry) to provide teaching factory training to students in order to improve competence. The expansion of these partners, in accordance with the principles of ISO 9001: 2015, in order to achieve sustainable success, the school needs to maintain relationships with all parties that have a major influence on school quality. On the other hand, this collaboration, as an effort of the school, in order to provide information to alumni about employment opportunities in the world/industry.

f. Decision making based on evidence

Decision making based on evidence has not been fully implemented in SMK Negeri 6 Malang. The Principal has the full right in making decisions related to all activities in the school, as stated in the job descriptions. However, employees also have the right to submit input in the context of final decision making towards quality schools.

g. Relationship Management

In accordance with the initial purpose, that the ISO is used by SMK Negeri 6 Malang to facilitate the achievement of the main objectives of the school, namely to improve the quality of SMK related to the number of workforce requests. Achieving this main goal is done by maintaining trust with the work partners, and prospective students of SMK Negeri 6 Malang. On the other hand, proper, comfortable, and clean learning facilities need to be done so that students do not get bored easily at school. In addition to providing adequate facilities, schools have provided work safety protection during practicum and internships, supported by health insurance. The school has dealt with problems faced by students quickly, both learning at school and at the internship, including handling complaints from the work partners. By maintaining this trust, schools are able to meet the demand for labor and are able to attract the interest of prospective students who come from SMP/MTs. Based on the analysis of the application of the principles of ISO 9001: 2015 as described above, it can be concluded that SMK Negeri 6 Malang has not implemented the requirements in ISO 9001: 2015 in every part of its structure, in full. Due to internal school barriers, there is no significant difference in the implementation of school management between before and after the enactment of ISO 9001: 2015 since mid-2017. Actually, SMK Negeri 6 Malang already has a clear organizational structure and job descriptions in each section. However, the human resources involved are so limited that some tasks have not been completed. Other reasons are: (1) school staff's understanding of the ISO 9001: 2015 Quality Management System has not been exhaustive despite efforts to provide training from the school; and (2) awareness of school management staff is also lacking in the importance of implementing a comprehensive ISO 9001: 2015 Quality Management System in every part of the school.

4. Analysis of the Implementation of ISO 9001: 2015 Quality Management System in supporting the quality of SMK

In accordance with school policies, the application of ISO 9001: 2015 is expected to help school management to be more structured and produce quality graduates who are satisfying the needs of the business world and the industrial world. But schools have not been able to fully implement this system as a whole, so there has not been a significant change in the quality improvement system of SMK graduates. Nevertheless, the performance of school management has been able to maintain school consistency in producing vocational graduates in accordance with the requirements of work partners such as the business world and the industrial world.

Before implementing the ISO 9001: 2015 Quality Management System, the school has tried to maximize the performance of school management, by maintaining good relations with all parties concerned, so that it is not difficult for schools to adjust to the new system. By maintaining good cooperation with partners, promotional activities, about schools and the promotion of the quality of vocational graduates who are ready to work, it will be easier to generate positive feedback. The management system to maintain the quality of graduates of SMK Negeri 6 Malang has been successfully implemented, and the school is able to meet the targets set.

In an effort to support activities to maintain the quality of graduates of SMK Negeri 6 Malang, both soft skills and hard skills, need to be improved through apprenticeship training programs in industry or with a teaching

factory system in schools. Although the school has not fully implemented the new quality management system, the improvement in the quality of skills undertaken by schools is in accordance with the core of ISO 9001: 2015, where schools focus on the needs of prospective workers, based on the demands of the business world and the industrial world.

Thus it can be concluded that although the application of ISO 9001: 2015 in SMK Negeri 6 Malang has not been maximized, schools have been able to carry out quality management well. Another fact, shows that after the school has an ISO 9001: 2015 certificate, school competitiveness increases and the school's image becomes better. In the future, the school hopes that the implementation of the ISO 9001: 2015 Quality Management System will be more comprehensive so that it will bring positive influences on the programs initiated by the school.

It seems that schools need to implement TQM. Because the interaction between TQM and organizational commitment has a positive and significant effect on managerial performance. The application of high TQM techniques to organizations with high organizational commitment will improve managerial performance. This opinion, in line with the results of research Sumarno (2005); Eker (2007); Sardjito&Muthaher (2007); and Nursanti (2013) who provided empirical evidence about the importance of organizational commitment as a contingency factor in efforts to improve school managerial performance.

V. CONCLUSION

Based on the discussion of research results as described above, it can be concluded as follows:

1. SMK Negeri 6 Malang has not been able to implement the ISO 9001:2015, Quality Management System, in a good and consistent manner. Even so, the school has successfully implemented three principles contained in ISO 9001: 2015 including the principle of customer focus, the principle of improvement, and the principle of relationship management.
2. The implementation of ISO 9001: 2015 Quality Management System at SMK Negeri 6 Malang is supported by several factors, namely: (1) efforts to increase competitiveness and values of excellence owned by schools; (2) improvement of the management system so that it is more structured; and (3) convincing partners that the school has tried to meet the competency standards held by students to provide the highest quality service.
3. Barriers to the implementation of the ISO 9001: 2015 quality management system in every part of the school's organizational structure, including: (1) insufficient human resources; (2) too much work in one section so that staff can not focus; (3) educators' knowledge about the new system, still needs to be improved; (4) teaching staff do not carry out procedures consistently; and (5) no punishments, if the teaching staff lacks discipline in carrying out existing work procedures.

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