

## **EVALUATING THE IMPLEMENTATION OF ISO 9001:2008 STANDARD QUALITY MANAGEMENT SYSTEM TO THE RESULT OF DUAL SYSTEM EDUCATION PROGRAM**

### ***EVALUASI PENERAPAN SISTEM MANAJEMEN MUTU BERSTANDAR ISO 9001:2008 TERHADAP HASIL PELAKSANAAN PROGRAM PENDIDIKAN SISTEM GANDA***

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#### **Abstract**

This study has four objectives: first, it aims to describe the evaluation context, input, process, and product of DSE program with implementing ISO 9001:2008 standard quality management system. Second, describes DSE implementation that contains about DSE implementation effectiveness. Third, find out the level of customer satisfaction, namely students also *DU/DI*. Fourth, describes performance improvement of *Pokja Prakerin*. Type of this research is quantitative descriptive. Data collection methods used questionnaires, documentation, interviews and triangulation. Data analysis method used is descriptive quantitative with a percentage. Based on the research results, it is known that: first, implementation of CIPP evaluation i.e. context, input, process, and product by implementing ISO 9001:2008 is quite good. Second, implementation of all DSE components in General in accordance with the DSE provisions organizing, effectiveness of DSE implementation reviewed from all of its components is effective category with the percentage of 76,2%. Third, the level of customer satisfaction at SMK Negeri 1 Bawang was in the satisfied category at 75.1% (students) also 69.4% (*DU/DI*). Fourth, implementation of ISO 9001:2008 on DSE program at SMK Negeri 1 Bawang have running well.

*Keywords:* Evaluation, Quality Management System, ISO Standards, DSE, Customer Satisfaction

#### **Abstrak**

*Penelitian ini mempunyai empat tujuan yaitu Pertama, bertujuan untuk mendeskripsikan evaluasi CIPP program PSG dengan diterapkannya sistem manajemen mutu berstandar ISO 9001:2008. Kedua, mendeskripsikan pelaksanaan PSG yang memuat tingkat efektivitas pelaksanaan PSG. Ketiga, mengetahui tingkat kepuasan pelanggan yaitu siswa dan DU/DI. Keempat, mendeskripsikan perbaikan kinerja Pokja Prakerin. Jenis penelitian ini adalah penelitian deskriptif kuantitatif. Metode pengumpulan data yang digunakan adalah dokumentasi, angket, wawancara, dan triangulasi. Metode analisis data yang digunakan adalah deskriptif kuantitatif dengan persentase. Berdasarkan hasil penelitian diketahui yaitu Pertama, pelaksanaan evaluasi CIPP dengan diterapkannya ISO 9001:2008 cukup baik. Kedua, pelaksanaan seluruh komponen PSG pada umumnya sesuai dengan ketentuan penyelenggaraan PSG serta efektivitas pelaksanaan PSG ditinjau dari keterlaksanaan seluruh komponennya adalah efektif dengan persentase keterlaksanaan 76,2%. Ketiga, tingkat kepuasan pelanggan SMK Negeri 1 Bawang dikategorikan Puas, dari siswa dengan persentase 75,1% dan DU/DI dengan persentase 69,4%. Keempat, pelaksanaan ISO 9001:2008 pada program PSG di SMK Negeri 1 Bawang telah berjalan baik.*

*Kata Kunci:* Evaluasi, Sistem Manajemen Mutu, Standar ISO, PSG, Kepuasan Pelanggan

## INTRODUCTION

The globalization era causes competition in various aspects such as economy, politics, culture, social, and so on. It is indicated by the opening of ASEAN Economic Community in 2015 which makes the competition become strict. It is not only inside the country but also outside it or some other countries. This condition forces people to face some challenges. Therefore, the best thing to do is to actualize a better life through the improvement of quality and to create qualified human resources.

One of the efforts to make qualified human resources is through education. Education has a major role in the process of improve human resources. It is explained in law number 20 in 2003 chapter 2, which states that National Education System has functions to develop ability and build character also to make the dignity of country civilization. Those are intended to educate nation life, aimed to develop learners' potential so that they can be faithful and pious to God, can get knowledge,creativity,become independent, and become democratic and responsible citizens. Education is expected to be able to improve nation's life quality, educate human who has knowledge, skill, and good character. Therefore, government strategy related to national education development is needed to actualize those ideals.

National Education Department or as known as *Depdiknas* (2001:5) elaborates that there are three core strategies of national education development and those are: (1) distributing chances for education, (2) improving educational management quality, and (3) improving the educational relevancy and quality. Development of the education sector-related research is improvement quality of educational management and improving the relevance and educational quality.

Education microsite was organized as the process of civilizing and empowering learners (Law of Republic of Indonesia number 20 in 2003 regarding national education system Chapter III, section 4, verse 3). Education can be commonly implied as planned and conscious business to realize learning process so learners are actively able to develop their potentials. In the same time, national education system must be able to interlace the quality improvement and its relevance also educational management efficiency in accordance with recent demands. In that case, planned, directed, and continuous renewal of education is required.

One of the educational renewals which focus on quality improvement is the standardization of quality management system. By implementing this quality management system, the quality of educational institution can be attained with

the main goal is customer satisfaction. In addition, it is expected that there is a process of continuous refinement on school performance so that the quality of education and management also school output as an educational institution always undergoes a quality improvement from time to time.

In education world, the standard which is frequently used is ISO 9001:2008. The philosophy of quality management views education as service and educational institution business as a service industry and not as a process of production. Consequently, quality management perceives that educational product as a service industry which is a service given by educational management and all educational institution personnel for every customer in line with certain quality standard. Moreover, the organization will support the quality suitable with ISO 9001:2008 standard specifications which have been planned well. As it has been elaborated by Gaspersz (2006:17) that, "ISO 9001:2000 management system implementation can increase the trust and satisfaction from customer through quality guarantee which is systematically organized. The process of documenting in ISO 9001:2000 shows that policy, procedure, and instruction related to the quality have been planned well.

The results of interviews conducted in SMK Negeri 1 Bawang, unknown that the student satisfaction rates for some students

in Accounting Proficiency to Dual System Education program (as know as *Prakerin*) in organizing the educational program "Link" and "Match" in an effort to prepare learners to be ready to work at partner institutions (as know as *DU/DI*), has not shown satisfactory results. It is caused due to the provision of material in the form of theory and requirements related to *prakerin*, for some students, is not really clear, also work placement of training program by industrial and business worlds for accounting proficiency program is not suitable with skill acquired.

It needs to be explained that the education development strategy initiated by the Government with regard to the relevance of education in Vocational High schools (adapted to the context of the research) is conducting a Dual System Education program. Vocational high school is educational institution which becomes the bridge for educational world connected with working world directly. Vocational school set an effort to provide stimulation in the form of learning experience and interaction with outside world to develop learners' potency through implementing this dual system education program.

Other interviews indicate that *DU/DI* satisfaction rates for some *DU/DI* as a partner institution to Dual System Education program organized by school, has not shown satisfactory results. It can happen because

the human resource management at school, in this case for some teacher or advisor who had responsibility to guide, direct, and give education to students were not there when the time of dropping to students in *DU/DI* started. Some teacher or advisors did not coordinate with our party to discuss about the curriculum, training, experience giving for them though the educator came every one month. Consequently, students did not know what to do and they just followed instruction from our worker. It made learners could not learn well.

Furthermore, based on the interview about the applicability of standardization of quality management system is found the problem that happened during the implementation of ISO 9001:2008 quality management standards is that all components of its educators must conduct the educational program with documented system, which is in fact, some teachers from particular programs did not do the documented quality management system because of administration task for teacher is increasing in order to fulfill the curriculum demands. There is a conflict between plans which have been determined and the implementation in field that refers to continual improvement which sues every component of educators to conduct documented system activity. One of ISO requirements are documented system activity program.

According to that, it is needed to know how far the objective achievement level on the implementation role of ISO 9001:2008 standard Quality Management System (QMS) on working instruction / work mechanism particularly in the implementation of Dual System Education (DSE) which emphasizes the implementation of *prakerin* consists of: conformance of ISO 9001:2008 standard Quality Management System on Dual System Education with school quality standard, Dual System Education implementation, customer satisfaction level after the program ends and the attempt for Dual System Education program continual improvement through the evaluation activities.

From those explanation, researcher is interested in conducting research with the title of "Evaluating the Implementation of ISO 9001:2008 Standard Quality Management System to The Result of Dual System Education Program in Accounting Proficiency at SMK Negeri 1 Bawang".

## **RESEARCH METHODS**

### **Research Design**

This research is included as evaluative research. Evaluation method which is used in this research is method developed by Stufflebeam using Context, Input, Process, Product (CIPP) approach. The evaluation criteria which will be

revealed is how the context which is implementation of its policy, input quality which is policy performer, process quality which is decision making through operational plan with the addition of dual system education component filling, and product which is the effect of institution performance on customer satisfaction through continuous improvement. This research is quantitative descriptive. Proposed by Sugiyono (2012:38) which can be used together to identify similar object but has different goals. This research combines between descriptive things and quantitative things, so the researcher can carry out data credibility test with various data collecting techniques and various data sources (Sugiyono, 2012:330).

### Research Setting

The research was conducted at SMK Negeri 1 Bawang located at Pucang Stree, 132, Banjarnegara 53471. This research was conducted on 1<sup>st</sup> February up to 8<sup>th</sup> April 2016

### Subject and Object

The subject in this research were the principal, school committee, quality management representative, vice principal of curriculum, head of *Prakerin* work program, the representative of partner institution, and eleventh grade students of accounting program in SMK Negeri 1

Bawang. Then, the object in this research is quality management in *prakerin* as the media of dual system education program implementation.

### Research Procedures

Below is the research activity design.

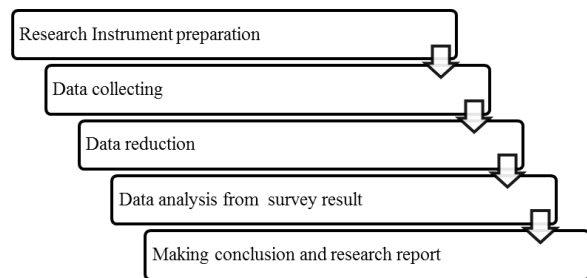


Figure 1. Research Procedure

Sources: Sugiyono (2012)

There are some implementation procedures as follows:

- a. Research instrument preparation, in this stage, researcher prepares tools or research instruments which are going to be used to collect the data, such as: close-ended questionnaire and instrument guide. Both instruments are used when the data collection processes in accordance with the conditions in the field.
- b. Data collecting, in this stage, researcher takes or collects the data through close-ended questionnaire, in-depth interview, or document, and also observation of things related to evaluation of ISO 9001:2008 standard Quality Management System implementation to the result of

- Dual System Education implementation in SMK Negeri 1 Bawang.
- c. Data reduction, in this stage, researcher summarizes and chooses the points, and focuses on important things, and omits unnecessary things from data collection.
  - d. Analysis, in this phase, research conducts validity and reliability test of blueprints related to close-ended questionnaire and interview instrument regarding the implementation of ISO 9001:2008 standard Quality Management System to the accomplishment result of DSE which each instrument has its indicator. After that, when the process of data analysis from close-ended questionnaire, interview, documentation, and observation occurs, the reduction is done with drawing conclusion based on the facts of final stage.
  - e. Drawing conclusion and making research report, in this phase, researcher draws conclusion from data analysis result continued by research report making.

### Data Collection Techniques

- a. Data
  - 1) Close-ended Questionnaire Instrument

This questionnaire is divided into three. First, it is about the program implementation for respondents, principal, vice principal of curriculum, the head of *prakerin*

work program, school committee, and partner institution. Second, it is about the measurement of internal customer satisfaction. It is for eleventh grade students of accounting proficiency. Third, it is about the measurement of external customer satisfaction. In this case, it is for industrial and business worlds as partner institution. Each questionnaire is presented in table (4), (5), and table (6).

Data collected from questionnaire in table (4) is data about the implementation of Dual System Education in industrial and business worlds of accounting proficiency at SMK Negeri 1 Bawang with the implementation of ISO 9001:2008 standard Quality Management System. In this research, the evaluation component measured is the evaluation on input and process. The blueprints are based on the accomplishment of DSE components from *Dikmenjur* (1997:5) about monitoring and evaluating DSE with process approach modification suggested by Vincent Gasperzs (2008: 285) without reducing the referred substance. Those aspects, then, are processed into some question items.

DSE components referred consist of: training and education program (as known as *diklat*), human resources (as known as *SDM*), educational facilities, educational management, students, costs, and partner institution. Process approach referred comprises: internal and external customers, management responsibility, and resource management, product actualization, and measurement, analysis, also improvement. But, for product and measurement realization aspects, analysis, and improvement are not included into points. These will be discussed when the conclusion from the collected data has been made.

COMPONENT		ASPECT	QUESTION
INPUT	PROCESS		
Educational training	-	DSE curriculum	1,2,3,4,5
		Graduate component	6,7,8,9,10
Company as PI	-	Company requirement as PI of DSE	11,12
-	Educational management	Implementation time	1,2,3,4
		Teacher and instructor	10
		Monitoring and evaluation	11,12,13,14
-	Student	Student readiness	8,9
Costs	-	Student placement in PI	5,6,7
		Operational cost of DSE	15,16,17,18
-	-	Resources of its expense	19, 20
-	Educational training	Programs in SMK and PI	1,2,3,4
Manpower	-	Teacher	6,7,8
		School committee	17
Educational facility	-	Tools	12,15
		Material	13,14
-	Educational management	Teacher and instructor	5,9,10
		Learning in SMK and PI	11
		Graduate marketing	16,18,19,21
Manpower	-	School committee	1,2,3,4
Educational facility	-	Tools	12
		Material	13
-	Educational management	Certification of competence test	5,6,7,8,9,10, 11
Costs	-	DSE operational cost	14
-	Educational training	Programs in SMK and PI	16
Manpower	-	Instructor	2,3,4,5,6
Educational facility	-	Tools	10,13
		Material	11,12
-	Educational management	Teacher and instructor	16,19,20
		Learning process in both parties	21,22,23
-	Student	Student readiness	14,15
		Student journal	17,18
Cost	-	Operational cost of DSE	24
		Resources of DSE cost	25
Company as PI of DSE	-	Company requirement as PI of DSE	1,9,30
		Company existence as PI of DSE	26,27,28,29, 31,32

Figure 2. Blueprint of Implementation of Quality Management System on DSE (Components of Input and Process Evaluation)

Then, customer satisfaction blueprint is divided into 5 aspects referred to Parasuraman, Zeithaml, dan Berry (in Lupiyoadi, 2009: 52) suggestions. Those aspects are tangible evidence, reliability, responsiveness, assurance, and empathy. From those aspects, it can be elaborated into some indicators.

Table 1. Blueprint of Student's Satisfaction in DSE (Components of Evaluation)

ASPECT	INDICATORS	QUESTIONS
Tangible	a. Modern facilities	1,2
	b. Fully equipped facilities	3,4*,5,6,7*,8*
	c. Staffs who have mastered their area	9,10*,11
	d. Staffs who appear to have competence, respect, and dedication	12,13,14,15
Reliability	a. Quick service process	16,17,18,19
	b. Indiscriminating service	20,21
	c. Trusted service to customer	22,23,24,25,26*,27*,28,29*,30*,31
Responsiveness	a. Satisfying service	32,33
	b. Competent service	34,35*,36
	c. Creating positive response	37
Assurance	a. Showing friendly and decent attitude	38,39*,40
	b. Security and satisfaction guarantee	41,42,43*
	c. Satisfying <i>prakerin</i> service	44,45,46
Emph	a. Sincerity	47,48,49

aty service  
 b. Caring and empathy to costumer which needs *prakerin* service.

Table 2. Blueprint of Partner Institution's Satisfaction in DSE (Components of Evaluation)

ASPECT	INDICATORS	QUESTIONS
Tangible	a. Recognizing the tools or equipments used	1,2
	b. Mastering technology to ease works	3,4*,5
	c. Learners who master their area	6,7,8
Reliability	a. Quick service process	12,13,14,15,16
	b. Indiscriminating service	17*
Responsive	a. gratifying service	18,19,20*,21,22,23*
	d. Learners who appear to have competence, respect, and dedication	9,10,11*



	b. Competent service	25,26,27*, 28
	c. Creating positive response	29
Assurance	a. Friendly and decent attitude	30,31,32*, 33
	b. Security and satisfaction guarantee	34,35,36*
	c. Satisfying service	37,38,39
Empathy	a. Sincere service	40*,41
	b. Caring and empathy to customer which needs service	42

Determination of the scores given to measure program implementation effectiveness and customer satisfaction using Likert Scale modified, as follows:

- a) Score 5 if Very Effective and Very Satisfied
  - b) Score 4 if Effective and Satisfied
  - c) Score 3 if Quite Effective and Quite Satisfied
  - d) Score 2 if Ineffective and Dissatisfied
  - e) Score 1 if Very Ineffective and Very Dissatisfied
- b. Data Analysis Techniques

According Sugiyono (2012:148), interview (descriptive)

analysis is done when the data collecting process happens. The data analysis process is conducted with respondent answer reduction and categorized in the instrument which has been made.

While, close-ended questionnaire analysis is done after the questionnaire is gathered then analyzed descriptively and quantitatively with percentage. After that, the next step is to determine the effective contribution from organization of each DSE component (Nk DSE) and then calculated based on this formula:

- 1) Effectiveness contribution test for each component of DSE

With formula:

$$Nk Cn = \frac{\sum VIn + \sum In + \sum QEn + \sum En + \sum VEn}{\sum Max Score} \times 100\%$$

$$\sum Max score = \sum N \times 5$$

Explanation:

$\sum N$  : The total of all statement items

$\sum VIn$  : Total of very-ineffective score for each component

$\sum In$  : Total of ineffective score for each component

$\sum QEn$  : Total of quite-effective score for each component

$\sum En$  : Total of effective score for each component

$\sum VEn$  : Total of very-effective score for each component

(Dikmenjur, 1997: 7)

2) Effectiveness test of Dual System Education implementation

With formula:

$$Nk_{DSE} = \frac{\sum VI + \sum I + \sum QE + \sum E + \sum VE}{\sum Max\ Score} \times 100\%$$

$$\sum Max\ Score = \sum N \times 5$$

Explanation:

$\sum N$  : Total of all statements

$\sum VI$  : Total of very-ineffective score

$\sum I$  : Total of ineffective score

$\sum QE$  : Total of quite-effective score

$\sum E$  : Total of effective score

$\sum VE$  : Total of very-effective score

(Dikmenjur, 1997: 7)

3) Effectiveness test for customer satisfaction fulfillment

With formula:

$$Nk_{Cs} = \frac{\sum VIS + \sum IS + \sum QS + \sum S + \sum VS}{\sum Max\ Score} \times 100\%$$

$$\sum Max\ Score = \sum p \times 5$$

Explanation:

$\sum Cs$  : Total of the statements

$\sum VDS$  : Total of very-dissatisfied score for each component

$\sum DS$  : Total of dissatisfied score for each component

$\sum QS$  : Total of quite-satisfied score for each component

$\sum S$  : Total of satisfied score for each component

$\sum VS$  : Total of very-satisfied score for each component

(Dikmenjur, 1997: 7) with modification

Furthermore, the determining of effectiveness level for each calculation result above uses effectiveness score range requirements of DSE achievement based on DSE accomplishment score according to Dikmenjur (1997: 7):

Table 3. Effectiveness and Satisfaction Levels Core Range

Value (%)	Predicate
81-100	Very effective / Very satisfied
61-80	Effective / Satisfied
41-60	Quite effective / Quite satisfied
21-40	Ineffective / Dissatisfied
00-20	Very ineffective / Very dissatisfied

Source: Dikmenjur (1997:7)

## FINDINGS AND DISCUSSION

### Description of the Research Objects

The topic of assessment in this study generally, include: *First*, the implementation of ISO 9001:2008 standard Quality Management System on Dual System Program in accordance with the fixed quality standard seen from context, input, process, and product aspects. *Second*, DSE implementation. *Third*, customer satisfaction level after the program ends. *Fourth*, and the attempt for DSE program continual improvement.

### Report Research

This research was conducted on 1<sup>st</sup> February up to 8<sup>th</sup> April 2016, on students in Accounting Proficiency at SMK Negeri 1 Bawang and SMK Negeri 1 Bawang's partner institutios totaling 88 for students and 17 for partner isntitutions. Description of the research data is intended to describe briefly on evaluating the implementation of ISO 9001:2008 standard quality management system to the result of dual system education program in accounting proficiency at SMK Negeri 1 Bawang. From the result of evaluation can be known evaluation context, input, process, and product of dual system education (DSE) program with implementing ISO 9001:2008 standard quality management system (QMS), describes DSE implementation that contains about DSE implementation

effectiveness, describes find out the level of customer satisfaction, namely students also *DU/DI*, also describes performance improvement of *Pokja Prakerin*.

Implementation of the CIPP evaluation models that context, input, process, and product to the applied of International Standards Organization (ISO) 9001 : 2008 is obtained as follows: First, the context evaluation that school has established a quality policy, quality objectives, as well as business process / work program set forth in an effort to achievement of quality in DSE program. Second, the inputs evaluation that school provide and describe of the school resources such as human resources, school facilities and information systems documented. Third, the process evaluation that school has been planning, implementing and evaluating elements that have been defined in terms of financing, the duties and responsibilities of each person, as well as other requirements relating to the DSE program. Fourth, the product evaluation that schools has obtained the achievement of goals and targets set in the Document School Quality's relating to DSE program. So, overall the QMS implementation of DSE program provides effective and efficient impact on the output results. In other words, the QMS be stated "**Modified**" (derived from the triangulation of research results) to the proviso that there

is an improvement / development program's aimed in the implementation of vision, mission, goals and strategic plan at SMK Negeri 1 Bawang.

First, the implementation of DSE program to the implementation of ISO 9001:2008 standard Quality Management System in Accounting Proficiency at SMK Negeri 1 Bawang review of all components of DSE program is generally in accordance to the provisions contained in the DSE implementation Ministry of education and culture number. 323 / U / 1997 as well as guidelines for the DSE implementation *Dikmenjur* 1997. Where the DSE implementation in accounting proficiency at SMK Negeri 1 Bawang in the academic year 2014/2015, ie the feasibility validation of the company as a partner institution (PI) of DSE, some of partner institution involved in the drafting of common training and educational program also curriculum, the theoretical material vocational and vocational basic practices implemented at school, while productive proficiency practice implemented at school and partner institution, there are several instructors in PI for the majority of all employees in a company can be instructors, industrial field practice in PI carried out for three months and student placement in PI tailored to the student residence and began in class XI, published the cooperation agreement (MoU) in DSE implementation, teaching

implementation in PI, students who industrial field practice given orientation or briefing and the opportunity to carry out work in PI, implemented competency test in school and certification provision for students implement of industrial field practice in PI. Second, effectiveness of the DSE implementation in Accounting Proficiency at SMK Negeri 1 Bawang in terms of enforceability of all of its components are very effective to the result percentages of 76.2 %. Described in the table below:

Table 4. Summary of the Per Component Percentage of DSE Implementation at SMK Negeri 1 Bawang

No	Component of DSE Program	Effective Contribution Percentage Per Components (%)	Percentage on Results of the Per Components Implementation (%)
1	Common Training and Educational Program	11.6	77.3
2	Human Resource	9.8	75.4
3	Facility	8	80
4	Education al Management	27.2	82.4
5	Student	7.8	86.7
6	Costs	6	66.7
7	Partner Institution	5.8	52.7
	Total	76.2	

Sources: Primary data are processed

Effective contribution of each component on the effectiveness of Dual System Education (DSE) in Accounting Proficiency at SMK Negeri 1 Bawang, i.e. common training and educational program components of 14%; human resources (HR) components of 9.8%; facility components of 8%; educational management components of 27.2%; student components of 7.8%; costs components of 6%; partner institution components of 5.8%. Third, factors supporting of DSE implementation using ISO 9001:2008 standard Quality Management System in Accounting Proficiency at SMK Negeri 1 Bawang, namely the willingness of industrial and business world as a partner institution for accept students, the suitability of a industrial field practice with student competence, involvement of partner institutions on during the orientation / briefing in industrial field practice, the frequency of monitoring and surveillance are scheduled, their budgets on school training program, and rules of ISO that have contributed. Meanwhile, factors inhibiting namely students placement in *prakerin* place, from students themselves, the elements in *prakerin* place, and SOP application, especially in work instructions. Fourth, the pattern of DSE in Accounting Proficiency at SMK Negeri 1 Bawang have been using model 1, but implementation is

done in the second year i.e. class XI. Patterns have been agreed for the implementation of common training and educational program at SMK Negeri 1 Bawang is a block release pattern, i.e. adaptive program materials, normative, vocational theory and vocational basic practices fully implemented in school.

SMK Negeri 1 Bawang's customer satisfaction including in the Satisfied category.

The level of customer satisfaction by the students can be presented in the following histogram:

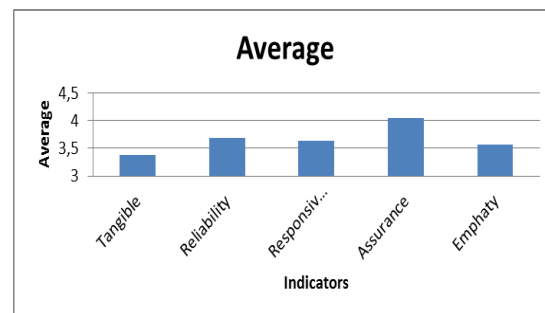


Figure 3. Histogram Results of Student Satisfaction

The above picture showed that most students were satisfied toward application the principles of ISO 9001 : 2008 standard quality management system of dual system education in accounting proficiency. The sequence data obtained average value aspects of customer satisfaction is the most highest till lowest, among others: Assurance of 4.05; Tangible of 3.84; Reliability of 3.69; Responsiveness of 3.64; and Emphaty of 3.57. Then, the overall percentage of aspect is 75.1% in the category are satisfied.

Calculation of fulfillment' percentage to students:

By the following formula :

$$Nk\ Cs1 = \frac{\sum VDS1 + \sum DS1 + \sum QS1 + \sum S1 + \sum VS1}{\sum Max\ Score} \times 100\%$$

Be discovered:  $\sum N = 100$

$$\sum TCs1 = 3,84$$

$$\sum RICs1 = 3,69$$

$$\sum ReCs1 = 3,63$$

$$\sum ACs1 = 4,05$$

$$\sum ECs1 = 3,57$$

So that,  $Nk\ Cs1$ (Students)

$$= \frac{3,84 + 3,69 + 3,63 + 4,05 + 3,57}{25} \times 100\% = 75,1\%$$

The level of customer satisfaction by the partner institution can be presented in the following histogram :

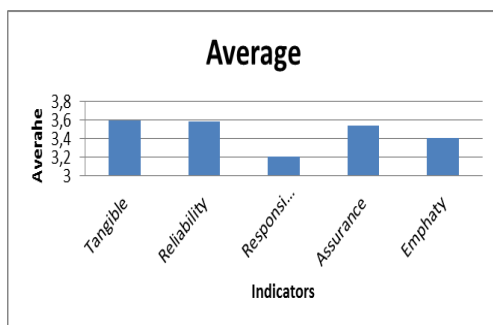


Figure 4. Histogram Results of Partner Institution Satisfaction

The above picture showed that most partner institutions were satisfied toward application the principles of ISO 9001 : 2008 standard quality management system of dual system education in partner institution. the sequence data obtained average value aspects of customer

satisfaction is the most highest till lowest, among others: Tangible with an of 3.60 ; Reliability of 3.58 ; Assurance of 3.54 ; Emphaty of 3.41 ; and Responsiveness of 3.21. Then, the overall percentage of aspect is 69.4% in the category are satisfied.

Calculation of fulfillment' percentage to students:

By the following formula :

$$Nk\ Cs2 = \frac{\sum TCs2 + \sum RICs2 + \sum ReCs2 + \sum ACs2 + \sum ECs2}{\sum Skor\ Max} \times 100\%$$

Be discovered:  $\sum N = 100$

$$\sum TCs2 = 3,60$$

$$\sum RICs2 = 3,58$$

$$\sum ReCs2 = 3,21$$

$$\sum ACs2 = 3,54$$

$$\sum ECs2 = 3,41$$

So that,  $Nk\ Cs2$ (Partner Institutions)

$$= \frac{3,60 + 3,58 + 3,21 + 3,54 + 3,41}{25} \times 100\% = 69,4\%$$

Implementation of ISO 9001: 2008 at SMK Negeri 1 Bawang using the concept of a process approach Gaspersz Vincent (2008) to the concept of PDCA (Plan-Do-Check-Act) developed by Edward Deming and conditioned to the clauses contained in ISO 9001: 2008 standards, has been running well in order to improve the performance of *Pokja Prakerin*. The betterment effort

starting from the planning process (Plan), for which school has committed to implement a QMS in accordance to the requirements demanded by ISO 9001: 2008. Then what was planned and then implemented (Do), the implementation process is under the control of a person who served as a representative of the quality management. Furthermore, to determine the conformity between planning and implementation of program, then an evaluation. This evaluation aims to check (Check), and evaluate the performance of DSE program (as know as *pokja prakerin*). After the inspection is completed, it is then taken action (Act). This action in the form of corrective action and preventive action, so that the deficiencies found during the evaluation, it should not be repeated.

## CONCLUSIONS AND SUGGESTIONS

### Conclusions

Based on data analysis result, tested research results, and discussion, it can be concluded that:

- a. Implementation of CIPP evaluation i.e. context, input, process, and product by implementing ISO 9001:2008 is quite good.
- b. Implementation of all DSE components in General in accordance with the DSE provisions organizing, effectiveness of DSE implementation reviewed from all

of its components is effective category with the percentage of 76,2%.

- c. The level of customer satisfaction at SMK Negeri 1 Bawang was in the satisfied category at 75.1% (students) also 69.4% (DU/DI).
- d. Implementation of ISO 9001:2008 on DSE program at SMK Negeri 1 Bawang have running well.

### Suggestions

In accordance with the discussions and conclusions above, recommendation can be presented are as follows:

- a. Need for a more intense socialization from the top management to all school personnel about the aims of ISO implementation.
- b. It should be frequently held workshops that support the implementation of ISO 9001:2008 standard QMS for the existing personnel at school.
- c. It is expected that the spirit of school personnel to keep running and adhere to quality management system that has been built despite the abolition of *RSBI* program.
- d. Validation and synchronization of the curriculum used in Dual System Education (DSE) program should be done openly and conducted jointly between school with partner institution.
- e. Schools need to approach by sending a supervising teacher is in vocational high

- school (SMK) to industrial and business world as a partner institution (PI) to disseminate training program and socialization about DSE programs in vocational high school (SMK) on PI.
- f. Need to increase the attention and openness of tutors and instructor of PI in confronting the problems of students who industrial field practices.
- g. Organise a student's profession certification test as a recognition of the profession associations in a comprehensive manner by involving institutions accounting's profession associations (IAI).
- h. Increased awareness of the importance of the supervisor / tutors roles in monitoring and evaluating to support the effectiveness of program on DSE enforceability with the implementation of ISO 9001 : 2008 standard Quality Management System.
- i. Pattern implementation's from Dual System Education to model 1 are appropriately upgraded in model 2.

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