

# Improve Customer Satisfaction through Implementation of Quality Management System ISO 9001:2008

Sasa Tantri Nur Afifah and Rasto Rasto

*Faculty of Economics and Business Education, Universitas Pendidikan Indonesia, Bandung, Indonesia*

*rasto@upi.edu, sasa.tantri.nur@student.upi.edu*

**Keywords:** quality management system, customer satisfaction, vocational high school.

**Abstract:** This research aimed to analyze the effect of implementation of ISO 9001: 2008 quality management system on customer satisfaction. The research method used explanatory survey. Data collection technique used questionnaire rating scale model. Respondents are teachers of Vocational High School in Bandung. Data were analyzed using simple regression. The results showed: (1) implementation of ISO 9001:2008 quality management system is in the effective category; (2) the level of customer satisfaction is in the satisfied category; and (3) implementation of ISO 9001:2008 quality management system has a positive effect on customer satisfaction.

## 1 INTRODUCTION

Customer satisfaction plays an important role in improving the quality of education, due to the importance of education, there is a correlation between education and economic growth (Husain in Hayan, 2010); (Owlia and Aspinwall, 1996). The education sector is one of the most important sectors of service. The education sector is now considered as important as other economic sectors (Kundi, et al., 2014).

Customer satisfaction can be obtained by providing excellent service and become important in creating sustainable gains in the competitive education market (Kotler in Ijaz, et al., 2011). It is recognized by schools that satisfied customers are the key to school success (Rukaria, 2014); (Argenti, 2000). The facts show that the level of customer satisfaction is still in the low category. There is an impromptu process in preparing the administrative preparation for the audit process so that it is not practically prepared from every activity carried out every day. This became one of the triggers of a low level of customer satisfaction. In order to survive in competitive competition in education, schools should reduce customer dissatisfaction by improving service quality and productivity (Khan and Afzaal, 2014); (Anderson, et al., 1997).

Customer satisfaction is very important for improving the quality of education (Chen, et al.,

2006); (Joseph and Joseph, 1997), it is necessary efforts to improve customer satisfaction. To improve the quality of the education sector requires quality school management (Suyatno, 2010). Good school management is a management that focuses on improving quality issues and international standards such as ISO 9001: 2008 (Noviana and Akhyar 2008). Organizations implementing ISO 9001 expect these standards to help them do things better and deliver real benefits, one of which is increased customer satisfaction (Dick, 2013). Based on the problem of research problem is "is there any influence of implementation of quality management system of ISO 9001:2008 to customer's sincerity?". Thus the purpose of this study is to analyze the effect of implementation of ISO 9001: 2008 quality management system to customer satisfaction.

## 2 CURTOMER SATISFACTION

The word satisfaction comes from the Latin word "satis" which means quite good, adequate and "facio" (do or make) so that it can be interpreted as "effort fulfillment something" or "make something adequate" (Tjiptono and Gregorius, 2011). As for Richard Oliver, satisfaction is the response of customers to the fulfillment of their needs (Wijaya, 2011); (Yang and Fang, 2004); (Au et al., 2008). Satisfaction is customer evaluation (Bitner in Akbar

and Parvez, 2009) so that a person's feelings of pleasure or disappointment (Kotler and Kelvin 2009) compare the expectation with feelings before customers consume products (Parasuraman in Dib and Alnazer, 2013).

Customer satisfaction as a conscious evaluation or assessment of product performance is relatively good or not, and whether the product matches its purpose or use (Tjiptono and Gregorius, 2011). In the customer satisfaction literature review conducted by Giese and Cote, three main components of understanding customer satisfaction are: (1) customer satisfaction is a response (emotional or cognitive); (2) the response involves a particular focus (expectation, product, consumption experience, and so on); (3) response occurs at any given time. After consumption, after product selection in the form of goods or services, based on accumulated experience, etc.). In short, customer satisfaction consists of three components: a response to a particular focus that is determined at a given time (Tjiptono and Gregorius, 2011); (Giese and Cote, 2000).

To create customer satisfaction must be able to meet the needs of the important customers called "The Big Eight Factors" which are generally divided into the following three categories (Hannah and Karp in Trisno Musanto, 2004):

- Factors related to the product
  - a. Product quality, which is the quality of all the components that make up the product. So the product has added value.
  - b. The relationship between the values to the price is the relationship between the price and the value of the product determined by the difference between the value received by the customer and the price paid by the customer for a product produced by the business entity.
  - c. Product form, is the physical components of a product yield benefits
  - d. Reliability, is the ability of an organization to produce products in accordance with what is promised by the organization.
- Factors related to service
  - a. Warranty, is a guarantee offered by the school to make repairs to defective products after use of the product.
  - b. Response and problem solving, is the attitude of the school in response to

complaints and problems faced by customers.

- Factors related to the purchase:
  - a. Employee experience, all customer relationships in terms of communication.
  - b. Ease and comfort, is all the ease and convenience provided by the school products produced.

Indicators for measuring customer satisfaction, namely (Parasuraman in Tjiptono and Gregorius, 2011), (Fornel;1992): (1) Reliability, relating to the school's ability to provide accurate service from the first time without making any mistakes and delivering its services within the agreed time; (2) Responsiveness, regarding the willingness and ability of the school to assist customers and respond to their requests, and to inform when services will be provided and then provide services quickly; (3) Assurance, which is the behavior of the school is able to grow customer confidence in the school, and the school can create a sense of security for its customers. Collateral also means that the school is always nice, and has the necessary skills to handle every customer's question or problem (Blight, et al., 1999), (4) Empathy, means that the school understands the problems of its customers and acts in the interests of the customer, and gives personal attention to the customers; and (5) Tangible, regarding the appeal of physical facilities, equipment used in schools, and appearance.

### 3 IMPLEMENTATION OF QUALITY MANAGEMENT SYSTEM ISO 9001:2008

Quality is an absolute concept (Sallis, 2010), in the form of product features, (Juran and Godfrey, 1998), direct characteristics. The quality management system is a set of documented procedures and standard practices to ensure systems aimed at ensuring conformity of a process and products (goods and / or services) to a particular need or requirement (Gaspersz, 2002).

Here is the process model of quality management system ISO 9001:2008 on Figure 1. ISO 9001 model.

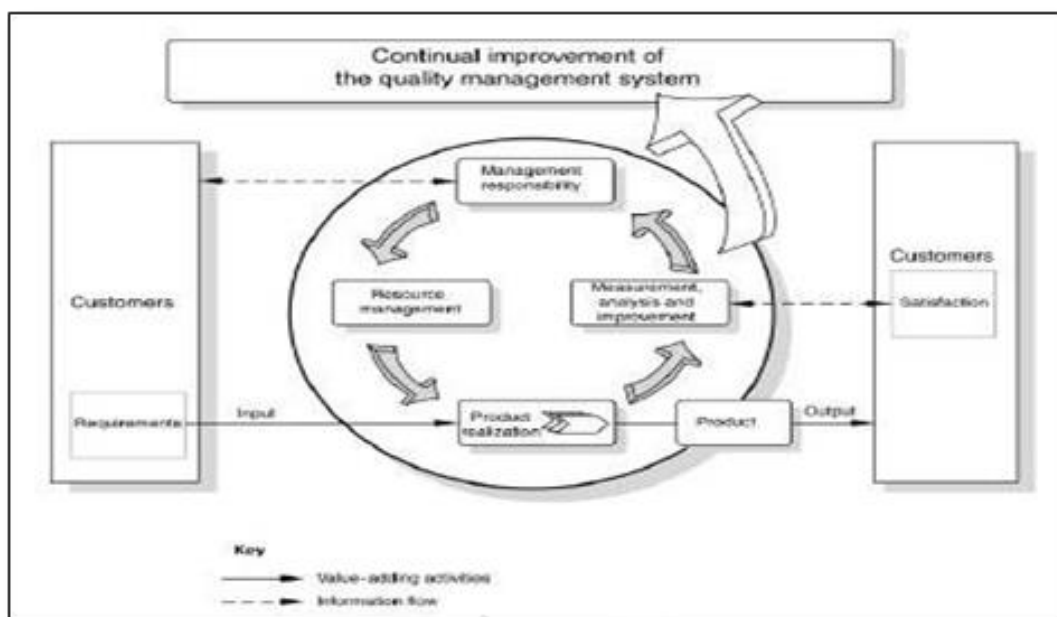


Figure 1: ISO 9001 model.

ISO 9001:2008 is not a product standard, because ISO 9001:2008 is only a standard quality management system. Based on figure 1 it can be described as follows (Santosa, 2013): (1) Customer requirements (system development), the customer is the person who gives input on what to do by the school; (2) Management responsibilities, indicating that there is a management commitment to the quality of the resulting product; (3) Resource management, an important part in the implementation is to determine who will do what, the person assigned to perform activities related to quality and have the ability; (4) Realization of educational services, including the manufacture of products or services; (5) Measurement, analysis and improvement: (a) Measurement, measurement data is very important to make decisions based on reality; (b) Analysis, decisions should be based on measurable results or accurately collected information; (c) Improvements, needs of corrective actions will arise if there is a discrepancy that can come from within and outside.

The organization shall ensure that the quality management system is developed, documented, implemented and improved on an ongoing basis to meet the requirements of this international standard. ISO 9001:2008 requirements are as follows (Gaspersz, 2002): (1) Identify the process or activity required in the quality management system and ensure its application to all functions in the organization; (2) Determining the order and interaction relationships of those processes; (3)

Establish the necessary criteria and methods, so as to ensure the operation and control are effective; (4) Ensure the availability of resources and information necessary to support the operation and monitoring of such processes; (5) Monitor, measure, and analyze such processes, and (6) Carry out the necessary actions to achieve the results it has planned and to continuously process improvement efforts.

According to Vincent Gaspersz the benefits of ISO 9001: 2008 certificate are as follows (Gaspersz, 2012), (1) Improve customer trust and satisfaction; (2) Improving the company's quality image and competitiveness in entering the global market (3) Improving quality and productivity through cooperation, problem solving and good communication, as well as consistent quality control; (4) Increase quality awareness within the company; (5) Provide systematic training to all company staff through well-defined work procedures and instructions.

International Workshop Agreement (IWA) 2 Quality management systems - Guidelines for the application of ISO 9001:2000 in education to be an indicator to measure the effectiveness of the implementation of ISO 9001:2008 Quality Management System, as follows (ISO, 2007), (Caraman, et al., 2008); (El, et al., 2013), (Simon and Honore, 2012); (Simon, et al., 2012) : (1) System Development i.e. processes related to organizational goals should be included during and after the provision of educational services: among others:

educational design, curriculum development, delivery of education, and assessment of learning; (2) Management's responsibilities - top management identifies educational services that meet customer needs and expectations. Top management should identify and demonstrate its commitment to continuous improvement of educational services and quality management systems; (3) Resource management is the provision of educational services where the organization should also ensure the availability of resources for the effective functioning of the quality management system, as well as providing resources to improve customer satisfaction by meeting customer expectations; (4) Educational Service Realization The educational organization should plan the various stages of educational services, including design and development of teaching methods, design, development, review and updating of study plans and curricula, assessment of learning and follow-up, support of service activities, resource allocation, evaluation criteria, and improvement procedures To achieve the desired result and: (5) The analysis, measurement and enhancement of the educational organization should determine the customer's perception of the extent to which the service education meets its expectations.

Based on the literature review described above, it can be described the theoretical framework as follows:



Figure 2: Theoretical framework.

Note: H\*= There is influence of implementation of quality management system ISO 9001:2008 on customer satisfaction.

## 4 RESEARCH METHODOLOGY

This research used explanatory survey method. This method is considered appropriate for this study to gather factual information through questionnaires. Respondents are 174 teachers of state vocational high school in Bandung, West Java, Indonesia.

Descriptive statistics used the average score, is used to obtain a description of the level of respondents' perception about of implementation quality management system ISO 9001:2008 and customer satisfaction. Inferential statistics used regression analysis to test the hypothesis.

## 5 RESULTS AND DISCUSSION

### 5.1 Customer Satisfaction

The average score of customer satisfaction is 3,65. It showed the perception of respondents that customer satisfaction is satisfied. Table 1 Customer Satisfaction presents the average scores of each indicator as the measure of teacher job satisfaction.

Table 1: Customer satisfaction.

Indicators	Average	Category
Reliability	3,70	Satisfied
Responsiveness	3,79	Satisfied
Assurance	3,64	Satisfied
Emphaty	3,72	Satisfied
Tangible	3,43	Satisfied
<b>Average</b>	<b>3,65</b>	<b>Satisfied</b>

The highest score is on the indicator of responsiveness. These results show that the level of responsiveness in satisfying the customer has been done optimally. Tangible indicators have the lowest average score. This result implies that the availability of facilities and infrastructure in schools is still not available in every teaching and learning process.

### 5.2 Implementation of Quality Management System

The average score of implementation of quality management system ISO 9001:2008 is 3,49. It showed the perception of respondents that implementation of quality management system ISO 9001:2008 is effective. Table 2 implementation of quality management system ISO 9001:2008 presents the average scores of each indicator as the measure of job involvement.

Table 2: Implementation of quality management system.

Indicators	Average	Category
System Development	3,64	Effective
Management Responsibility	3,38	Effective
Resource Management	3,49	Effective
Realization of Education Services	3,58	Effective
Measurement, Improvement in analysis and educational organization	3,36	Effective
<b>Average</b>	<b>3,49</b>	<b>Effective</b>

The highest score is on the indicator of educational service realization. This is demonstrated by the quality management system ISO 9001:2008 has been implemented effectively with the development of teaching methods, review and update the study plans and curriculum, as well as learning process has been done effectively. Measurement indicators, improvements in the analysis of educational organizations have the lowest average score. These results show the ISO 9001:2008 quality management system in the process of determining the customer's perception of the extent to which the education service meets its expectations through the audit process has not been effectively implemented.

### 5.3 Influence of Implementation of Quality Management System ISO 9001:2008 on Customer Satisfaction

The regression equation showing the implementation of ISO 9001: 2008 quality management system to customer satisfaction is  $\hat{Y} = 38,918 + 0,222 X$ . Positive sign (+) shows the relationship between variables running one way meaning the more effective implementation of ISO 9001:2008 quality management system, the higher Level of customer satisfaction. Value of coefficient of determination (R<sup>2</sup>) variable Implementation of SMM ISO 9001: 2008 to Customer Satisfaction is equal to  $0,169 \times 100\% = 16,90\%$ . So it can be concluded that the determination of the variable Implementation of SMM ISO 9001:2008 members explain the variable customer satisfaction 16.90%. This figure indicates that the variable of Customer Satisfaction is explained by another factor of 83.10%.

## 6 CONCLUSIONS

Customer satisfaction has an important role to improve the quality of education, because with the customer satisfaction of the school will be able to continue to increase customer satisfaction. Customer satisfaction and process improvement have been found to be the main reason for ISO 9001 implementation by most participating companies (Customer satisfaction in question includes reliability, responsiveness, Assurance, empathy and tangible). Implementation of quality management system become solution to increase customer satisfaction, thus implementation of quality

management system of ISO 9001:2008 give positive impact to increase of customer satisfaction.

## REFERENCES

- Akbar, M. M., Parvez, N. 2009. Impact of Service Quality, Trust, and Customer Satisfaction on Customer Loyalty. *ABAC Journal*, 29(1), 24–38.
- Anderson, E. W., Fornell, C., Rust, R. T. 1997. Customer satisfaction, productivity, and profitability: Differences between goods and services. *Marketing science*, 16(2), 129-145.
- Argenti, P. 2000. Branding B-schools: Reputation management for MBA programs. *Corporate Reputation Review*, 3(2), 171-178.
- Au, N., Ngai, E. W., Cheng, T. E. 2008. Extending the understanding of end user information systems satisfaction formation: An equitable needs fulfillment model approach. *MIS quarterly*, 43-66.
- Blight, D., Davis, D., Olsen, A. 1999. The internationalisation of higher education. *Higher education through open and distance learning*, 15-31.
- Caraman, I., Lazar, G., Bucuroiu, R., Lungu, O., Stamate, M. 2008. How IWA 2 helps to implement a quality management system in Bacau University. *International Journal for Quality research*, UDK-005.63, 37.
- Chen, S. H., Yang, C. C., Shiau, J. Y., Wang, H. H. 2006. The development of an employee satisfaction model for higher education. *the TQM Magazine*, 18(5), 484-500.
- Dib, H., Alnazer, M. 2013. The Impact of Service Quality on Student Satisfaction and Behavioral Consequences in Higher Education Services. *TI Journals International Journal of Economy, Management and Social Sciences*, 2(June), 285–290.
- Dick, G. 2013. Usage of Quality Tools, 7595(272), 1–16.
- El Abbadi, L., Bouayad, A., Lamrini, M. 2013. ISO 9001 and the Field of Higher Education: Proposal for an Update of the IWA 2 Guidelines. *Note From the Editor*, 14.
- Fornell, C. 1992. A national customer satisfaction barometer: The Swedish experience. *the Journal of Marketing*, 6-21.
- Gaspersz, V. 2002. *ISO 9001:2000 and continual quality improvement* (2nd ed.). Jakarta: PT. Gramedia Pustaka Utama.
- Giese, J. L., Cote, J. A. 2000. Defining consumer satisfaction. *Academy of marketing science review*, 2000, 1.
- Hayan, M. A. 2010. The impact of service quality on students' satisfaction in higher education Institutes of Punjab. *Journal of Management Research*, 2(2), 1–11.
- Ijaz, a, Irfan, S. M., Shahbaz, S., Awan, M., Sabir, M. 2011. An Empirical Model of student satisfaction: Case of Pakistani Public Sector Business Schools. *Journal Pf Quality and Technology Management*, VII(Ii), 91–116.
- ISO. 2007. International Workshop Agreement IWA 2 Quality management systems — Guidelines for the application of, 2007.

- Joseph, M., Joseph, B. 1997. Service quality in education: a student perspective. *Quality Assurance in education*, 5(1), 15-21.
- Juran, J. M., Godfrey, A. B. 1998. *Juran's Quality Control Handbook*. McGrawHill.
- Khan, S., Afzaal, N. 2014. A Case Study : Implementation of Quality Management System ISO 9001 : 2008 in Education Institute , Karachi, 19(1), 84-87.
- Kotler, P., Kevin Lane, K. 2009. *Manajemen Pemasaran*. Jakarta: Erlangga.
- Kundi, G. M., Khan, M. S., Scholer, M. P., Qureshi, Q. A., Khan, Y., Akhtar, R. 2014. Impact of Service Quality on Customer Satisfaction in Higher Education Institutions. *Industrial Engineering Letters*, 4(3), 1-6.
- Noviana Irnawati, M. Akhyar, R. 2008. Implementasi Sistem Manajemen Mutu Iso 9001:2008 Di Smk PGRI 1 Surakarta. *Jurusan Pendidikan Teknik Kejuruan Fakultas Keguruan Dan Ilmu Pendidikan Universitas Sebelas Maret*, (v), 1-15.
- Owlia, M. S., Elaine M. Aspinwall. "A framework for the dimensions of quality in higher education." *Quality Assurance in Education* 4.2 (1996): 12-20.
- Rukaria, K. 2014. ISO Quality Management System Certification And Customer Satisfaction In Kenyan Aviation Industry By Solomon Kirimi Rukaria A Research Project Presented In Partial Fulfillment Of The Award Of Masters Degree In Business Administration , School Of Business , (October).
- Sallis, J. F., Jacqueline Kerr, Jordan A. Carlson, Gregory J. Norman, Brian E. Saelens, Nefertiti Durant, Barbara E. 2010. Ainsworth, Evaluating A Brief Self-Report Measure Of Neighborhood Environments For Physical Activity Research And Surveillance: Physical Activity Neighborhood Environment Scale (Panes), *Journal Of Physical Activity And Health*, 7(4).
- Santosa , Widhiawati, dan D. 2013. Penerapan Standar Sistem Manajemen Mutu ( ISO ) 9001 : 2008 Pada Kontraktor PT . Tunas Jaya Sanur, 2(1), 1-6.
- Simon, A., Honore Petnji Yaya, L. 2012. Improving innovation and customer satisfaction through systems integration. *Industrial Management and Data Systems*, 112(7), 1026-1043.
- Simon, A., Karapetrovic, S., Casadesus, M. 2012. Evolution of integrated management systems in Spanish firms. *Journal of Cleaner Production*, 23(1), 8-19.
- Suyatno, T. 2010. Faktor-faktor Penentu Kualitas Pendidikan Sekolah Menengah Umum di Jakarta.
- Tjiptono, F., Gregorius, C. 2011. *Service, Quality and Satisfaction*. Yogyakarta: CV ANDI OFFSET.
- Trisno Musanto. 2004. Faktor-Faktor Kepuasan Pelanggan Dan Loyalitas Pelanggan: Studi Kasus Pada CV. Sarana Media Advertising Surabaya. *Jurnal Manajemen Dan Kewirausahaan*, 6, pp.123-136.
- Wijaya, T. 2011. *Manajemen Kualitas Jasa*. Jakarta: PT. Indeks.
- Yang, Z., Fang, X. 2004. Online service quality dimensions and their relationships with satisfaction: A content analysis of customer reviews of securities brokerage services. *International Journal of Service Industry Management*, 15(3), 302-326.