

# The Effect Analysis of Quality Management System Application on Improving Employees' Performance through Quality Culture (Case Study in Education and Training Center of PUPR Region I Medan)

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## ABSTRACT

Education and Training Center of PUPR Region I Medan has implemented a Quality Management System that encourages researchers to conduct research on the extent to which the application of Quality Management Systems (QMS) can improve performance through quality culture by testing the quality management system (QMS) planning variables, the quality management system (QMS) procedures and quality culture as the influencing factors. The study was conducted by distributing questionnaires to the samples who are also the entire population in this study, namely all of the civil servants in the PUPR Education and Training Center Region I Medan. Then the data was analyzed with path analysis method, by using the SPSS (Statistical Product and Service Solution) program. Based on the results obtained, it can be concluded that QMS planning has a positive and significant influence on quality culture, QMS procedures have a positive and significant effect on quality culture, QMS planning has a positive and significant effect on employee performance, QMS procedures have a positive and significant effect on employee performance, quality culture has a positive and significant effect on employee performance, QMS planning has a positive and significant effect on performance through quality culture, and QMS procedures have a positive and significant effect on performance through quality culture.

**Keywords:** QMS planning, QMS procedures, quality culture, and employee performance

## INTRODUCTION

In the last decade, the performance of civil servants has always been the subject of public discussion. Many people complained about the performance of civil servants. Even though in reality not all civil servants have poor performance, but their work culture has been rated poorly by the community. Awareness of quality makes people demand the minimum standards of service they use to prove that the organizations providing these services can be trusted for quality. To answer these challenges, organizations implement a Quality Management System (QMS). The application of the QMS confirms that the

fulfillment of product or service requirements can be affected either directly or indirectly by the work of the executor (Prabowo, 2009).

This study uses a quality management system factor in influencing employee performance because so far the PUPR Region I Medan Education and Training Center has implemented a quality management system with the issuance of certificates since 2011. The Quality Management System is an international standard governing the quality management system, both in setting policies and the quality objectives and achievements that can be applied in every type of organization /

company. Initially, this Quality Management System was only implemented by private companies, because ISO 9001 was oriented towards consumers or customers. However, in recent years, a number of government agencies also want to gain recognition of the quality of their management through implementation. The demand for good governance is the reason for a number of government agencies to obtain certificates, bearing in mind the quality management principles contained in are part of good governance. In addition, these principles also contain elements of internal control for an organization.

The problems that are seen in the Education and Training Center of PUPR Region I Medan related to employee performance include the existence of several employees who have not been able to achieve the work targets, in addition there are also indicators of employee performance achievements that have not been maximized so that their performance is not good enough. The following are data relating to the performance evaluation of Education and Training employees of PUPR Region I Medan Office.

**Table 1: Performance Targets and Realization PUPR Education and Training Center Region I Medan**

No	Activity	Output	Target	Realization	Percentage
1	Help direct the activities of the hostel receptionist, consumption staff, cleaning staff and security forces	Report	728	610	84 %
2	Organizing training cooperation with other agencies	Training Activities	10	7	70 %
3	Perform training / recruitment of training participants	Training participants	1270	1233	97 %
4	Carry out monitoring and report on the results of monitoring	Report	240	227	94,6 %
5	Booked In and Out Service Letter	Files	360	330	91,7 %
Average			521.6	481.4	87,46%

Source: Education and Training Center of PUPR Region I Medan (Processed), 2018

Table 1, the performance of The Education and Training Center of PUPR Region I in Medan Office shows that the average achievement in achieving the performance targets that must be met is only 87.46%. This shows that the performance of Education and Training Center PUPR Region I Medan is still not optimal. Organizational performance is an accumulation of employee performance. The results of Juana, Sudibya and Sintaasih (2016) research prove that the implementation of the QMS has a significant effect on the performance of employees at the UPTP Denpasar Transmigration Training Center. Samuel and Zulkarnain (2011) prove that the application of ISO 9001 QMS is able to significantly improve employee performance through a corporate quality culture as a mediation.

### Performances

Mangkunegara (2009) states that: "Performance is the work of quality and

quantity achieved by an employee in carrying out their duties in accordance with the responsibilities given to him." While Hasibuan (2005) states that: "Performance is a work that is achieved by someone in carrying out the tasks assigned to him based on skill, experience and sincerity as well as time". Performance and quality of work life of employees not only refer to things such as working conditions and wages, but the extent to which employees can use their ability to work in the work they are interested in and gain the development of abilities, skills and insights as well as mindset. Thus, performance is a function of motivation and ability. To complete a task or job, a person must have a degree of willingness and ability level.

Performance indicators must be identified based on a form of measurement that will assess the results and outcomes obtained from the activities carried out in order to achieve the organization's strategic goals and objectives. Mangkunegara (2009),

states that employee performance indicators, namely:

1. Quality of work; Reflect improvement in quality and work standards that have been predetermined, usually accompanied by increased ability and economic value.
2. Work quantity; reflecting the increase in volume or amount of an activity unit that produces goods in terms of quantity. The quantity of work can be measured through the addition of physical values and goods from previous results.
3. Reliable; Reflecting how a person completes a job that is given to him with a high level of accuracy, willingness and enthusiasm.
4. Cooperative attitude; Reflecting the attitude that shows the high level of cooperation between each other and the attitude towards superiors, also towards employees of other companies.

### **Quality management system**

Quality management according to Susilo (2011) is a systematic effort through the functions of planning, implementation, inspection or control as well as follow-up on all elements of the organization, both internal and external covered in the dimensions of material, methods, machines, funds, people, environment and information to realize commitments, policies and quality targets that have been set in order to provide satisfaction to customers for now and in the future. Quality management planning is the initial phase in formulating and designing steps for implementing ISO QMS, starting from selecting the ISO certification body, identifying aspects of quality, documentation and others. To support the success of achieving ISO certification, careful planning is needed so that when an audit is carried out all recorded data as evidence of the application of ISO QMS can be demonstrated (Sumber Samuel and Zulkarnain, 2011). According to Gaspersz (2008) Quality management system planning is the determination of the target

activities of the Vision and Mission documents. To achieve this Vision and Mission a Strategic Plan document (Renstra), Work Program (Proker), Education Guidelines, Quality Manual, and Faculty Quality Standards and Quality Objectives, Procedures Manuals, and other supporting documents. Quality management planning can also be interpreted as a system of determining policies, goals, and achievement of targets directly and in a controlled organization that affects quality.

The indicators of Quality Management System Planning are (Samuel and Zulkarnain, 2011):

1. Identification of quality aspects; consider and determine the musty aspects that can improve the quality of organizational management.
2. Documentation; concrete form of recording various information from an activity that can be described.
3. Training; Training is conducted to add the skills of new and old employees to facilitate them in carrying out their work.
4. Making standard procedures; the standard procedure is made by providing a complete breakdown of the standard set of activities in the form of detailed tasks, steps for implementation, decisions or policies of the leadership and the implementation process so as to minimize errors in the execution of work.

### **Quality Management System Procedures**

According to Gaspersz (2008) quality management procedures are a set of documented processes and standard practices for system management aimed at ensuring the suitability of a process and product (goods or services) to the requirements of certain requirements determined by customers and organizations. Quality Management System Procedure is a sequence or workflow that is an important

requirement of ISO, to make procedures for all work activities that have an impact on quality (Samuel and Zulkarnain, 2011). Based on the opinion of several experts about the procedure, the authors conclude that the procedure is a sequence of steps in data processing or sequence of activities involving several people in one or more departments that are made to ensure uniform handling of a company transaction that occurs repeatedly.

The indicators of the Quality Management System Procedure are (Samuel and Zulkarnain, 2011):

1. Periodic audits; Audits can be conducted regularly, namely annual audits. This audit is needed in order to evaluate the implementation of procedures that have been carried out.
2. Compliance with standard procedures; Compliance with standard procedures means being willing to follow all standards, laws or policies set by the organization, agency or company.
3. Implement corrective and preventive actions; Corrective is a direct action taken if there is a discrepancy, the aim is to reduce the impact of the incident, while preventive action is an action taken to prevent a discrepancy.

### **Quality Culture**

According to Edwar (2012) quality culture is a value system whose results are conducive to the development of quality in a sustainable manner in the environment, it contains values, traditions, procedures and expectations that support quality. The quality culture put forward by Goetsch and Davis (2006) is the value of organizations that produce an environment conducive to the formation and continuous improvement of quality consisting of values, traditions, procedures, and expectations that improve quality. The nature of quality culture put forward by Goetsch and Davis (2006) will be very clearly seen in the area of operating philosophy, objectives, management

approaches, attitudes towards customers, problem solving approaches, supplier relations, and performance improvement approaches.

Quality culture is an organizational value system that produces an environment conducive to the formation and continuous improvement of quality (Goetsch and Davis, 2004). The indicators of quality culture are (Samuel and Zulkarnain, 2011):

1. Top Management Support for Quality Planning; The support and commitment of top management is one of the critical success factors in the quality of company management, where top management must behave, think and act about quality in all decisions. This measurement uses indicators:
  - a. Leadership attitude
  - b. Policies that support quality
  - c. Direct involvement of leaders
2. Strategic Planning for Quality; Planning a good quality work in a company can take place well, if done by people who really know about the company. This measurement uses indicators:
  - a. Vision and mission has reflected quality culture
  - b. Communication of leaders and subordinates to work culture
  - c. Organizational framework
3. Customer Focus; in an effort to continuously improve and improve the quality of service, an organization must focus on customer satisfaction.
4. Quality Training; training on improving work quality, product quality and service quality to all employees is needed in an organization to improve its quality. Therefore, management needs to actively participate in supporting the implementation of quality training.
5. Recognition; Management needs to give recognition or appreciation to employees who have made quality improvements. The award can be material or moral. Recognition given by an organization to employees, can be interpreted as a reward. Recognition can be used to

increase motivation and measure the quality of work performance of employees who have made quality improvements, which in turn can improve employee job satisfaction.

6. Empowerment and Involvement; employee involvement (involvement) is a process for involving employees at all levels of the organization in making decisions and solving problems for organizational success. Empowerment can be interpreted as meaningful employee involvement. Empowerment is not just having input, but paying attention, considering, and following up on that input. Good and useful investment must be followed by employee empowerment.
7. Quality Improvement Teamwork; the development of quality teamwork must involve all levels of the workforce in the organization, in order to create strong and compact teamwork.
8. Measurement and Analysis; every work process needs to be recorded in detail, to make it easier to make improvements. A good Measurement and Analysis system must:
  - a. Work is measured by quality supervision guidelines
  - b. Data on work results are analyzed carefully
  - c. The work process is carried out in detail
9. Quality Assurance; quality assurance is a program that contains activities that must be carried out so that the quality of work carried out in accordance with the quality of work desired. Quality assurance includes: policies, procedures, standards, training and guidelines related to the work, as well as the existence of a system that produces quality.

#### **Relationship of Quality Management System Planning to Performance**

Certification planning is the initial phase in formulating and designing steps for

implementing ISO QMS, starting from selecting the ISO certification body, identifying quality aspects, documentation and others. To support the success of achieving ISO certification, careful planning is needed so that when an audit is carried out all recorded data as evidence of the application of ISO QMS can be demonstrated. Planning can be done effectively through steps: identification of quality aspects, then documenting, conducting quality training to employees and making standard procedures to be carried out by the company. ISO certification planning in this study is certification planning. The better ISO planning will be able to improve employee performance. This is supported by the research results of Semuel and Zulkarnain (2011) which prove that ISO quality management system planning has an effect on employee performance

#### **Relationship of Quality Management System Procedures to Performance**

The application of established organizational standard procedures is an important requirement of ISO. To run ISO QMS in an organization, it is necessary to make standard procedures for all work activities that have a clear and easy to apply quality effect. Activities that are part of the application of procedures are: conducting periodic audits, compliance with standard procedures, and implementing corrective and preventive actions. The better application of ISO procedures will be able to improve employee performance. This is supported by the results of Samuel and Zulkarnain's (2011) research which proves that the application of ISO quality management system procedures affects employee performance.

#### **Relationship between Culture of Quality and Performance**

Quality culture is essentially one of the supporting elements in improving employee performance. Organizations that



pay attention to the elements of organizational culture will improve the quality of the organization. Quality culture is one of the work guidelines to improve employee performance to be more optimal. According to Robbins (2006: 296) there is almost no doubt that organizational culture is very influential on employee attitudes. So

to achieve professional work, top management and human resources division can create a quality organizational work culture.

The following is a conceptual framework of research built on the relationship between variables.

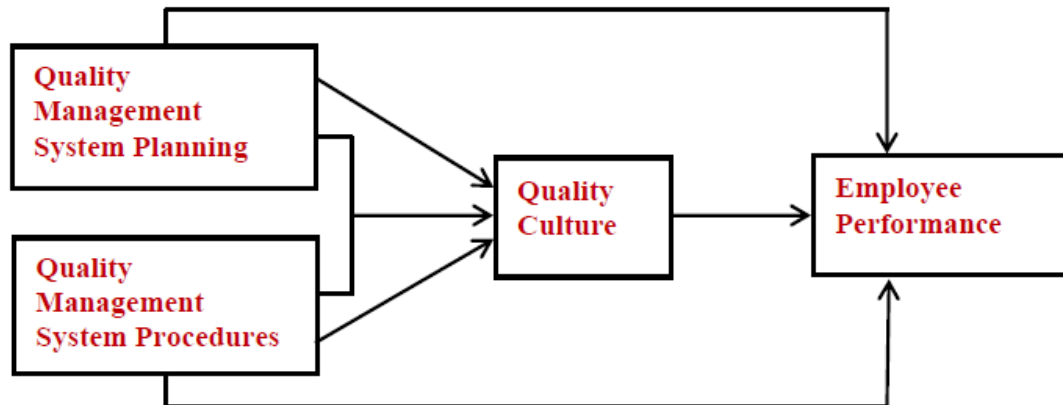


Figure 1: conceptual framework

### Hypothesis

Based on the definition of hypotheses, the formulation of hypotheses in this study is:

H<sub>1</sub>: There is a positive and significant relationship between system planning Quality Management (X1) on Quality Culture (Z).

H<sub>2</sub>: There is a positive and significant relationship between System procedures Quality Management (X2) on Quality Culture (Z).

H<sub>3</sub>: There is a positive and significant relationship between system planning Quality Management (X1) on improving employee performance (Y).

H<sub>4</sub>: There is a positive and significant relationship between System procedures Quality Management (X2) on improving employee performance (Y).

H<sub>5</sub>: There is a positive and significant relationship between Quality Culture (Z) to improving employee performance (Y).

H<sub>6</sub>: There is a positive and significant relationship between system planning Quality Management (X1) through Quality Culture (Z) towards employee performance improvement (Y).

H<sub>7</sub>: There is a positive and significant relationship between System procedures Quality Management (X2) through Quality Culture (Z) towards employee performance improvement (Y).

### MATERIAL AND METHOD

This research was conducted to test the hypotheses proposed using research methods that have been designed in accordance with the variables studied in order to obtain accurate results. This type of research is descriptive qualitative. This research was conducted at the Education and Training Center of PUPR Region I Medan.

Population is a generalization area that consists of objects or subjects that have certain qualities and characteristics determined by researchers to be studied and then drawn conclusions. (Sugiyono, 2009). The population in this study is the Civil Servants (PNS) in the Education and Training Center of PUPR Region I Medan, amounting to 37 people. Sampling in this study using a census technique that is the entire population unit used as a sample of 37

employees. This study uses two types of data sources namely:

**Primary Data**

Primary data is data obtained directly from selected respondents at the study site. Primary data were obtained by giving questionnaires and conducting interviews with employees of the Region I Education and Training Center PUPR Medan. In this study a questionnaire with Likert Scale was used.

**Secondary Data**

Secondary data is data obtained from other sources that are processed such as reports on survey results, Employee Work Targets (SKP), journals and other data from the internet that supports this research.

**RESULT AND DISCUSSION**

The variables in this study are SMM Planning (X1), SMM Procedure (X2), Quality Culture (Z) and Employee Performance (Y) at the PUPR Region I Medan Education and Training Center.

**Table 2 Category Average Respondents' Answers**

Mean	Category	Conclution	Variable Conclution
1,00 – 1,80	E	Strongly Disagree	Strongly Bad
1,81 – 2,60	D	Disagree	Bad
2,61 – 3,40	C	Agree less	Enouhgt
3,41 – 4,20	B	Agree	Good
4,21 – 5,00	A	Strongly Agree	Very Good

The SMM Planning Variable (X1) has 4 indicators, namely the identification of quality aspects, documentation, training, and making standard procedures. Overall SMM Planning variables get an average value of 4.31 which is included in the excellent category. This shows that the Head of Subdivisions or Section Heads still need to evaluate the pattern of assessment of the work they provide to subordinates. The QMS Procedure Variable (X2) is measured using 3 indicators, namely: Periodic Audit, Compliance with standard procedures and Application of measures. All SMM Procedure variables get an average value of 4.28 which is included in the excellent category. But in the objective indicators in assessing, there are still

respondents who disagree. This shows that the Head of Department still needs to evaluate the existing work procedures to be more effective and efficient so that he can achieve maximum performance.

Quality Culture (Z) is measured using 9 indicators namely: Leadership Quality, Strategy Quality, Customer Focus, Training Quality, Awards, Employee Involvement, Team Works, Detailed Recording and Evaluation as outlined in 13 statements. Overall quality culture variables get an average value of 4.23 which is included in the excellent category. This illustrates that the majority of employees are always obedient to the directions given in completing their tasks so that quality culture can be implemented in a real way that can produce maximum performance.

Employee Performance (Y) is measured using 4 indicators, namely: Quantity of Work, Quality of Work, Working Time and Effectiveness of Work which is poured into 7 statements. Overall get an average value of 4.29 which is included in the excellent category. This illustrates the majority of employees fully understand that the work that is in accordance with the standards set by the organization is very important in supporting performance.

**Normality Test**

Data normality test is very important in parametric statistical analysis so that the regression model is free from prediction errors. SPSS Test Results for data normality can be seen as follows:

**Table 3 Normality Test by One-Sample Kolmogorov-Smirnov One-Sample Kolmogorov-Smirnov Test**

		Unstandardized Residual
N		37
Normal Parameters <sup>a</sup>	Mean	.0000000
	Std. Deviation	2.13376837
	Most Extreme Differences	
	Absolute	.110
	Positive	.110
	Negative	-.081
Kolmogorov-Smirnov Z		.622
Asymp. Sig. (2-tailed)		.834
a. Test distribution is Normal.		

Source: Primary data processing results, 2019

From the results of data processing in table 4.10 above, it can be seen that the significance value of Kolmogorov-Smirnov (K-S) is 0.834, so it can be concluded that the variable data is normally distributed because the significance is  $> 0.05$ . Testing the normality of the data can also be known by looking at graphical images and normal distribution curves. The data will be normally distributed if the expected probability value is equal to the expected probability value and the observed probability is shown by a diagonal line which is the intersection between the expectation probability line and the observation probability. The following is a test of the normality of data results in the form of histogram charts and P-P Plots curves as shown in Figure 2 below:

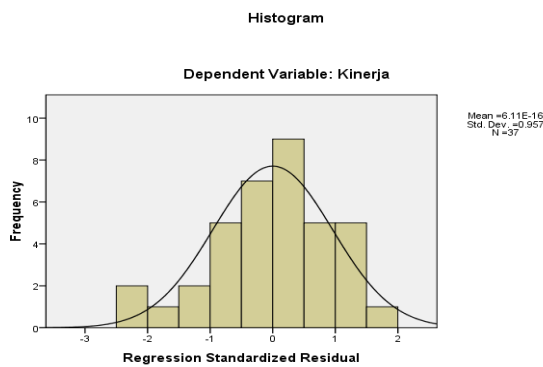


Figure 2 Histogram Graph

Source: Primary data processing results, 2019

Based on the histogram graphic image in Figure 4.2 it can be concluded that the data has been normally distributed. This can be seen in the data that follows a diagonal line forming a bell in the middle.

Normal P-P Plot of Regression Standardized Residual

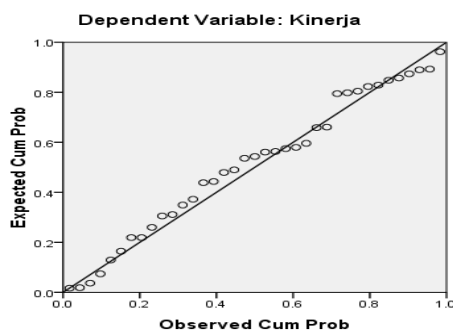


Figure 2 PP-Plots Curve

Source: Primary data processing results, 2019

Based on the PP-Plots curve in Figure 4.3 it can be concluded that the curve has been distributed normally. This can be seen in the normal PP-Plots curve, where the points spread close to the diagonal line.

### Multicollinearity Test

The results of the multicollinearity test can be seen in the following table:

Table 4 Multikolinieritas Test Result

Model	Collinearity Statistics	
	Tolerance	VIF
1		
	(Constant)	
	SMM Planning	.839
	SMM Procedure	.822
	Quality Culture	.731

Source: Primary data processing results, 2019

From the test results above, it can be seen that the tolerance numbers of all independent variables  $> 0.1$  and the VIF  $< 5.0$ . This indicates that there is no multicollinearity among the independent variables in the regression model in this study.

### Heteroskedasticity Test

Heteroscedasticity test aims to test the occurrence of differences in residual variance of one observation period to another. Heteroscedasticity analysis using scatterplot test graphs. Heteroscedasticity can be done by observing certain patterns on scatterplot charts, where if there are points that spread above and below the number 0 on the Y axis and do not form a pattern then there is no heteroscedasticity. Scatterplot charts can be seen in the following image:

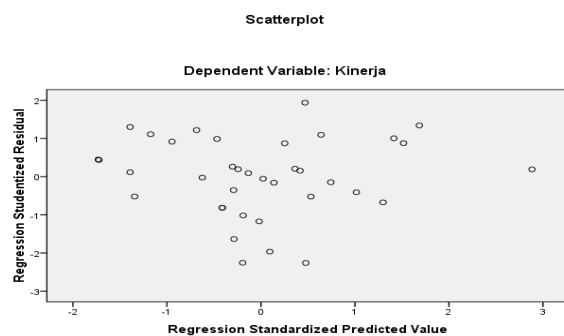


Figure 3

Source: Primary data processing results, 2019



From the scatterplot picture above, it is seen that the points spread randomly and do not form certain patterns or are irregular. This indicates there is no heteroscedasticity in the regression model so that the regression model is feasible to use.

**Hypothesis test**

Based on the data obtained from the analysis, the path analysis results diagram in the research model is as follows:

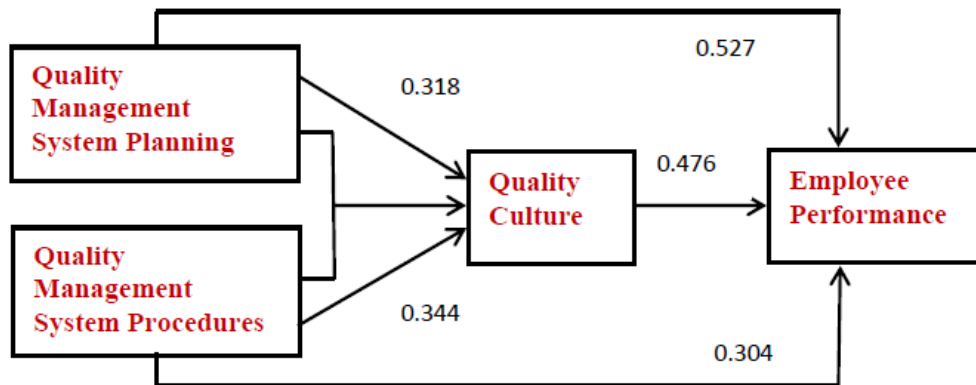


Figure 4 Conceptual Framework for Path Analysis

The results of testing the research hypothesis are summarized in the following Table 4:

Table 4 Research Hypothesis Testing Results

No	Hypothesis	Path Coefficient	Sig.	Result
H <sub>1</sub>	SMM planning has a positive and significant effect on the Culture of Employee Quality at the Education and Training Center of PUPR Region I Medan.	0,318	0,042	Accepted
H <sub>2</sub>	The SMM procedure has a positive and significant effect on the Culture of Employee Quality at the Education and Training Center of PUPR Region I Medan.	0,344	0,029	Accepted
H <sub>3</sub>	SMM planning has a positive and significant effect on the performance of employees at the Education and Training Center of PUPR Region I Medan.	0,527	0,000	Accepted
H <sub>4</sub>	SMM Procedure Has a Positive and Significant Impact on Employee Performance at the Education and Training Center of PUPR Region I Medan.	0,304	0,027	Accepted
H <sub>5</sub>	Quality culture has a positive and significant effect on employee performance at the Education and Training Center of PUPR Region I Medan.	0,476	0,003	Accepted
H <sub>6</sub>	SMM planning has a positive and significant effect on performance through the Quality Culture of employees at the Education and Training Center of PUPR Region I Medan.	0,678	0,000	Accepted
H <sub>7</sub>	The SMM procedure has a positive and significant effect on performance through the Quality Culture of employees at the Education and Training Center of PUPR Region I Medan.	0,468	0,000	Accepted

Source: Primary data processing results, 2019

**DISCUSSION**

**SMM planning has a positive and significant effect on Quality Culture**

The test results provide empirical evidence that SMM Planning has a positive and significant effect on Quality Culture where it proves the hypothesis is accepted. This means that the better SMM Planning will improve the Quality Culture of employees at the PUPR Region I Medan Education and Training Center. The results of this study support the research results of Samuel and Zulkarnain (2011) which prove

that ISO quality management system planning has an effect on culture. The implication of the results of this research is that the SMM Planning at the PUPR Region I Medan Education and Training Center is good enough. This can be seen from the ISO certification planning can be done effectively through steps; identifying aspects of quality, then documenting, conducting quality training to employees and making standard procedures to be carried out by the agency. If the company implements these 4 steps, especially

conducting quality training for employees related to one of the nine factors of quality culture, namely quality training, the culture at the institution will gradually change towards a better direction, and therefore the quality culture at the agency is assessed will also increase.

### **The QMS procedure has a positive and significant effect on Quality Culture**

The test results provide empirical evidence that the QMS procedure has a positive and significant effect on Quality Culture where it proves the hypothesis is accepted. This means that the higher the employee SMM Procedure, the higher the Quality of Employee Culture in the Education and Training Center of PUPR Region I Medan. The results of this study support the research results of Semuel and Zulkarnain (2011) which prove that ISO quality management system procedures affect culture. Specifically, the research findings conclude that the SMM Procedure at the PUPR Region I Medan Education and Training Center can improve Quality Culture. The results of this study support the research conducted by (Hatane, 2011) showing that the application of the procedure has a significant effect on quality culture. The implication of the results of this study is that the QMS procedure for employees in the company is quite good. This can be seen from employees already having a high commitment to work, creativity in working quite well, employees can work well together. However, further improvements need to be made so that the QMS procedure is better by creating calm at work, employees are expected to focus on work. Workers are the main element in the organization and play a very important role. All elements of the organization will not function without being handled by workers. This arises because humanly, humans really want to be able to play a role in every environment, including the QMS Procedure. Someone works to want his work to have a value that affects the overall results. The

position of the value of one's work is a picture of the role of someone in showing the QMS procedure. Although there are some employees who do not have high QMS procedures in dealing with their work, but this can still be overcome because the organization's management always counseling employees who do not have a good QMS procedure by providing motivation, organizing recreation and providing bonuses and entertainment so that employees can be aroused to have a high QMS procedure.

### **Quality culture has a positive and not significant effect on performance**

The test results provide empirical evidence that Quality Culture has a positive and significant effect on performance where it proves the hypothesis is accepted. This means that Quality Culture has played an active role in improving employee performance at the Education and Training Center of PUPR Region I Medan. The results of this study support the results of research conducted by (Anton Hariyanto) indicating that quality culture is significant to employee performance. The implications of the results of this study indicate that the Culture of Employee Quality has not been able to significantly improve employee performance. This condition is caused by employees not understanding the organization's vision and mission as a whole. Institution Leaders should be able to emphasize the importance of a better quality work culture. Organizational culture is useful for handling the internal and external environment of the organization, so it needs to be instilled among members of the organization to be able to hold perceptions, think and feel their work correctly in order to create maximum performance. Support and commitment of top management to the success of quality, are the main factors determining the success of the implementation of quality success, where top management must behave, think and act about quality in all decisions. Top

management must have a quality policy statement that is related to company goals. Active participation and direct involvement of top management in conducting inspections and control of activities are indicators of the successful implementation of quality in the organization. An important factor that must also be owned by top management in order to support the improvement of quality implementation is the existence of leadership that supports the top management itself.

### **SMM Planning Has a Positive and Significant Effect on Performance**

The test results provide empirical evidence that SMM Planning has a positive and significant effect on performance where it proves the hypothesis is accepted. This means that the better the SMM Planning, the better the performance of employees in the PUPR Region I Education and Training Center in Medan. These findings indicate that the employee's performance is directly affected by the existing SMM Planning. From the results of the analysis, it is clear that the SMM Planning at the Regional Education and Training Center of PUPR Region I Medan has a positive and significant impact on the performance of its employees. So, if the management wants to improve performance, the section head has a big enough share in planning an effective and efficient work system so that employees can work well. Specifically, the research findings conclude that SMM Planning can improve performance. This finding is in line with the findings of Semuel and Zulkarnain (2011) which prove that ISO quality management system planning influences employee performance. Planning for ISO 9001 certification can be done effectively through steps; identifying aspects of quality, then documenting, conducting quality training to employees and making standard procedures to be carried out by the company. If the company applies the 4 steps above to the company, then the employee's performance is assessed to also increase.

### **The QMS procedure has a positive and significant effect on performance**

The test results provide empirical evidence that the QMS procedure has a positive and significant effect on performance where it proves the hypothesis is accepted. This means that the better the SMM Procedure, the better the performance of employees at the PUPR Region I Medan Education and Training Center. The results of this study are in line with Semuel and Zulkarnain (2011) who prove that ISO quality management system procedures affect employee performance.

Specifically, the research findings conclude that the QMS Procedure (X2) has a direct effect on employee performance. New procedures usually make employees have to change the way work has been done for years. Implementing procedures as a form of change is always not easy. To make employees change the way they work, or do something new, what must be done first is to instill awareness in employees about the importance of change and implement established quality procedures. There are 3 indicators in the application of ISO QMS procedures, namely periodic audits, following procedures and implementing corrective and preventive actions. If the company applies these 3 things well, it will significantly affect employee performance.

### **SMM Planning has a positive and significant effect on Performance through Quality Culture**

The results of hypothesis testing using path analysis show that SMM Planning can have a direct effect on performance and can also indirectly influence that of Quality Culture (as an intervening variable) on Performance. The magnitude of the direct effect is 0.527 while the magnitude of the indirect effect is 0.678. Therefore the value  $(P1 \times P2) > P1$  then Quality Culture functions as an intervening variable. The results of this study are in line with Susanty (2012) which shows that SMM Planning influences performance through

the Quality Culture of employees at PT. PLN (Persero) APD Semarang. The positive effect of indirect certification planning through quality culture on employee performance, indicates that ISO 9001 changes the orientation of the work culture of employees towards a quality culture that ultimately can increase employee performance. This is consistent with the opinion of some previous researchers who said that the application of ISO 9001 is very dependent on organizational culture (Cortada & Goetsch in Tjiptono & Anastasia, 2003). Other research also states that the ISO 9001 QMS is able to develop a quality culture and a quality culture that supports process improvement that ultimately increases employee performance. In addition, the results of this study can be the basis of statistical conclusions in the field that SMM Planning can affect performance better through the Quality Culture. This shows that Quality Culture can bridge the influence of SMM Planning on Performance. The better the Quality Culture is, the stronger the influence of SMM Planning on Performance.

### **The QMS procedure has a positive and significant effect on performance through a Quality Culture**

The results of hypothesis testing using path analysis show that the QMS procedure can directly influence performance and can also indirectly influence quality culture (as an intervening variable) on performance. The magnitude of the direct effect is 0.304 while the magnitude of the indirect effect is 0.465. Therefore the value ( $P1 \times P2 > P1$ ) then Quality Culture functions as an intervening variable. Employees who carry out the SMM Procedure well will be reflected in their behavior, such as hard working, willing to work together, work according to the directions and so on. With good employee QMS procedures that are reflected through high Quality Culture behavior as well, it will certainly create

good work efficiency and effectiveness so that it will produce good performance as well. The PUPR Region I Medan Education and Training Center of course expects its employees to implement even better QMS procedures in order to be able to contribute to the development of the organization, for the achievement of objectives.

### **CONCLUSIONS AND RECOMMENDATIONS**

Based on the results of this study it can be concluded as follows:

1. SMM Planning has a positive and significant effect on the Culture of Employee Quality at the Education and Training Center of PUPR Region I Medan
2. SMM Procedure has a positive and significant effect on the Culture of Employee Quality at the Education and Training Center of PUPR Region I Medan
3. Quality culture has a positive and significant effect on employee performance in Education and Training Center of PUPR Region I Medan
4. SMM planning has a positive and significant effect on the performance of employees at Education and Training Center of PUPR Region I Medan
5. SMM Procedures Have a Positive and Significant Impact on Employee Performance at Education and Training Center of PUPR Region I Medan
6. SMM planning has a positive and significant effect on performance through the Quality Culture of employees at Education and Training Center of PUPR Region I Medan
7. SMM procedures have a positive and significant effect on performance through the Quality Culture of employees at the Education and Training Center of PUPR Region I Medan

The suggestions of this research are as follows:



1. Institutional leaders should be able to continue to improve the quality culture in order to mediate the relationship between the application of the Quality Management System to better performance.
2. Employees should be able to improve the quality and quantity of work in order to achieve the expected work targets.
3. For further researchers, it should explore more various other variables that can affect performance such as training, motivation, discipline, job satisfaction and so forth.

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