

EVALUATION OF INDUSTRIAL WORK PRACTICE PROGRAMS IN EXPERTISE PROGRAM OF MACHANICAL ENGINEERING IN VOCATIONAL HIGH SCHOOL 1 WEST SUMATERA IN 2018

***Rusdi Sahara¹, M. Giatman², and Mulianti³**

¹Student of Graduate Program of Technology Vocational Education
Faculty of Engineering Universitas Negeri Padang

²PTK Lecturer, Faculty of Engineering, Universitas Negeri Padang

³PTK Lecturer, Faculty of Engineering, Universitas Negeri Padang

Email: rusdisahara.vhava@gmail.com

*Corresponding Author, Received: March 10, 2019, Revised: April 15, 2019, Accepted: May 10, 2019

ABSTRACT

This study aims to evaluate the implementation of the Industrial Work Practices program at SMK Negeri 1 West Sumatra. The evaluation of the Industrial Work Practices (Prakerin) program was seen from the aspects of design, installation, procurement, product and cost faced in the implementation of the Prakerin program. The research method used is a combination of Sequential Explanatory design methods, combining sequential and qualitative research methods in sequence, which in the first stage of research uses quantitative methods and in the second stage qualitative methods. The results showed that the implementation of Industrial Work Practices in the West Sumatra Vocational High School 1 Mechanical Engineering program as a whole included: Evaluation of designs according to reality obtained a standard average score of 72% enough, and design evaluation as expected obtained a standard average score of 85.4 % well. In reality, the evaluation of the installation obtained an average standard score of 74.5% is sufficient, and the evaluation of the appropriate expectations obtained a standard average score of 85.5% good. Process evaluation according to reality obtained a standard average score of 75.4% enough, and Process evaluation in line with expectations obtained a standard average score of 84.6%. Product evaluation according to reality gets an average standard score of 66.1% enough, and Product evaluation according to expectations gets an average standard score of 83.6% enough. Cost Evaluation according to the fact that the standard score average is 72.9% is sufficient, Cost evaluation according to expectations gets a standard average score of 84.2% is enough. Based on the findings of this study, it was concluded that the Industrial Job Training program (Prakerin) in the 2018 SMKN 1 Sumatera Barat Mechanical Engineering skills program was still in the sufficient category, needing to be improved for each aspect.

Keywords: Design, Installation, Process, Product and Cost.

INTRODUCTION

Education is very important at this time in human life which continues to change. Through human education it can increase its knowledge, form a mindset, and determine attitudes in their daily lives. With the existence of education, it will improve the standard of living for humans themselves. All that depends on teaching and learning activities organized by educational institutions. Vocational education is an education that is expected so that graduate students can immediately get a job that is in accordance with the education and expertise that he has learned during the education level in the vocational education program. This is in accordance with the opinion of Kuswana (2013) which states "Vocational School aims to prepare students to work, either independently or fill job vacancies in DU / DI as middle-level workforce, in accordance with the field of expertise and expertise programs that his interest. Meanwhile the purpose of vocational education according to Thorogood in Ganefri (2013) states that vocational education aims to: (1) provide provision of skills that sell well in the community, so that it can support economic life, (2) help students obtain and maintain jobs that he wanted, (3) encouraging economic productivity economically regionally and nationally, (4) encouraging the growth of trained personnel to sustain economic and industrial growth, and (5) encouraging the improvement of community quality. National education according to Law No. 20 of 2003 The National Education System is education that prepares students to be able to work in certain fields, then Government regulation No. 19 of 2005 concerning National Education Standards, explaining that Vocational High Schools are secondary education that prioritize the development of student abilities for certain types of work.

Some industry criticisms about the quality of vocational high school graduates

- 1). Not relevant to industry needs, covering the topics / eyes of the training being studied, very few relevant topics.
- 2). Not complete, including the amount of material taught is not complete. So that the amount of material that should be completed becomes incomplete.
- 3). Graduates are not ready to work in the industrial world. The Strategic Plan of the Ministry of Education and Culture (Kemdikbud) 2010-2014, mentioned several directions of national education development policies including the need for harmony between education and the business world and the industrial world. In

the elaboration, it was emphasized that the results of education must be able to meet the needs of the business world and the industrial world. To make it happen, one of the steps or policies that must be taken is to align the plans for developing education services with industrial development plans, regional development plans and investment plans. This step in itself implies the importance of building partnerships between government, educational institutions and business actors to design education development to suit economic development. At the same time, one of the strategies for achieving strategic objectives contained in the strategy and direction of the national education development policy for 2010-2014 is the provision and improvement of facilities and infrastructure for the implementation of quality vocational learning systems based on local excellence and relevant to the needs of regions that are evenly distributed. provinces, districts and cities (Ministry of Education and Culture Renstra).

As a result of some of the problems seen from graduates of SMK 1 West Sumatra, although in terms of facilities and infrastructure practicum is good enough, but in terms of cognitive ability or mastery of vocational theory is still low. It can be seen from the table above that cognitive abilities or mastery of vocational theory of students in the Mechanical Engineering Skill program in West Sumatra Vocational School 1 still tend to be low. As a result, only a few graduates of West Sumatra Vocational High School 1 were accepted to work in the industry. It can be seen from the data above that more than 57% of alumni work not in accordance with their expertise and only a few students continue their education to college.

Only a few graduates of SMK 1 West Sumatra were accepted to work in the industry, nor did they continue their education to college. So this will add to the problem of unemployment in the area. In fact, this will increase unemployment nationally. For this reason, an evaluation is needed to assess the program's achievement of what was previously planned. Stufflebeam (2007) states that "It is interesting to assess and help to improve all aspects of society". Evaluation is oriented to assessing and helping to improve all aspects of society. This evaluation is carried out so that program components that have not been optimal can be improved so that they can be appropriate and improve the quality of the community. Since its establishment in 2009, SMK 1 West Sumatra has not yet evaluated the expertise program provided at this

school. Stufflebeam (2007) also states "Evaluation serves a society by providing affirmations of worth, value improvement, accreditation, accountability, and, when necessary, a basis for terminating bad programs". Evaluation serves the community by complementing the affirmation of price, value, improvement (and how and when this should occur), accreditation, accountability, and when needs, and a basis for deciding a bad program.

The problem of the Industrial Work Practices (Prakerin) program in the engineering program of the Engineering Engineering of SMK 1 West Sumatra after identification is: the implementation of industrial work practices is still not maximal, seen in the problems that occur during internship, still not in accordance with the material taught in schools with the place of practice industrial work, still low competence (affective, cognitive and psychomotor) students who carry out internship, still not relevant learning of vocational education with the needs of DU / DI, involved in the suitability of the curriculum with the competency requirements needed by DU / DI, still lack of MoU (Moment of Understanding) or the Moment of Agreement (MoA) between the school and the DU / DI, and the low quality of vocational education graduates is not as expected, this is greatly influenced by the learning process in Vocational Schools and the implementation of the Prakerin program.

METHOD

This type of research is program evaluation research (Evaluation Research). This evaluation research aims to evaluate a program, evaluate the implementation of an object and so on with the purpose of improvement. The evaluation model used to evaluate the internship in SMK 1 in West Sumatra, the evaluation model used is the Discrepancy Model. The study was carried out on the XI class Prakerin students in the period January-April 2018 at SMKN 1 West Sumatra. The choice of place of study is determined based on the background that has been made, that the author's aim of conducting research is to find out the appropriateness of the apprenticeship program in the school with the practical guidelines and research subjects in accordance with the research objectives.

RESULTS AND DISCUSSION

This study uses a combination of quantitative data and qualitative data models or sequential explanatory designs. Sugiyono (2013) states that the research method of combination model or sequential explanatory design is a combination research method that combines quantitative and qualitative research methods sequentially, where in the first stage the research is conducted using quantitative methods and in the second stage is carried out by qualitative methods.

In this study, quantitative data were obtained from questionnaires distributed to 65 students in the Mechanical Engineering class XI program with question items that had been tested for validity and reliability. The questionnaire consists of 5 aspects, namely a) aspects of design, b) aspects of installation c) aspect process, d) aspects of the product and aspects of cost. While for the qualitative data obtained from the results of interviews conducted to the head of the apprenticeship program, treasurer of the apprenticeship, head of the expertise program, students participating in the apprenticeship and instructors in DUDI, observation and documentation study.

Based on quantitative data analysis for each aspect, the design evaluation according to reality obtained a standard average score of 72% enough, and design evaluation according to expectations obtained a standard average score of 85.4% good. In reality, the evaluation of the installation obtained an average standard score of 74.5% is sufficient, and the evaluation of the appropriate expectations obtained a standard average score of 85.5% good. Process evaluation according to reality obtained a standard average score of 75.4% enough, and Process evaluation in line with expectations obtained a standard average score of 84.6%. Product evaluation according to reality gets an average standard score of 66.1% enough, and Product evaluation according to expectations gets an average standard score of 83.6% enough. Cost Evaluation according to the fact that the standard score average is 72.9% is sufficient, Cost evaluation according to expectations gets a standard average score of 84.2% is enough. Then the results are totaly of the five aspects which is equal to 76.59% which falls into the sufficient category. This is also supported by qualitative results, namely interviews, observation and documentation studies. The indicators in this study are aspects of design, installation, process and product. Based on qualitative data analysis, it

can be concluded that the implementation of industrial work practice programs still has several disadvantages from various sides. So that it takes the participation of the school and all school community members to maximize the internship program going forward, so that students have sufficient provision to face the world of work after graduating from school.

Some of the problems of apprenticeship that need to be handled by the school include the lack of debriefing of students before entering the industrial world, instructors are less able to motivate students, engineering programs are less able to improve students' competencies, instructors in the industrial world lack practical guidance, teachers monitor students not check attendance students, students do not experience an increase in knowledge after apprenticeship and lack of material linkages in school with industry. These problems were found through the respondent's achievement level analysis (TCR).

Based on the above description and the results of qualitative and quantitative analysis it can be concluded that the effectiveness of the implementation of industrial work practices is in the moderate / moderate category of 76.59%, meaning that the implementation of industrial work practices needs various improvements and improvements to produce graduates who are ready to compete in the world of work. Supported by the results of interview activities with several informants who concluded that a) the material delivered in schools was less relevant to the application in the industrial world, b) lack of direction / debriefing provided by the school before students do internship, c) apprenticeship does not run smoothly, d) lack of interaction and motivation given by the instructor to students who carry out internship.

Based on the above description and the results of qualitative and quantitative analysis it can be concluded that the effectiveness of the implementation of industrial work practices is in the moderate / moderate category of 76.59%, meaning that the implementation of industrial work practices needs various improvements and improvements to produce graduates who are ready to compete in the world of work. Supported by the results of interview activities with several informants who concluded that a) the material delivered in schools was less relevant to the application in the industrial world, b) lack of direction / debriefing provided by the school before students

do internship, c) apprenticeship does not run smoothly, d) lack of interaction and motivation given by the instructor to students who carry out internship.

CONCLUSIONS

Design (Design) that is in the Mechanical Engineering expertise program at SMK 1 West Sumatra in terms of the objectives of the internship program is in sufficient category and needs improvement. Provision of equipment needed by the program in the Mechanical Engineering program of SMK 1 West Sumatra in terms of preparation of engineering programs, readiness of the supervisors, readiness of instructors, supporting facilities and infrastructure and the relevance of the program are in sufficient categories and need improvement. The process (process) contained in the Mechanical Engineering skills program at SMK 1 West Sumatra in terms of the implementation of industrial engineering programs, monitoring the apprenticeship program, and obstacles to the implementation of internship are in the category of sufficient and need improvement. Results that have been achieved by the Mechanical Engineering Program of SMK 1 West Sumatra in terms of the assessment of the learning of the apprentice participants are in the sufficient category and need improvement.

REFERENCES

- Aditya, F. 2013. Analisis Pelaksanaan Praktek Kerja Industri (Prakerin) Pada Program Keahlian Administrasi Perkantoran Kelas XI SMK Negeri 4 Surabaya. Jurnal Administrasi Perkantoran. Vol 2 Nomor 1. UNESA
- Arikunto, S dan C. S. Jabar. 2009. Evaluasi Program Pendidikan. Jakarta: Bumi Aksara.
- Arifin, Z. 2009. Evaluasi Pembelajaran. Jakarta: PT. Remaja Rosdakarya.
- Depertemen Pendidikan Nasional. 2006. Standar Isi Kurikulum Tingkat Satuan Pendidikan.
- Dikmenjur. 2008. Kurikulum SMK. Jakarta : Dikmenjur.
- Doni, G. 2012 Evaluasi Program Praktek Kerja Industri di SMK Negeri 1 Plambayan. Jurnal. UNP.
- Finc, C. R and C. Jhon. 1979. Curriculum Development in Vocationaland Technical Education: Boston

- Ganefri dan Hendra Hidayat. 2013. Persepektif Kurikulum Pendidikan Kejuruan. Padang: Teknik Elektro FT UNP
- Hamalik, O. 2007. Kurikulum dan Pembelajaran. Jakarta: Bumi Aksara.
- Kuswana, S. 2013. Dasar-dasar Pendidikan Vokasi dan Kejuruan. Bandung: Alfabeta.
- Noor, D. 1997. Lingkungan. Yogyakarta: Graha Ilmu.
- Priyatno. 2009. 5 Jam Belajar Olah Data dengan SPSS 17. Yogyakarta: Andi
- Puspitasari, D. 2012. Evaluasi Pelaksanaan Program Pembelajaran Keterampilan di Sekolah Menengah Atas (SMA) 11 yogyakarta. Nomor 4. Volume 3
- Sardiman. 2008. Interaksi dan Motivasi Belajar Mengajar. Jakarta: Rajawali Pres.
- Sanjaya, W. 2008. Strategi Pembelajaran Berorientasi Standar Proses Pendidikan. Jakarta : Kencana Media Group.
- Stufflebeam, D.L, and Shinkfield, A.J. 2007. Evaluasi Theory, Models, & Aplication. United State: Jossey-Bass.
- Sudjana. 2008. Evaluasi Pendidikan Luar Sekolah. Jakarta: PT. Remaja Rosdakarya.
- Sugiyono. 2013. Statistika Untuk Penelitian. Bandung: Alfabeta
- Sugiyono. 2011. Metode Penelitian Kuantitatif, Kualitatif, dan R&D. Bandung: Alfabeta
- Tursina. 2011. Evaluasi Program Praktik Kerja Industri Luar Negeri SMK Negeri 9 Padang Dengan Model CIPP. UNP.
- Wakhinuddin, S. 2009. Evaluasi Program Pendidikan. Padang : UNP.
- Widoyoko, E. P. 2009. Evaluasi Program Pembelajaran. Yogyakarta: Pustaka Pelajar.
- Wirawan. 2011. Evaluasi Teori, Model, Standar, Aplikasi, dan Profesi Contoh Aplikasi Evaluasi Program. Depok: RT. Raja Grafindo Persada.