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An Evaluation of The Industrial Job Training At Vocational High School

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ABSTRACT

The research aims to evaluate industrial job training in terms of: context, input, process, and product. This research model used the CIPP model with a quantitative descriptive approach. Data was collected on research respondents from vice principal for industrial relations, 18 teachers, 18 BS/BI from Buol Regency, Tolitoli Regency, Gorontalo Province and 110 students using questionnaire, observations, interviews, and documentations. The results of the study show in terms of: (1) context where the results of data analysis are in the appropriate category, but the achievement of the objectives of apprenticeship is less than optimal, namely providing increased competence to students to become quality workforce and having professional expertise. Planning, drafting, not paying attention to the condition of the school's ability in terms of learning, in synchronizing competencies that do not involve BS / IS elements, and the development of cooperation between industrial and labor through the MoU have not been well realized; (2) input where the results of data analysis are in a very suitable category, but the lack of industry in designing debriefing is an obstacle. Still needing the readiness of participants in terms of competencies where the obstacles faced are more about mastery of competence and lack of work readiness so that maximizing the time and material of debriefing is very necessary; (3) the process where the results of data analysis are in the appropriate category, but the lack of maximum role and responsibility of the supervisor causes communication of the development of students' competencies less monitored; (4) product where the results of data analysis are in a very appropriate category, it is shown by the changes that occur by students in terms of attitudes, responsibilities and increased competence.

Keywords: CIPP; Evaluation; industrial; job training

INTRODUCTION

Vocational High School is a secondary school with an educational method that prepares participants to learn especially to work in certain fields. It was explained in Law No. 20 of 2003 article 15 that the existence of vocational school was designed to prepare graduates to work in certain fields, (Kemendikbud, 2016: 15). One of the centers of attention of vocational education is preparing skilled workers who are ready to work, as well as labor that is in line with the needs of the business world and the industrial world (BS/IS). The meaning of vocational education is explained more specifically in Government Regulation Number 29 of 1990 (article 1 paragraph 3) concerning Secondary Education, namely "Vocational secondary education is education at the secondary

education level which prioritizes the development of students' abilities for the implementation of certain types of work".

Vocational high school are established to prepare the needs of middle-level workers who are ready to work with the skills they have after attending education and training. Vocational graduates must have competence in accordance with the expertise program chosen and ready to compete in the world of work. This is in line with the statement of the Minister of Education and Culture, that the government has continued to strive to improve the quality of vocational schools in order to produce more trained vocational and mid-level technicians to better meet the work requirements in industry, trade, and services and be able to self-open employment and new businesses. This is in line with the results of the study, research conducted by Chidinma Dokubo and Isaac Dokubo (2013) explained that vocational education has an important role to develop the development economy, industrial growth, create jobs and reduce poverty and unemployment.

Development policies undertaken by the government through the implementation of Dual System Education with the concept of Link and Match, starting in 1997 (Ministerial Decree No. 323/U/1997) where the initial effort to involve the business world/industrial world in vocational education. Cooperation between the Department of Education and Culture and the Indonesian Chamber of Commerce and Industry intends to engage the industry and companies in implementing System Education, Dual (Wardiman, 2016: 316).

The application of dual system education programs in Vocational Schools through industrial work practices or referred to as internship as a joint program between vocational schools and industry. The practice of students in an industry which is theoretically considered ideal to improve the relevance and efficiency of vocational schools. In the book Revitalization of Vocational Education (Kemendikbud, 2016:37), good vocational education is one that also produces graduates that are in line with the needs of BS/IS so the learning process must involve BS/IS so that the teaching and learning process can be in accordance with BS/IS. Industrial work practice is a concrete manifestation of the implementation of Dual System Education where students who carry out Industrial Work Practices are expected to be able to apply the knowledge gained and at the

same time learn it in the industry. Masrian Bukit (2014: 50) states that the goal of internship is for students to gain work experience on production lines, understand attitudes, work discipline, obtain vocational competencies and social competencies that are in accordance with the standards demanded by the industry or the real world of work.

In implementing Internship, the problem faced by Vocational Schools according to the results of the study of Doni Gustion (2012) is the lack of industrial availability while the number of Vocational Schools competing to place students in accordance with the standard of internship. The same thing by Wardiman in his book "Along the Way of Memories" (2016: 316), one of the obstacles in the implementation of dual system policy was the lack of internships in several regions so that students from several vocational schools were contested. In addition to BS / IS, the flow system of apprenticeship is inaccurate so that there are gaps in school learning with practical competencies in BS/IS. Schools are lagging behind the ever-changing technological developments because communication is not utilized by school supervisors or BS/IS mentors as a means to jointly design the implementation of internship so that it can run optimally.

Given the importance of the implementation of internship, as well as the reality in its implementation, an evaluation of the implementation of apprenticeship is needed. As the results of research conducted by Warju (2016: 41) that evaluation is used to determine the gap between real conditions and expectations that occur in a program by collecting data or information to be compared with criteria that have been made / determined then concluded. There are many evaluation models that can be used to evaluate programs. However, the most common and appropriate method is evaluating the context, input, process, product (CIPP) model developed by Stufflebeam and Shinkfield in 1985 (Warju, 2016: 36).

Data obtained from preliminary observations made in June 2017 through interviews with the Deputy Principal of the Hubdin field that the impact generated by the implementation of apprenticeship for schools was very little. Of the 6 departments that have carried out the internship so far, only one department, namely Motorcycle Business has clearly benefited from Engineering, partnerships between schools and industry, where cooperation is not only at the time of implementation of the apprenticeship, but up to the absorption of graduates, although admittedly still very low. In addition, another obstacle found in the field is that when some BS/ISs refuse, BS/IS's distrust of students' work competencies makes BS/IS assume that student attendance is still a burden and worries about the risk of work failure that results in the loss of customers. and material loss.

Some problems are caused by improper apprenticeship systems, the workflow should be developed considering further several constraints caused by inappropriate flow. The development in the engineering workforce is more in the curriculum synchronization stage where to know and analyze what competencies are taught by students and at BS/IS, what competencies are needed by BS/IS and are in school, and what competencies are needed by BS/IS but not owned by the school. Next is developing a stage where understanding the strengths and weaknesses of BS/IS as a partner in industry through industry feasibility testing. This means that before the school cooperates with BS/IS to become a school partner in the implementation of internship, the school first conducts an industrial feasibility evaluation. This evaluation aims to enable students to work as expected and there is an increase in quality in terms of practice and character. With this evaluation of feasibility, the possibility of incompatibility between student competencies and the work needed by BS/IS can be avoided or at least minimized.

Based on the description of the background above, it can be seen that the problems faced by the State Vocational School 1 Bokat Buol Regency are very complex, ranging from problems to compliance with the objectives of apprenticeship, lack of institutional partners, BS/IS trust in students, monitoring and material mentoring systems, absorption debriefing, to the absorption of vocational graduates in the workforce. However, in this study, it is necessary to limit the problems to be investigated to be more focused. By looking at the many problems that occur in the field as described in the background, it is necessary to evaluate the implementation of apprenticeship. therefore the research problem can be formulated as follows: 1. How far is it in accordance with the implementation of industrial work practices in SMK Negeri 1 Bokat when viewed in terms of context? 2. How

far is it in accordance with the implementation of industrial work practices in SMK Negeri 1 Bokat when viewed in terms of input? 3. How far is it in accordance with the implementation of industrial work practices in SMK Negeri 1 Bokat when viewed in terms of process? 4. How far is it in accordance with the implementation of industrial work practices in SMK Negeri 1 Bokat when viewed in terms of product?

In this study the objectives to be achieved 1) describing the suitability of the are implementation of apprenticeship in SMK Negeri 1 Bokat in terms of context which includes: the objectives of the internship implementation program, collaboration with schools based on the MoU, the hope that the implementation of internships is in accordance with the implementation curriculum, 2) describe conformity of the implementation of apprenticeship SMK Negeri 1 Bokat in terms of input which includes: readiness of participants in carrying out the internship, absorption of debriefing material from school and BS/IS, realization of the implementation of the implementation curriculum, 3) describing the conformity of the implementation of internship at SMK Negeri 1 Bokat in terms of the process that includes : monitoring and guiding students, involvement / participation of students in the work process in the Industry, cooperation between students and the ability to solve problems, 4) describe the suitability of the implementation of apprenticeship SMK Negeri 1 Bokat in terms of product which includes: improvement, mastery of competencies and certification of students after implementation industrial work practices.

METHOD

The approach used in this evaluation is the evaluation model proposed by Stufflebeam which includes Context, Input, Process, Product (CIPP). Sukmadinata (2009: 121) states "evaluative research is needed to design, refine, and test the implementation of a practice". research conducted Similarly. bv M. Kamaluddin (2017:4) uses program evaluation with the CIPP approach with the aim of evaluating the implementation of vocational industrial practicum programs for school students in Bandung using questionnaires. observation, interviews and documentation.

In this case the researcher evaluates the internship program at the Bolat 1 State

Vocational School in Buol District which is viewed from the Context, Input, Process and Product. The study was conducted to evaluate the program for the implementation of industrial work practices in SMK Negeri 1 Bokat. The analysis technique used is quantitative descriptive approach. Data from observations, interviews and documentation were analyzed using qualitative descriptive. Quantitative data is obtained from the context, input, process and product variables evaluated. Data from the questionnaire were analyzed using quantitative descriptive. Evaluation is a procedure to examine the suitability of a program in achieving its objectives. Sukardi (2014: 5) suggests that program evaluation is a series of activities carried out intentionally and carefully to determine the level of implementation or success of a program by knowing the effectiveness of each component, both towards the program that is running and the programs that have passed.

The research is in the area of Bokat State Vocational High School 1 of Buol Regency, Central Sulawesi, as well as several industries where students are practicing: Buol District, Tolitoli Regency, and Gorontalo Province. The subject of this research was the Deputy Head of School as the Chief Executive, School Supervisor, Industry Supervisor, and all students who carried out the internship in 2017. Data collection used questionnaires, observation, interviews and documentation. Test data analysis was carried out by computerization through the analysis process, namely SPSS version 16.0. The results of the trial are then analyzed to find out the validity and reliability of the statement items from each indicator and variable.

RESULT AND DISCUSSION

Result

Description of Context Data

Questionnaires were distributed to respondents consisting of 3 variables with 23 items and 4 answer choices distributed to 110 students, 3 variables with 14 items and 4 answer choices distributed to 18 school counselors and 18 BS/IS mentors.

Based on the questionnaire given and the results of the analysis of the data obtained where the implementation of apprenticeship when viewed from the variable objective of the apprenticeship program tends to be in the very appropriate category. Shown by the percentage for student respondents that is 69.09%, for school supervisor respondents is 50.00%, and for BS/IS supervisors is 55.56%. Judging from the cooperation variables BS/IS and schools based on the MoU tend to be very suitable categories. Shown by the percentage for student respondents amounting to 49.09%, for school counselors by 77.78%, and for BS/IS supervisors by 50%. Whereas if viewed from the expectation variables the implementation of apprenticeship according to the implementing curriculum tends to be in the appropriate category. Shown by the percentage for student respondents at 52.73%, for school counselors at 66.67%, and for BS/IS supervisors at 61.11%.

Graph 1 Diagram Component Context



In the implementation of apprenticeship always pay attention to the goal of producing a quality workforce and have professional expertise as well as an increase in link and match between schools and industry through the equivalence of education and training in schools with the demands of the competencies needed by the world of work. The learning process in the field is not fully run smoothly, the productive lessons conducted by the teacher are constrained by the limited facilities and infrastructure. The equipment used does not all resemble existing equipment BS/IS. Some departments lack practical equipment. The aim of the apprenticeship of SMK Negeri 1 Bokat about increasing the link and match between schools and industry through the equivalence of education and training that is schooled with the demands required by the world of work, in fact cannot be maximally achieved.

Vocational High School 1 Bokat in achieving the goal of apprenticeship so as to focus more on school readiness in improving student competence, the implementation of productive learning programs that emphasize work readiness. School readiness by involving BS/IS in the curriculum development process so as to achieve comparability between the learning provided by the school and the demands of the competencies required by the Industry. Wardiman Djoyonegoro (2007) explained that the purpose of apprenticeship will be achieved if all elements (students, schools and BS/IS) involved have the readiness to design, plan and carry out the apprenticeship carefully.

Legality of cooperation in the implementation of apprenticeship between schools and industry is realized in the form of an agreement or memorandum of understanding (memorandum of understanding). This is an effort to improve the quality of education at SMK Negeri 1 Bokat with industry through internship activities. In line with the Regulation of the Minister of Industry No. 03 / M-IND / PER / 1/2017 concerning "Guidelines for the Development and Development of Competency-Based Vocational Schools that Link and Match with Industry" explained that industrial work practices are work practices in industry or companies as part of the vocational education curriculum to improve competence. Good cooperation between schools and BS/IS determines the success of the implementation of apprenticeship, improvement and mastery of competencies is easy to achieve, synchronization of school learning and BS/IS can be realized so as to provide improvement and progress for schools and BS/IS.

But the reality is that school collaboration with BS/IS does not run optimally. BS/IS as a partner is not included in the process of preparing the learning curriculum in preparation for the implementation of the apprenticeship as a result the industry cannot know the extent of the competencies possessed by students before they enter the internship. The school should review a number of points contained in the letter of agreement related to industry involvement in designing the internship program, increasing the competencies learned in schools and those needed by the industry, as well as responsibility in providing information related to improving student competencies during the internship. It is expected that the cooperation is not only during the internship implementation but continues with several program activities related to improving student competence.

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The results obtained in the interview with the Deputy of Hubdin who hoped that there would be synchronization between the curriculum used by the school and the needs of BS/IS so that the implementation of the internship could run in accordance with school expectations and BS/IS. However, complaints from several BS/IS who questioned the competence of students who were placed not in accordance with the expectations and needs of the industry. Students do not master the basic competencies for the work needed by the industry. Some competencies that have not been done by BS/IS are still taught in schools, whereas competencies that are not taught in schools are actually needed by the industry. This is not in line with Surachim in the Formulation of Dual System Education Curriculum (2016: 19) that the dual system education curriculum must reflect the synchronization of learning activities in schools with internship in partner work institutions. integrated in the implementation of learning in accordance with the standards and characteristics of PSG implementation.

Description of Data Input

Questionnaires were distributed to respondents consisting of 3 variables with the number 20 items and 4 answer choices distributed to 110 students, 3 variables with 14 items and 4 answer choices distributed to 18 school counselors and 18 BS/IS mentors.

Based on the description of the data that has been described from the questionnaire given and analyzed, the results of the input evaluation on the implementation of the practicum of SMK Negeri 1 Bokat are seen from the variables of readiness of participants, schools and BS/IS tend to be in the appropriate category. Shown by the percentage for student respondents at 54.55%. for school counselors at 50.00%, and for BS/IS supervisors at 61.11%. Whereas seen from the absorption variable of the debriefing material from school and BS/IS tend to be in the very appropriate category. Shown by the percentage for student respondents at 55.45%, for school counselors at 61.11%, and for BS/IS supervisors at 61.11%. Furthermore, it is seen from the realization variable of the implementation of the implementative curriculum, it tends to be in the very appropriate category. Shown by the percentage for student respondents at 69.09%, for school counselors at 61.11%, and for BS/IS supervisors at 61.11%.

Graph 2 Diagram Component Input



Internship activities can run because of the readiness of students physically, mentally, and competently in carrying out technical internships. School readiness and BS/IS in designing activities and providing sufficient debriefing for students in the readiness to carry out practical work. Schools and BS/IS in carrying out debriefing are in accordance with the objectives, namely students can absorb well the material provided by the school and BS/IS. Implementativecurriculum which is a synchronization curriculum between BS/IS and school parties is relevant to student internship activities so that the apprenticeship can be effective.

Schools in preparing the implementation of internships by forming a working group, designing the implementation of internship from the preparation, implementation and evaluation stages. In line with the Guidelines for the Implementation of Prakerin (PSMK. 2008: 2) that the design of the apprenticeship program cannot be separated from the implementation of the syllabus into learning that requires appropriate methods, strategies, and evaluations of implementation. School readiness can be seen from the available human resources, especially the availability of several experienced mentoring teachers. facilities that are sufficiently supportive, organized administration, mature financing planning, and a good level of school collaboration with industry, although not yet maximal. BS/IS readiness viewed from the knowledge in compiling competency programs, having cooperative ties with Vocational Schools to become partner partners, instructors who are experienced in guiding, adequate facilities and infrastructure are very helpful for students in carrying out practical work and meet the needs of students in having a real learning experience.

In reality the readiness of participants, schools and BS/IS in their implementation is not fully realized. Students in following a series of activities during the debriefing process have not been 100% realized. While the school readiness in terms of netting does not run optimally, placement of internship students in some BS/IS is not in accordance with student competence and not in accordance with what is done in the industry. On the contrary some BS/IS complained about the competencies that students had had were not in accordance with what was needed by BS/IS. Some BS/IS still lack understanding about the responsibility. The results of observations in the field became data evidence of 18 BS/ISs which were sampled. only industries were drafting 2 the apprenticeship program that would be given to students.

The problem is the process of designing the workflow path used is lacking. Schools in carrying out the pre-apprenticeship do not go through the synchronization stage of the curriculum which aims to reduce the learning gap in schools with the practical competencies in BS/IS. Analyze the competencies taught and needed BS/IS, as well as competencies that are not owned by the school but are needed by BS/IS. Next is the stage where you understand the advantages and disadvantages of BS/IS as a partner for apprenticeship through industrial feasibility tests. With this feasibility evaluation, the possibility of incompatibility between students' competence and the work required by BS/IS can be avoided or at least minimized.

The provision of debriefing is an activity carried out by the school and BS/IS before students are deployed to BS/IS or done by BS/IS before students work in the workplace. Schools and BS/IS in carrying out debriefing should pay attention to the absorption of material in terms of improving and the quality of student competence. Wardiman (2016: 313) that industrial work practices are essentially shared by SMKs with industry, meaning that this program does not only belong to SMKs, therefore all activities related to PSG are always thought out and implemented together between SMK and the industrial world. Debriefing is usually related to the readiness of students to get to know the world of work, a brief description of the competencies taught with the work to be obtained in BS/IS.

Even though the debriefing was carried out well, what happened in the field was more about

the work readiness of students who were still lacking, competency mastery was low. Some industries have not entrusted students to be able to work independently like employees because students have not fully mastered the competencies acquired during learning at school. This is due to the lack of time used in debriefing. Not maximizing the debriefing of students in terms of mastery of competencies that are only obtained during school graduation and are not focused at the time of debriefing.

Description of Data Process

Questionnaires were distributed to respondents which consisted of 3 variables with 26 items and 4 answer choices distributed to 110 students, 3 variables with 23 items and 4 answer choices distributed to 18 school counselors and 18 BS/IS mentors.

Based on the description of the data that has been described from the questionnaire given and analyzed, the results of the evaluation process in the implementation of the internship process were seen from the monitoring and guidance variables, the students tended to be in the very appropriate category. Shown by the percentage for student respondents at 60.00%, for school counselors at 55.56%, and for BS/IS supervisors at 55.56%. Furthermore, it can be seen from the variables of student involvement / participation in the work process in the industry that they tend to be in the appropriate category. Shown by the percentage for student respondents at 57.27%, for school counselors at 61.11%, and for BS/IS supervisors at 72.22%. While seen from the variables of student cooperation and problem solving abilities tend to be in the appropriate category. Shown by the percentage for student respondents amounting to 49.09%, for school counselors at 61.11%, and for BS/IS supervisors at 66.67%.

Graph 3 Diagram Component Process



Graph Process Component Evaluation Diagram

Monitoring and coaching aims to monitor and evaluate the development of students during the execution of work practices in the workplace and in lodgings. Helping students in working on journals, implementation reports that are charged by students, besides that the mentoring teacher is obliged to provide inputs if students experience problems or problems in the implementation of the internship. In addition to counselors from schools, students also have mentors in BS/IS who are responsible for things that occur while students are at work (BS/IS).

In terms of monitoring has been going well, but it is still constrained by the guidance process that has not run optimally. Some BS/IS teachers and mentors do not understand their duties and responsibilities. The results of the study in the field that 55.55% of supervisors did not know the development of students' competencies in the field, and 61.11% claimed to rarely communicate with students during the internship. There is almost no communication between tutor teachers, students with BS/IS supervisors, communication occurs only when students experience problems or commit violations and at the time of preparation of the final report on apprenticeship.

The supervising teacher should know the competencies possessed by students, such as in the Guidelines for Implementation of Prakerin (PSMK. 2008:7) that mentoring for schools is carried out by productive teachers who understand the competencies of students while the guidance of BS/IS is a mechanic who is responsible for the competence of students in the industry. It is very necessary to give an understanding in the form of training related to the duties and responsibilities of the teacher as a school counselor. Thus, it will minimize the miscommunication that has occurred between school counselors and mentors in BS/IS.

While in terms of student participation in the work process in the industry directly involved in work activities. BS/IS trust in student work causes students to feel confident so they are not awkward in carrying out their duties. Although in some places some students are still awkward and hesitant in carrying out work independently because students in the implementation of learning in school are less involved and active in practical activities.

Product Data Description

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Questionnaires were distributed to respondents which consisted of 2 variables with the number 14 and 4 answer choices distributed to 110 students, 2 variables with 9 items and 4 answer choices distributed to 18 school counselors and 18 BS/IS mentors.

Based on the description of the data that has been described from the questionnaire given and analyzed in order to obtain the results of the process evaluation on the implementation of the practicum of SMK Negeri 1 Bokat, when viewed from the variable of improvement and mastery of competence students tend to be very suitable category.

Graph 4. Diagram Component Product



Shown by the percentage for student respondents at 54.55%, for school counselors at 50.00%, and for BS/IS supervisors at 72.22%. Whereas if viewed from the variable of student certification after prakerin tends to be in the very appropriate category. Shown by the percentage for student respondents at 74.55%, for school counselors at 66.67%, and for BS/IS supervisors at 55.56%.

From the results of this study states that there are changes that appear to be shown by students after carrying out internships where there is an increase in discipline, responsibility and mastery of the competence of students. Whereas in the granting of values carried out by BS/IS based on the level of mastery of competencies acquired by students during the internship period.

Through the implementation of apprenticeship, the work experience gained will certainly increase the understanding and mastery of competencies to be able to enter the workforce. Practical experience in the industry provides students with the ability to handle work, discipline in respecting quality and time, increasing self-esteem and self-confidence and shortening the transition period (lead time) from school to the world of work. In line with that conveyed by Bukit (2014: 59-60) that the implementation of student apprenticeship gained a lot of experience in work, making students more mature in thinking, acting, disciplining, and appreciating the ability to apply the competencies they had acquired during school and new competencies they get in the apprenticeship.

With good competence will be able to carry out the work well without obstacles, otherwise competencies that are less will experience problems related to their confidence to be able to work. Everything can not be separated from the willingness of students to be able to learn and practice to add experience in order to work professionally. Willingness to actively ask questions and learn is something that some students lack. The slow understanding of the work is also owned by some students. While the thing that is really expected by BS/IS is how students can be proactive in picking up jobs.

The implementation of the apprenticeship ends with the awarding of a certificate or certificate of implementation of the labor practices both by the BS/IS and the school. Certificate or certificate is proof of student participation as participant. In accordance with the Regulation of the Minister of Industry Number 03 / M-IND / PER /1/2017 concerning "Guidance for the Development and Development of Competency-Based Vocational Schools that Link and Match with Industry in Article 10 Paragraph (4) states that" Industrial Companies and Industrial Estate Companies provide certificates to students and teachers of productive study fields who have completed Industrial Work Practices and / or Industrial Apprenticeship ".

Disccusion

Based on the context in terms of three variables, namely:

 The achievement of the goals of the apprenticeship program carried out by SMK Negeri 1 Bokat but less than the maximum, which provides increased competence to students so that they become qualified and professionally skilled workforce, as well as an increase in link and match between schools and industry through education and training equivalence which is schooled with the demands of the competencies needed by the world of work.

- 2) The suitability of the implementation of apprenticeship in SMK Negeri 1 Bokat with the collaboration between BS/IS and the school based on the MoU is evidenced by the legality of developing cooperation in the implementation of apprenticeship between SMK 1 Bokat and industry in the form of an agreement or memorandum of understanding.
- 3) The suitability of the implementation of apprenticeship in SMK Negeri 1 Bokat with the variable implementation of apprenticeship in accordance with the implementation curriculum. Even though in the implementation of learning carried out by the school no longer matches the work in BS/IS.

Based on the input aspect which is viewed from three variables, namely:

- There is readiness of students physically, mentally, and competently in carrying out practical work. School readiness and BS/IS in designing activities and providing sufficient debriefing for students in the readiness to carry out practical work.
- 2) The provision of debriefing has proceeded well and has been in accordance with the objectives in which students can absorb the material provided by the school and by the BS/IS, but some points that are recorded by the school include taking into account the time required in preparing the main practice. in terms of debriefing.
- 3) Implementative curriculum which is a synchronization curriculum between BS/IS and the school side is in accordance with student practical activities, which can be effective because it is based on the implementing curriculum even though the school in developing the curriculum does not involve the Industrial world.

Based on the process in terms of three variables, namely:

- 1) In following the development of the implementation of internships, especially in terms of the process of carrying out the work of students in BS/IS through monitoring, it has been running well, but it is still constrained by the guidance process that has not run optimally.
- 2) There is confidence from students in working because they master competencies and understand the work given by the industry. Although this is not all that is felt by all

students because they feel awkward and hesitant to carry out the work, it is still owned by some students who practice.

3) Good cooperation between students and employees will greatly affect the performance of employees and students participating in the apprenticeship so that students can apply to the existing problems during the implementation of the internship.

Based on the product aspect, in terms of three variables, namely:

- 1) Changes that appear to be shown by students after carrying out internships where there is an increase in discipline, responsibility and mastery of the competence of students.
- 2) The granting of value carried out by BS/IS as evidence or acknowledgment of students' competencies during carrying out the internship. This means that in the provision of values carried out by BS/IS based on the level of mastery of competencies acquired by students during the internship period. In accordance with the Regulation of the Minister of Industry Number 03 / M-IND/ PER/1/2017 concerning "Guidelines for the Development Development and of Competency-Based Vocational Schools that Link and Match with Industry

CONCLUSIONS AND SUGGESTION

The results of the study show in terms of: (1) context where the results of data analysis are in the appropriate category, but the achievement of the objectives of apprenticeship is less than optimal, namely providing increased competence to students to become quality workforce and having professional expertise. Planning, drafting, not paying attention to the condition of the school's ability in terms of learning, in synchronizing competencies that do not involve BS / IS elements, and the development of cooperation between industrial and labor through the MoU have not been well realized; (2) input where the results of data analysis are in a very suitable category, but the lack of industry in designing debriefing is an obstacle. Still needing the readiness of participants in terms of competencies where the obstacles faced are more about mastery of competence and lack of work readiness so that maximizing the time and material of debriefing is very necessary; (3) the process where the results of data analysis are in the appropriate

category, but the lack of maximum role and responsibility of the supervisor causes communication of the development of students' competencies less monitored; (4) product where the results of data analysis are in a very appropriate category, it is shown by the changes that occur by students in terms of attitudes, responsibilities and increased competence.

The suggestions in this study is (1) In the preparation of program planning, the achievement of objectives must pay attention to the ability of schools in terms of facilities and infrastructure, maximizing relations with industry through competency programs needed by the industry; (2) To better understand the cooperation agreement with BS/IS through the MoU by reviewing several points related to synchronizing the curriculum with the competencies needed by the industry; (3) Able to involve BS/IS in the preparation of the curriculum through synchronization of the material contained in the curriculum with the fields of work available in BS/IS. (4) Review the process of the internship process through the synchronization phase of the curriculum and the stage of industrial feasibility evaluation before the mapping and screening process so that student placement can later be relevant and appropriate between competencies and their work. (5) Schools and BS/IS maximizes debriefing by increasing time, giving more material to mastering competencies and job readiness, involving representing BS/IS in the provision of debriefing material. (6) Providing understanding to the supervisor teacher about the duties and responsibilities as mentors through socialization activities or in the form of training. Building communication between school counselors and BS/IS supervisors so that it becomes a bridge in channeling students as labor needed by industry. (8) At the end of the apprenticeship implementation, in order to make an evaluation report to the industry related to the satisfaction of the implementation of the internship. This is to find out how far the success rate of the implementation of internship can be an improvement in the subsequent implementation.

REFERENCES

Ahim, S. (2013). Dual Education System (PSG) Effectiveness to Improving SMK Graduates Quality. Lecturer of Business Management Program, Indonesia University of Education. International Journal of Science and Research (IJSR), India Online ISSN: 2319-7064.

- Bukit, M. (2014). Vocational Education Strategy and Innovation: from Competence to Competition. Bandung: Alfabeta
- Dikmenjur. (2008). Guidance for Implementation of Prakerin. Jakarta: Directorate of PSMK Directorate General of Primary and Secondary Education Management, Ministry of National Education
- Dikmenjur. (2008). The implementation of Industrial Work Practices (Prakerin) is part of the Dual System Education which is an innovation in vocational programs.
- Doni G. (2012). Evaluation of the Industrial Work Practice Program at State Vocational School 1 Palembayan. Thesis. Vocational Technology Education. Padang State University.
- Dokubo, C., & Dokubo, I. (2013). Identifiable Problems Inhibiting The Effective Management of Vocational Education Programmes in Nigerian Universities. European Scientific Journal, Volume 9, No.22.
- Government Regulation No. 29 yrs. 1990. Secondary Education. Republic of Indonesia.
- Kamaludin, M., W Munawar, D Mahdan, M V Simanjuntak, and H F Wendi . (2017). The Evaluation of Industry Practical of Mechanical Engineering in Vocational Education: A CIPP Model Approach. Technical and Vocational Education, Universitas Pendidikan Indonesia. Bandung. To cite this article: M Kamaludin et al 2018 IOP Conf. Ser.: Mater. Sci. Eng. **306** 012079. IOP Conference Series: Materials Science and Engineering
- Ministry of Education and Culture (1997). RI Decree. No.323 / U / 1997 Implementation of Dual System Education in Vocational High Schools. Director of Vocational Secondary Education.

- Ministry of National Education. (2003). RI Law No. 20, Year 2003, concerning the National Education System.
- Ministry of Education and Culture. (2016). Revitalization of Vocational Education. Jakarta.
- Minister of Industry. (2017) Minister of Industry Regulation Number 03 / M-IND / PER / 1/2017 concerning "Guidance for the Development and Development of Competency-Based Vocational Schools that Link and Match with Industry. Republic of Indonesia.
- Sukmadinata. (2009). Educational Research Methods. Bandung: Teenagers Rosdakarya

- Sukardi. (2014). Evaluation of Education and Training Programs. Jakarta: PT. Earth Literacy
- Wardiman. J. (2016). Along memory. Working with the Three Great Nation Leaders. Jakarta. Popular Library of Gramedia
- Wardiman. J. (1998). Development of Human Resources Through Vocational High Schools. Jakarta: PT Jayakarta Agung Offset
- Warju. (2016). Educational Program Evaluation using CIPP Model. Innovation of Vocational Technology Education. Department of Mechanical Engineering, Faculty of Engineering, Universitas Negeri Surabaya, Indonesia. Accepted 28 January 2016. Available online 01 February 2016.