



Implementation of Quality Management System ISO 9001:2015 Integrated with Accreditation Standards in SMK 1 Sragi

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Article Info

Article History:
Received August 2018
Accepted October 2018
Published December 2018

Keywords:
Accreditation; CIPP;
Integration; ISO
9001:2015.

Abstract

Accreditation and ISO become a benchmark that is used as a school in an effort to ensure the quality of education. In applying of Quality Management System ISO 9001: 2015 can be integrated with accreditation standards. Purpose of this research: (1)the evaluation results of ISO 9001: 2015 implementation integrated with accreditation standards in SMK 1 Sragi in terms of Context, input, process, product; and (2) inhibiting and supporting factors for the implementation of ISO 9001: 2015 that are integrated with accreditation standards in SMK 1 Sragi. This research was carried out using the CIPP evaluation model from Stufflebeam. Data collection techniques: questionnaires, interviews, and review of archive documents. The results showed that : (1) The evaluation results of the ISO 9001: 2015 implementation integrated with accreditation standards in SMK 1 Sragi showed that: the context aspect is categorized quite well with an average of 3.18, the input aspect is categorized quite well with an average of 3.23, the process aspect is categorized quite well with an average of 3.19, the product aspect is categorized quite well with an average of 3.06. (2) The inhibiting factors for the implementation of ISO 9001: 2015 integrated accreditation standards in SMK 1 Sragi are stagnation of mindset for sustainable school progress, lack of literary awareness and lack of understanding of risk management, supporting factors for the implementation of ISO 9001: 2015 integrated accreditation standards in SMK 1 Sragi are top management commitment, role of personal, effective communication, and continous improvement.

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p-ISSN 2339-0344
e-ISSN 2503-2305

INTRODUCTION

In Law No. 20 of 2003 concerning the National Education System implied the government's commitment to providing qualified education, this is written in article 5 paragraph (1), namely "Setiap warga Negara mempunyai hak yang sama untuk memperoleh pendidikan yang bermutu". Qualified education is only from the quality of the graduates, the qualified education is education that is able to meet the needs of clients (education staff, students, parents, community, and graduates stakeholder) in accordance with applicable quality standards. Knowledgeable and skilled graduates help some of the learning result delivered by the teacher, while schools also provide services, provide school environments and provide human resources and education personnel that is teacher and the staff. Then the quality of SMK includes: (1) product quality (graduates); (2) the quality of the learning process; (3) quality of school services; (4) the quality of the school environment; (5) Human resources (teachers and other education staff) (Sarbiran: 2003). The quality of education used for all components, implementation and education activities, then in the management of vocational high school they will produce a quality management system that is in accordance with quality and client satisfaction. One of the most widely quality management systems in vocational high school is based on international standards, namely ISO 9001. In an effort to ensure the education process will continue to adjust to the specified requirements, in the end the school becomes the required benchmark standard, in addition to the benchmark which is of international standard for schools that implement ISO, the government has quality standards compiled by national standards institution contained in Government Regulation number 19 of 2005. To ensure the quality of education according to the standards set by the government requires accreditation for education units.

The standards used by the School / Islamic school (Madrasah) Accreditation institution are specific to education units while ISO 9001: 2015 is an international standard that was originally developed for the industrial world or some nonprofit institutions. Quality management system of ISO 9001: 2015 is a system that contains quality system clauses that can help the operation of educational institutions' performance efficiently and effectively (Asy'ari, 2015). So if the school can synergize the quality assurance system standard of ISO with accreditation standards, of course the management of the institution will run more effectively and efficiently so that it will impact the conformity of meeting the quality standards of education and meeting the level of client satisfaction. It is very possible to integrate international standards of ISO with national education standards, because ISO 9001: 2015 has the flexibility to be integrated with other management systems that support institutional objectives, this is in line with the key changes in the ISO 9001: 2015 version according to Waqar Ahmed (2017: 39 -54) "Revised standard reflects key changes which include, put more emphasis on developing a management system tailored to the specific needs of each organization and strategic direction."

So in implementing the ISO 9001: 2015 standard it has the flexibility to be integrated with other management systems or other standards because ISO 9001: 2015 places more emphasis on developing systems that are tailored to the needs and strategic direction of the institution. SMK 1 Sragi Pekalongan is a school that is always committed to the quality of education. The school which was founded in 2007 has implemented ISO 9001: 2008 since 2011 with an ISO 9001: 2008 certificate from PT TUV Rheinland. When there was a revision of ISO 9001: 2008 version to 9001: 2015 version, SMK 1 Sragi also immediately transacted by updating the ISO certification from the 9001: 2008 version to ISO 9001: 2015 in 2015, SMK 1 Sragi became the first school in Central Java get ISO 9001: 2015 certificate. In implementing ISO 9001: 2015 QMS, SMK 1 Sragi has integrated the ISO documents with accreditation standards, as a result of the integration all departments in SMK 1 Sragi get an A for accreditation. The last two departments that carry out accreditation in 2017 are the Department of Computer and Network Engineering Accounting by obtaining scores.

Based on the description of the problems above, the objectives of this study are: (1) Describe the implementation of QMS ISO 9001:2015 integrated with accreditation standards in SMK 1 Sragi. (2) Knowing the results of evaluation of QMS ISO 9001:2015 implementation that are integrated with accreditation standards in SMK 1 Sragi in terms of context, input, product aspects. (3) Knowing the inhibiting factors of QMS ISO 9001:2015 implementation that are integrated with accreditation standards in SMK 1 Sragi.

METHODS

In principle this research uses a quantitative descriptive approach because the data taken uses numbers, starting from data collection, interpretation of the data, and the appearance of the results. The type of this research is evaluative research. This research evaluates the program by analyzing the role of each factor in accordance with the CIPP model (Context, Input, Process and Product). The data collected in this research are qualitative data obtained through the use of interview techniques, and documentation while quantitative data from questionnaires distributed to the ISO quality assurance team, staff / teachers and students. Respondents of this research were 98 students, 83 teachers and 36 ISO teams. Before being used to collect data, the validity and reliability of the instrument was tested.

Test validity toward instrument in this research uses corrected item total correlation technique. Each item score and total score are correlated to correlation coefficient score which is over-estimated. If the value of $r_{\text{calculation}} > r_{\text{table}}$, the statement items in questionnaire have significant correlation concerning the total score (which means that the items are valid). If the value of $r_{\text{calculation}} < r_{\text{table}}$, the items in the table have no significant correlation concerning the total score (which means that the questionnaire items are invalid). In this research, the tool to analyze validity is SPSS software 23. The summary of validity test result can be seen in this table below.

Table 1. The summary of validity test

Variable	Item Total	Total valid	Total in valid
Context	39	36	3
Input	58	56	2
Process	57	55	2
Product	14	13	1

Reliability test is a testing method to make sure that the level of questionnaire reliability used in research. In this research is computed using Alpha Cronbach method. The computation of instrument reliability is assisted by SPSS software 23. The reliability test result can be seen in this table below.

Table 2. The result of reliability test

Instrument	Respondent (Teacher)			Respondent (Student)		
	Koef. (rii)	Alpha	Intepretating	Koef. (rii)	Alpha	Intepretating
Context	0,942		Reliabel			
Input	0,955		Reliabel	0,932		Reliabel
Process	0,964		Reliabel	0,901		Reliabel
Product				0,783		Reliabel

Data was collected using questionnaires, interviews, and document studies. The data that has been collected then analyzes the data descriptively using an average analytical technique. Average analytical technique is done by calculating the average of each instrument item. The average of these instruments is then averaged into sub-variable averages. The sub-variable average obtained is calculated to be the average of each CIPP evaluation variable, namely Context, Input, Process, and Product. The average value of each variable is compared with every aspect of evaluation so that the types of criteria are obtained. Data is then presented and converted from quantitative data to qualitative data as follows:

Table 3. Evaluation criteria and interpretation

No.	Score range	Score range	Interpretation
1	(Mi+1.5SDi) up to (Mi+3SDi)	3.26-4.00	Well
2	Mi up to (Mi+1.5SDi)	2.51-3.25	Quite well
3	(Mi-1.5SDi) up to Mi	1.76-2.50	Less well
4	(Mi-3SDi) up to (Mi-1.5SDi)	1.00-1.75	Not well

RESULT AND DISCUSSION

Implementation of ISO 9001: 2015 SMM Integrated Accreditation Standards in SMK 1 Sragi

SMK 1 Sragi upgraded ISO 9001: 2008 to ISO 9001: 2015 since 2015, starting from that time SMK 1 Sragi began integrating the ISO 9001: 2015 quality assurance system with accreditation standards. This is done because the ISO 9001: 2015 standard is more flexible, the application of the management system requirements can be adjusted to the character of the organization.

The purpose of the school to integrate QMS ISO 9001: 2015 with accreditation standards is to assist in meeting the eight national education standards so that schools can obtain A for accreditation, there is an orderly administration, orderly management because there is no duplication of work (there is no separation between the ISO team and the accreditation team), there is an alignment of authority and responsibility.

In the process of integrating the QMS ISO 9001: 2015 with accreditation standards the management team carries out the following steps:

- a. make observations to the system, what are the similarities and what are the differences.
- b. create an ISO 9001: 2015 matrix mapping clause with accreditation instruments
- c. Creating a Standard Operating Procedure (SOP) that is adjusted to eight national standards of education

Implementation of QMS ISO 9001:2015 Integrated Accreditation Standards in SMK 1 Sragi

Determine the context and scope of the school

The scope of the quality management system in SMK 1 Sragi is all things related to the learning process in SMK 1 Sragi. In determining this scope SMK 1 Sragi conducts a SWOT analysis of internal issues and external issues. Using the SWOT analysis matrix, the management team reviews internal and external issues both positive and negative. The results of the review are input for the management team to adjust the quality management system, namely on the quality objectives or risk assumptions and opportunities that exist and which will result in a work plan for the next year.

Leadership

The top management of the quality assurance system at SMK 1 Sragi is the headmaster. The headmaster has a high commitment to the implementation of ISO 9001: 2015 in SMK 1 Sragi, the headmaster's commitment is shown by the headmaster who always monitors the effectiveness of the implementation of the management system with direct involvement in the evaluation and coordination unit meetings, in addition to ensuring the programs made by the unit in accordance with the objectives of the vision and mission of the school. Each carrying out the coordination meeting of the headmaster always motivates the team to carry out their duties and authority as well as possible, and always be open to suggestions or ideas from the team to improve the management system. SMK 1 Sragi's headmaster also demonstrated his commitment by striving to provide and ensure the availability of resources personnel, costs and equipment in the implementation of management programs.

Determination of quality targets

Determination of quality targets at SMK 1 Sragi is carried out by the Chairperson of the Unit with the approval of the headmaster at the beginning of each school year so that it becomes a quality target to be achieved in the relevant school year. The quality targets made by the unit leader refer to the vision and mission objectives of the school. The quality targets that have been set are then socialized internally to each unit so that everyone in the unit understands where their objectives are and how they contribute to achieving these targets.

Analysis of risks and opportunities and control of documented information

Analysis of risk is an important requirement in the implementation of ISO 9001: 2015 SMM. Risk management starts from risk identification to measure risk to determine the level of risk, determine risk management measures, handle risks and monitor risks after handling.

Risk management has been carried out by each unit in the SMK 1 Sragi management team by identifying risks that refer to internal and external issues, but the implementation of risk management is still not fully implemented, the risk management applied in SMK 1 Sragi is still limited on identification, measurement and risk handling measures only, so that risk management that is applied is still not effective. Risk procedures are not yet perfect due to lack of understanding of the ISO management team regarding risk management.

Documents are important in the organization, the control of documents carried out in SMK 1 Sragi is centrally stored in the school documents room. This is done to improve order, document protection reduces the risk of missing documents and makes it easier to search documents.

Operational maintenance

In line with the time infrastructure which includes buildings, equipment and educational infrastructure will be gradually damaged, therefore SMK 1 Sragi maintains and repairs the infrastructure with the aim of keeping the facility functioning properly for the learning process. The WKS Unit 4 which handles infrastructure facilities has procedures for carrying out maintenance and repairs, this procedure is distributed to other units so that in case of damage the facilities and infrastructure can be handled immediately.

In addition to maintaining the infrastructure of the SMK 1 Sragi, it is also very concerned about maintaining the competence of the elements of teachers and education staff. Schools record competencies needed and strive to maintain existing competencies and improve the competencies needed to improve education services.

Assessment of the design and development process

The learning process at SMK 1 Sragi starts from planning, implementing and evaluating. The planning of the learning process carried out by the teacher of SMK 1 Sragi starts from the analysis of the effective day to make the annual program and semester program, compile a syllabus, compile a lesson plan, and make an assessment plan. At the implementation stage the teacher interacts with learning process with various strategies, methods and the use of learning media tools. Furthermore, at the evaluation stage the teacher assesses the aspects of knowledge, skills and attitudes of students.

The evaluation is done to measure the achievement of the learning process with various techniques. The follow-up of the evaluation was carried out with remedial to participants who had not reached the target set and given enrichment exam to students who had exceeded the target. In carrying out the learning process the teacher will be monitored and supervised by the headmaster periodically to ensure the quality of learning.

Training and awareness

The change of version to ISO 9001: 2015 SMM causes the need for a new understanding of the system so that the system continues to run and the benefits of the management system can be achieved in accordance with school expectations. SMK 1 Sragi has carried out several training related to ISO 9001: 2015 implementation requirements, namely awareness training that focuses on changes to the basic concepts and preparation of ISO 9001: 2015 documents and internal audit training.

Performance, data analysis, measurement and reporting evaluation

In the implementation of ISO 9001: 2015 SMK 1 Sragi conducted a performance evaluation. One of the performance evaluations is by monitoring and analyzing client satisfaction (students, parents, graduates stakeholder) the aim is to determine the level of client satisfaction with service, determine the effectiveness of the system and as a system improvement material. Client satisfaction monitoring and evaluation is carried out once a year by survey. In addition to the SMK 1 Sragi client satisfaction analysis also conducts internal audits, internal audits are conducted to ensure the suitability of the system applied in SMK 1 Sragi with the organization's requirements and international standard requirements. Performance evaluation results are reported to the headmaster as top management in a management evaluation meeting. The purpose of the management evaluation is so that the headmaster can find out and conduct an assessment of the application of the ISO 9001: 2015 SMM in SMK 1 Sragi whether it is in line with the desired objectives or not. Management evaluation meetings are conducted once a year after the internal audit process.

Evaluation Results of ISO 9001: 2015 SMM implementation integrated accreditation standards

Based on the research data analysis, it was found that context variables consisting of client focus, leadership, people involvement, process approach, system development, evidence-based decision making and good relationship management with various parties belonging to the SMM turned out to be quite well in the implementation of ISO 9001: 2015 SMM integrated the accreditation standard in SMK 1 Sragi. This is indicated by the results of the study with the achievement of the average score in the context evaluation is 3.18 from the highest average value of 4.00.

From the input variable data consisting of curriculum, cost, infrastructure readiness, and readiness of teachers and education staff belonging to the input variables are quite well in the implementation of ISO 9001: 2015 SMM integrated accreditation standards in SMK 1 Sragi. This is indicated by the results of the study with the achievement of the average value in the aspect of input evaluation is 3.23 from the highest average value of 4.00. From the process variable data obtained the average value is 3.19 from the highest average value of 4.00, this means that the process variables are categorized quite well in the implementation of ISO 9001: 2015 SMM integrated accreditation standards in SMK 1 Sragi. From the data analysis of product variables belonging to school culture and achievement of competencies obtained an average value of 3.05 from the highest average value of 4.00, this means that the implementation of ISO 9001: 2015 SMM integrated the accreditation standard in SMK 1 Sragi on variables the product is in a quite well category.

Inhibiting and supporting factors of the implementation of ISO 9001: 2015 SMM integrated accreditation standards

Inhibiting factors that cause less than optimal application of quality management systems in SMK 1 Sragi. These inhibition mainly come from the management internal team:

- a. stagnation of mindset for sustainable school progress, there are some personnel in the management team who are already satisfied with the current situation and progress of SMK 1 Sragi so as to reduce the enthusiasm to study and innovate in the development and improvement of school progress.
- b. lack of literary awareness, weaknesses in the willingness and ability to literate so as to cause disobedience or lack of knowledge of the latest information and developments.
- c. lack of team understanding of risk management for sustainable improvement, where risk management is the main point that is the foundation of ISO 9001: 2015 compared to ISO 9001: 2008. This is as the statement of the chairman of quality assurance that the management team still does not fully understand the risk management of how to identify emerging risks, how to identify the handling and evaluate risks.

Supporting factors implementation ISO 9001:2015 in SMK 1 Sragi top management commitment, role of personal, effective communication, and continuous improvement.

CONCLUSION

Based on the exposure of the research results of SMK 1 Sragi, it has implemented ISO 9001: 2015 SMM by applying the clauses in the system required in the SMM. In the implementation of ISO 9001: 2015 SMM, SMK 1 Sragi integrates quality management systems with accreditation standards by mapping between clauses in the quality management system with standard accreditation instruments, in addition to the management team also making operational standard procedures tailored to eight national education standards.

The results of evaluation of ISO 9001: 2015 SMM implementation which are classified in context, input, process, and product variables are indicated by the average value of each variable. The results of the evaluation of the context variables obtained results of 3.18 from the highest average value of 4.00, this means that the context variable is categorized quite well. The results of the evaluation of the input variables obtained by achieving the average value in the aspect of input evaluation is 3.23 from the highest average value of 4.00, this means that the input variables are categorized quite well. The results of the evaluation of the input variables obtained by the achievement of the average value on the aspect of the process evaluation is 3.19 from the highest average value of 4.00, this means that the process variables are categorized quite well. The results of the evaluation of the input variables obtained by achieving the average value in the aspect of the process evaluation is 3.05 from the highest average value of 4.00, this means that the product variables are categorized quite well.

The inhibiting factor of ISO 9001: 2015 SMM implementation is the stagnation of mindset for sustainable school progress, lack of literary awareness, lack of team understanding of risk management and the supporting factors implementation ISO 9001:2015 in SMK 1 Sragi top management commitment, role of personal, effective communication, and continuous improvement.

ACKNOWLEDGMENT

Acknowledgements were addressed to head master, manajement representative and all respondent of SMK 1 Sragi for their great cooperation, Mr Yeri as head of Study Program Pendidikan Kejuruan, and thesis testing team as well as editor of the Vocational Education journal, UNNES.

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