

The Obstacle Analysis in the Implementation of the ISO 9001: 2008 Quality Management System in Vocational High Schools

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Abstract— This study aims to find out the constraints in implementing ISO 9001:2008 QMS; and the solutions to overcome obstacles in the application of ISO 9001:2008 SMK QMS in the Bali province. This study used a qualitative approach. Then, this study was conducted at SMKN 1 South Kuta and SMKN 3 Singaraja. The subjects of this study were: principal, QMR team, and head of department. Then, data collection techniques were used interviews, observation and documentation studies. The procedure of data analysis was done in three stages, namely data reduction, data display and conclusion drawing. The results of this study are: Constraints on the implementation of ISO 9001:2008 QMS in Vocational Schools in Bali include: First, Increased service constraints by funds, Difficult to change mindset, Weak teacher commitment, Document storage and numbering are not effective, Difference in document format, Competence employees are not suitable, Weak teacher competency in assessment, Analysis of student learning outcomes have not been effective. Then, solutions proposed include: Priority scale setting, Improving QMR readiness and ISO team, Increasing ISO awareness training, Increasing the role of document control and work units, Simplifying document numbering, Working with teams, Providing services according to standards, holding workshops for teachers and employees.

Keywords: ISO, management, system, vocational

I. INTRODUCTION

The low human resources (HR) in Indonesia make difficult for Indonesians to compete in the labor market. The Boston Consulting Group sees the Indonesian country still lack a quality workforce. This is reinforced by the data of human development report issued by the United Nations Development Program (UNDP). UNDP report the results of the Human Development Index (HDI) in 2018 that Indonesia ranks 116th out of 187. The needs of the workforce for quality human resources and skillfully forcing and encouraging an educational institution and Vocational Schools (SMK) doing a quality assurance for the educational process held. It is done in the hope that can get the quality of skilled and qualified graduates. [1] Vocational School is one of the efforts made by the Indonesian government to improve and improve existing human resources.

Vocational High School is one of the secondary education levels in Indonesia. [2] Vocational high school is a secondary education that has main goal of preparing a skill, professional and highly discipline workforce. The implementation of vocational high schools is to improve and enhance existing human resources. Vocational high schools carry out the quality as a guarantee of the educational process held to getting positive values and customer satisfaction. [3][4] One factor in the success of vocational education is the absorption of graduates into the Industrial World. It is important to study the quality of world development in vocational high schools as a means of enhancing partnerships that result in the relevance of vocational education to the labor market.

Quality graduates are printed by schools that also have quality assurance with the demands of globalization. Schools that have quality assurance will continue to improve existing education services and improve the quality of school education services. The implementation of an effective ISO quality management system to carry out quality assurance in violating the educational process of educational institutions. [5] The application of ISO quality management system is an international quality standard will be consistent in proving efficiency in managing school resources and school quality.

In addition, it is hoped there will be continuous process of improvement for school performance. Therefore, the quality and output of schools as educational institutions always improve over time. The ISO-based quality management system aims to improve the quality of educational institutions in order to improve education and to ensure the customer satisfaction. [6] Customers of educational institutions are teachers and internal staff in schools. While, the external customers from educational institutions are parents of stakeholders and the community.

The lack of consistency in the performance of international vocational high schools. First, vocational high schools find difficult to focus their work in accordance with ISO demands. Then, here are many jobs in each work unit of the vocational secondary school. After that, the most important thing in implementing ISO is a quality management system in vocational high schools or employees for the development of information and technology. [7][8] A common obstacle

experienced by vocational high schools is the problem of school culture.

The The implementation of the ISO quality management system will be better and more likely to be accompanied by a school vision, which is the overall responsibility of the community and not just the responsibility of individuals, especially leaders. The success of Vocational Schools getting ISO certification requires high-level quality management. The acculturation of quality must maintain the ISO certificate that has been obtained must be integrated into the organization. [9] States that the application of the ISO 9001: 2008 Quality Management System (SMM) is one of the efforts that can be done to carry out quality assurance in the violation of the learning process in an educational institution. [10] Further stated that QMS with ISO 9001: 2008 standards aims to improve the competitiveness of an institution in this case educational institutions in order to improve the process of implementing education in order to ensure customer satisfaction.

In the concepts and principles of education, management said management is a tool or way to use people, money, equipment, materials, and methods effectively to achieve goals [11]. Whereas according to Sallis's view in education integrated quality management [6] in quality improvement there are several levels, starting from the most basic level are: (1) conducting a thorough examination to maintain quality with precision and supervision, (2) quality control with detection, (3) Quality assurance guarantees quality by prevention, and (4) integrated quality management ensures quality to be maintained continuously. The implementation of a quality management system requires a commitment from the management ranks of an organization, and all standards of the quality management system requirements that commitment to be documented in the form of an organization's quality policy statement [12]

Vocational High School to produce quality learning services, it must be able to make changes to the system. Achieving quality desired by schools must go through the stages of planning, supervision, and quality improvement. Achieving quality is achieved continuously by involving everyone in the school to produce service products that meet the demands of the customers. Every school element involved must work together, commit, responsibility, consistently, and continue to cultivate the implementation of a quality management system. [13] The creation of an integrated quality culture and quality management system, the competency standards that are expected to be achieved effectively and efficiently. Carry out professional management functions to achieve the expected competency standards by implementing a quality control process that includes continuous PDCA activities (Plan, Do, Check, and Act). However, in its implementation, there are still many problems found, so that a more in-depth study is needed on the Analysis of Constraints in the Implementation of the ISO 9001: 2008 Quality Management System in Vocational High Schools. This study aims to find out: (1) Constraints in implementing ISO 9001: 2008 QMS; and (2) Solutions to overcome obstacles in the application of ISO 9001: 2008 SMK QMS in the Province of Bali.

II. RESEARCH METHOD

In This study was used qualitative approach. According to [14] "Qualitative method is a research procedures that produce descriptive data in the form of written and oral words from people and observable behavior".

Besides, the type of research was used ethnography of education. According to [15] "Ethnography of education refers to part or all of the educational process". The place of research was taken in the State Vocational Schools that implemented ISO 9001: 2008. The QMS in the Bali province with name SMK 1 South Kuta and SMK 3 Singaraja. The subjects of this study were: Principal, QMR Team, and head of department. The data was obtained from documents and archives of SMKN 1 South Kuta and Singaraja Vocational High School 3. The object that is the focus of research is the application of ISO 9001: 2008 QMS.

Data collection techniques were carried out through interview, observation and documentation studies. In this study, data analysis was focused on the process in the field together with data collection. Data analysis procedures based on three stages including data reduction, data display and conclusion. According to [16] there are four steps of qualitative research. The four steps are data collection, data reduction, data presentation and conclusion drawing.

III. RESULTS AND DISCUSSION

3.1 Constraints in the Implementation of ISO 9001: 2008 QMS in Vocational Schools.

Based on the data analysis obtained information that there are obstacles in the Implementation of ISO 9001: 2008 QMS in the State Vocational School of Bali Province. These constraints were found in customer focus, employee participation, systems approach to management, and continuous improvement. However, the leadership principle, process approach, factual approach to decision maker, and others beneficial supplier relations have not found significant obstacles. The obstacles in the Implementation of ISO 9001: 2008 QMS in Vocational Schools are as follows bellow.

3.1.1 Increased services are constrained by limited funds. The results of management reviews in the form of corrective actions are often not immediately realized by the school due to limited funds. Physical school infrastructure is still often late for repairs. As a result, the fulfillment of student services cannot be maximally fulfilled.

3.1.2 A mindset that is difficult to change and a low work ethic. A mindset of teachers and employees about the implementation of ISO 9001: 2008 QMS in Vocational Schools is just a waste of funds. These assumptions influence the low work ethic of teachers and employees in supporting ISO 9001: 2008 QMS in schools. [17] The low work ethic of teachers and employees is influenced by the unwillingness to make changes. Elderly teachers and senior employees are often difficult to make changes. This is certainly hinder continuous improvement in school.

3.1.3 Weak commitment and teacher response. The lack of commitment and teacher response to ISO 9001: 2008 QMS. This was caused by a lack of teacher understanding of ISO 9001: 2008 QMS. In addition, some teachers are difficult to be invited to make changes so that continuous improvements in the school become hampered. [18] argues that "If it has been decided to use ISO 9001: 2008 in this way,

it is important that these decision makers understand what such commitment involves". Thus, if school has decided to use ISO 9001: 2008 QMS, the school must be aware of the importance of commitment to discipline in those implementation.

3.1.4 Storage of documents that have not been effective. Documents are important in ISO 9001: 2008 QMS, everything in the system must be properly and correctly document. However, in practice at school there are still difficulties in finding documents. It shows that document storage in schools is still not effective. Storage of documents that have not been effective cause the difficulties to access the document. The difficulties in accessing documents is one of the obstacles that occurs in the quality management system. This is accordance with the opinion from [18] said that "Ensuring everyone had access to working with the correct version of a document was not easy". then, not effectiveness of storage of document caused by human errors such as the busyness and inaccuracy of teachers and employees.

3.1.5 Document numbering is not effective. Teachers and employees often confusing in document numbering. Documentation numbering in ISO 9001: 2008 QMS is different from the document numbering of education service rules. The difference demand us to read the official documents and rules of the ISO 9001: 2008 QMS rules. Document numbering based on ISO clauses is not less simple and confusing for teachers and employees so that it still raises errors in document numbering.

3.1.6 The differences in document, service formats and ISO. The document format of ISO 9001: 2008 QMS is different from the document format of education office. Therefore, teachers and employees must adapted from documents that have been written based on format and service into ISO document format. In practice at school, teachers and employees still have difficulty in adjusting the format. The difficulties faced by teachers and employees are caused by limited time to make document adjustments. This obstacle often occurs when the teacher must change the RPP and syllabus that has been compiled with the MGMP into an ISO document format. As a result, documentation of ISO 9001: 2008 QMS has been hampered.

3.1.7 Employee competencies are not suitable with their work. The lack of employee competency is caused by the competence of employees not yet fulfill qualifications. Employee who are civil servants are still very limited in school. From those problem, the school or institution apply honorary employees. However, the appointment of honorary employees also cannot be maximized due to limited funds for employee salaries. As a result of these limitations, it is not uncommon for schools to use existing staff even though their competencies are not in accordance with their field of work. In addition, education levels that are still low also affect employee performance.

3.1.8 Weak teacher competency in assessment.

Teacher competency is still weak in observational studies which are affective and psychomotor aspects. Assessments carried out by teachers have not been well administered. Assessment reports carried out by teachers are only limited to

the final assessment report while the assessment process has not been fully reported to the curriculum field. As a result, document control has not been effective and data related to student assessment cannot be collected in one place.

3.1.9 Analysis of student learning outcomes that have not been effective. One quality document that must be made by the teacher is an analysis of student learning outcomes. Analysis of student learning outcomes aims to determine the progress and results of student learning, diagnose learning difficulties, and provide feedback or improvement of the learning process. Analysis of student learning outcomes is done by analyzing the items on the answers to students' tests. Analysis of student learning outcomes should be done one by one students. However in practice, the teacher analyzes the learning outcomes globally only by looking at the results of the students' tests and then comparing them with the minimum criteria. Analysis of learning outcomes that have not been effective is due to limited labor and teacher time. The analysis of learning outcomes is carried out properly will indeed require a long time. While the activities that must be done by the teacher are not only an analysis of student learning outcomes. Given the limited time and personnel of the teacher, the analysis of student learning outcomes is still carried out but has not been effective.

3.2 Solution to Overcoming Constraints in Implementing ISO 9001: 2008 QMS in Vocational Schools. Based on the data and analysis, it is known that there are obstacles in the application of ISO 9001: 2008 QMS in Vocational Schools. The results of the study also obtained information about the solutions made by the school to overcome these obstacles. Solutions made by schools to overcome obstacles in the application of ISO 9001: 2008 QMS in SMK as follows.

3.2.1 Priority setting and gradual and continuous improvement. The inability of schools is see the necessary and expectations of students caused by limited funds. To overcome these obstacles, the school made a priority scale in the corrective actions that must be taken. The school identifies what corrective actions should be taken. Then, places the corrective actions based on priority scale. Thus the corrective action can still be carried out even though gradually.

3.2.2 Increase the readiness of the QMR and the ISO team. Changing the mindset and work ethic of teachers and employees is not an easy thing. However, the school tried to overcome these obstacles by starting to change the mindset and work ethic of teachers and employees. The change was carried out gradually in the beginning and core team. The school, especially the principal, has an important role in providing knowledge and awareness for all school people to make changes. In this case, the head of the QMR team and the ISO team were the executive coordinators of the ISO 9001: 2008 QMS Implementation. Through QMR and ISO the awareness, mindset, work ethic, and commitment of all school people began to be built. QMR is expected to be able to provide motivation and role models for other school residents to participate in supporting the improvement of school quality through QMS with ISO 9001: 2008 standards.

3.2.3 Improve coordination and ISO awareness training to increase commitment. Solutions made by schools in overcoming the weak commitments of citizens in ISO 9001: 2008 QMS are to provide an understanding of the important roles and benefits of ISO 9001: 2008 QMS. This understanding is always given in school coordination meetings and the ISO awareness training is always given to teachers and employees. By increasing coordination meetings and ISO awareness training, teachers and employees are expected to have a better understanding of ISO 9001: 2008 QMS and increasingly the committed to supporting the implementation of ISO 9001: 2008 QMS.

3.2.4 Increase the role of document control and collaboration of work units. The next solution made by schools is increasing the role of document control. Each work unit is also asked to help function, role and control documents. The form of assistance and support is each work unit manages their own documents related to work unit. Then, each work unit is asked to provide documents that support the implementation of ISO 9001: 2008 QMS.

3.2.5 Simplify document numbering rules. The solution for schools in overcoming the confusing document numbering constraints is to simplify the document numbering rules. Schools can create their own numbering codes that are considered easy to understand. Although the school can make its own numbering code but the document format still follows the rules of the ISO 9001: 2008 QMS.

3.2.6 Cooperate with the team in adjusting the document format. Constraints related to differences in the quality and service document formats of ISO 9001: 2008 QMS are handled by teachers with cooperation in the MGMP and ISO teams. Making quality documents such as RPP and syllabus accordance with the format and service can be consulted with teachers in the MGMP. Besides, making quality documents that are accordance with the ISO 9001: 2008 QMS format can be consulted with the QMR team and supervisors from ISO.

3.2.7 Providing services according to minimum standards, conducting training, and enhancing cooperation of all parties. Employee competence that is not accordance with the field of work overcome by providing services in accordance with minimum standards, conducting training and increasing cooperation among all parties. Although the competence of employees is not suitable with their field of work, the school always asks employees to continue provide services that comply with minimum standards. The school also provides training and engaging employees with their field of duty. In addition, to provide services that meet the minimum standards, all parties both teachers and employees are asked to help each other and work together in completing work even though the work is not their task.

3.2.8 Hold workshops on assessments for teachers. The weakness of teacher competence in student assessment is overcome by holding workshops on student assessment. The workshop activities are carried out by inviting the education office (supervisor) to provide explanations and training on student assessment. In addition, teachers also asked and learn with other teachers regarding student ratings.

3.2.9 Using the help of item analysis program questions for assessment. The difficulty of teachers in analyzing student learning outcomes is overcome by using an item analysis

program that simplifies and speeds up the analysis process. The item analysis program can be used to analyze the questions of multiple choice forms and descriptions. Then, determine the quality of the questions made by the teacher both the power side, the level of difficulty, and the effectiveness of the practice. Besides, the item analysis program can also provide information about students' abilities and KKM achievements. Then, this program can also identify students who must be remedial. With the help of a computer program it is expected that the analysis of student learning outcomes can be carried out effectively and efficiently.

IV. CONCLUSION

Based on the results of research, the Analysis of Constraints on the Implementation of ISO 9001: 2008 QMS in Vocational Schools, it can be summarized as follows. (1) Constraints in implementing ISO 9001: 2008 QMS in Vocational Schools include service improvement hampered by limited funds and difficult to change mindset and low work ethic. Then, the constraints also include commitment and teacher response, ineffective document storage, not effective the document numbering, differences in document formats and ISO, employee competency is not suitable with the field task, the weakness of teacher competence in assessment, and analysis of student learning outcomes that have not been effective. (2) Solutions made by Vocational Schools in overcoming the obstacles in implementing ISO 9001: 2008 QMS in Vocational Schools include priority setting and continuous improvement, increasing QMR readiness and ISO team, improving coordination and ISO awareness training. ISO awareness training implemented to increase commitment, the role of document control and work unit cooperation, simplifying document numbering rules, working with teams in document format adjustments, providing services in accordance with minimum standards, conducting training and increasing collaboration of all parties, and holding workshops on assessment for teachers.

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