

Evaluation Program on the Implementation of Industrial Apprenticeship (Prakerin) in Electrical Engineering

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Abstract. This research aims to find out the evaluation program of the Industrial apprenticeship (Prakerin) in electrical engineering. This research includes on four variables of CIPP. (1). Context (a). programme planning (b). design. (2). Input (a). readiness of students (b). performance of vocational education teachers (c). Facilities and infrastructure, (3). process (a). performance students (b). performance mentors, (4). Product (a). readiness of student work. This research is a type of program evaluation research with Stake model approach. Data collection methods used are questionnaires with closed questions and frequently asked questions.

1. Introduction

Measuring the effects of apprenticeship training relative to school-based vocational training on labor market outcomes has been a challenge. The problem “arises from the fact that the two vocational routes are rarely available to young people as direct alternatives in the first place. Vocational preparation at sectoral or occupational level typically depends within any one country exclusively on either apprenticeship or full-time schooling [1]

In the apprenticeship programs, participants have a work contract, receive a salary, and are considered as full-fledged employees of a company. They spend half of their time at a company that provides learning in the workplace and the other half in a training center where they are taught the theoretical aspects of the specific trade [2]

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Program evaluation is a unit or unit of activity that aims to gather information that realizes or implements a policy, takes place in a continuous process, and occurs within an organization that involves a group of people for decision-making. Program evaluation aims to know the achievement of program objectives that have been implemented. Furthermore, the results of the program evaluation are used as the basis for carrying out follow-up activities or for subsequent decision making [4].

The progress of a nation will be determined by the quality of its future generations. To create a formidable generation, it is the core time for development not only oriented to the physical things alone. Rather to human development as a driving factor of development.

Vocational education is growing in line with the development of demands Society, through two social institutions. First, social institutions in the form of job structure with the organization, the division of roles or duties, and behaviors related to the selection, acquisition and stabilization of careers. The second



social institution, in the form of education with its double function, is as a media of cultural preservation as well as the media of social change [5].

This policy requires both the school and industry to jointly develop the concept, it is intended that there is a suitability between school and industry. Suitability is meant that the competence gained by students in school is a required competence in the industry. Industry must also play an active role in conveying technological progress to the school so that synchronization between the industrial world and the world of education. Double system education policy is operationalized in the form of Apprenticeship (Prakerin).

Apprenticeship(prakerin) is basically a form of education that involves students directly working in the business world / industrial world so that learners have competencies that match the expectations and demands of the business world / industrial world. In addition, also to obtain work experience as one of the things to improve professional skills. The term Prakerin is not a new thing in the world of education in Indonesia, especially for vocational education or Vocational High School (SMK). This prakerin began popularized in 1994 through the Double Systems Education policy. This is well-founded considering that the industrial world requires a qualified workforce and experts in its field to operate advanced equipment and technology.

The purpose of Prakerin's implementation is to improve the quality of Vocational High School graduates (SMK), both knowledge, skills and work ethics in accordance with the demands of employment, so that SMK graduates are ready to enter the labor market. But in reality the type of expertise and the number of graduates produced by SMK has not been in line with the demand of the labor market

2. Methods

This research categorized as evaluative type, with quantitative descriptive approach. Quantitative descriptive in program evaluation is used to collect, describe and explain the aspects that have been evaluated [6]. The evaluation model used is an evaluation model developed by Stake. Stake Model Evaluation emphasizes the implementation of two main things, namely to do description and judgments. These two main points are obtained through an overview of the evaluation component that includes the input (antecedent), the process (transaction) and the product (outcomes) [7].

Data collection techniques is a major step in the research, because the purpose of the research is to obtain data. Without knowing the techniques of data collection, the researchers will not get the data set Data collection techniques used include:

- a. Documentation, this method is used to obtain supporting data about the description of planning and implementation of Prakerin program. The documentation includes Prakerin procedure, Prakerin participants data, list of business world / industry world which become Prakerin partner and Prakerin guidance data available in industry.
- b. Observation, this method is used to obtain data on facilities and infrastructure and the state of the school environment.
- c. Quizoner / questionnaire, a questionnaire is a set of written questions given to respondents with the intention of revealing the existing situation in the respondent self or outside the respondents who want revealed by the researcher. Conditions to be expressed by researchers is about:
 - 1) Readiness of learners, teachers' performance of productive subjects, readiness of school facilities and infrastructure.
 - 2) Performance of learners and supervisor performance during Prakerin implementation.
 - 3) Readiness of students work after the implementation of Prakerin.

The research instrument is one of the tools used to collect data. Instruments used in this study are documentation, observation and kuisoner. As a guide for collecting data in this study, the lattice is as follows:

- a. Documentation, Prakerin implementation guide, list of industries, list of learners and mentors of industry work practices in the industry.

- b. Observation is to identify the facilities and infrastructure that exist in the school.
- c. Questionnaires / questionnaires, questionnaires used in this study there are two types, namely open and closed. Closed questionnaire consists of questionnaire A for learners and questionnaire B for mentors.

3. Results

Based on preliminary observations then obtained data:

- a. Input evaluation: (a) students' readiness in very good category (100%), (b) productive teacher's performance in very good category (68.57%) and good (31.34%), (c) readiness of facilities and infrastructure in very good category (68.58%), good (25.71%) and low (5.71%).
- b. process evaluation: (a) the performance of learners in very good category (57.14%) and good (42.86%); (b) performance of the industry's best practices (71.43%) and good (28.57%).
- c. product evaluation: the readiness of students to work in very good category (65.71%) and good (34.29%).
- d. obstacles: (a) obstacles to learners, lack of direction, insistent orders, subject matter in different schools with the state of the field, (b) supervisory constraints, should guide intensively.

From the results of input evaluation found 7 mentors or 100% states readiness of learners to carry out industrial work practices including into the high or good category. A total of 11 students or 31.34% stated that the productive teachers' performance in teaching learning is included in the high or good category and as many as 24 students or 68.57% stated the performance of productive subject teachers in implementing the learning including into the category very high or very good. A total of 2 students or 5.71% stated that the readiness of facilities and infrastructure included into the low category, 9 students or 25.71% stated the readiness of facilities and infrastructure included into the high or good category and as many as 24 students or 68.58% stated the readiness of the facilities and infrastructure is included into very high or excellent categories.

The result of process evaluation got 3 counselors or 42,86% stated student's performance included into high or good category and as much as 4 counselor or 57,14% stated that student's performance included into very high or very good category. A total of 10 students or 28.57% said the supervising performance included into the high or good category and as many as 25 students or 71.43% said the supervising performance included into the category very high or very good.

Result of product evaluation got 13 students or 34,29% stated readiness of learners work included into high or good category and as much 22 student or 65,71% stated readiness of learners work included into category very high or very good.

4. Conclusion

There are still many obstacles in the implementation of apprenticeship, for the required evaluation to see the results of apprenticeship running well or not. The purpose of apprenticeship to provide students readiness in the world of work must be developed gradually.

From the evaluation data, there are still deficiencies and challenges that give effect of decreasing performance in apprenticeship implementation. Evaluation results exist to see results and data useful for subsequent decision making. So the results of this evaluation will improve the apprenticeship process and form a good output.

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