

# Electricity course on vocational training centers: a contribution to unemployment management

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**Abstract.** This study aims to determine the extent of the contribution of electricity education and training programs organized by vocational training centers in overcoming an unemployment problem. This research was conducted using the Context Input Process Product (CIPP) model evaluation approach. This research was designed by determining the classification of the success of the program implementation into 4 categories, namely, Very Good, Good, Poor, and Very Poor. The research data is presented in quantitative descriptive so that the obtained information can be understood easily. Based on the findings refer to the CIPP model, the aspect of the context in implementing the program was considered to be very good. Meanwhile, the Input, Process, and Product Aspects are in a good category. Thus, in general, the implementation of the Vocational Training Centers or Balai Latihan Kerja (BLK) Education and training program in the electricity sector can be said to run well and sufficiently contribute to overcoming an unemployment problem.

## 1. Introduction

Currently, Vocational Education and Training are being serious focus *discussion* [1]. This can be seen from various government policies related to vocational education especially in vocational education outside of school, such as those held by the Vocational Training Center or Balai Latihan Kerja (BLK). Some programs organized by BLK are called job training programs, product development, and entrepreneurship training. In general, the Job training program is held adaptively to changes in the needs of the labor market in a relatively short period of time, so it is a place to build the pillars of the profession and competence of Indonesian workers [2].

BLK is known to hold a training program that has a function to produce experts in many sectors such as automotive, electrical, and machinery and various other fields. BLK has considerable potential to solve socio-economic problems like unemployment problem by creating experts in various fields. This condition is caused by the impact of holding training and self-actualization which can have a positive effect on work motivation and work involvement [3]. This assumption is the Government's policy basic to



solve the overcoming unemployment problem through BLK in the regions, including Special Region of Yogyakarta.

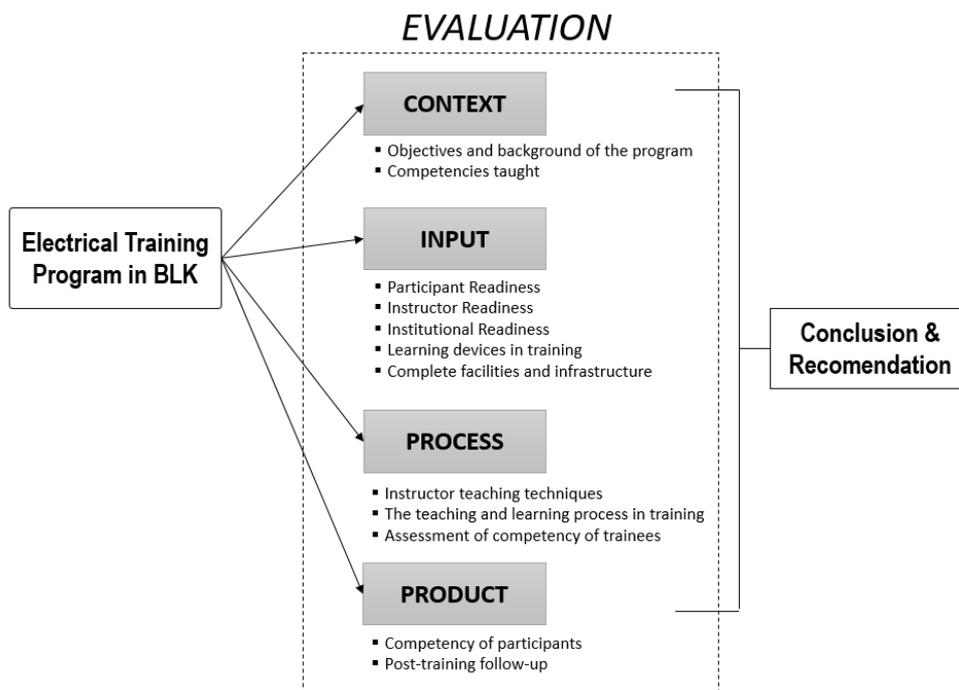
In Special Region of Yogyakarta, The 2016 Sakernas data shows that the productive age unemployment is still at a high level which is 9.14% [4]. Meanwhile, through BLK, the Regional Government organizes skills training programs, especially in the technology for the electrical field. That means, there are expectations of the program implementation to solve and face the problem [5].

Good training requires effective management skill [6]. This indirectly requires measurable and sustainable program implementation control. The aim of leadership skills among technical and vocational educators is to prepare them for effective organizations. Because, a praxis training program can only be held above the maturity of concepts that are relevant to the progress of knowledge, and knowledge requires the ability to respond a change and constant adaptation [7].

The argument above is the reason why information is needed for program sustainability, and the most appropriate way is to conduct an evaluation [8]. Evaluation is directed towards everything related to the process of organizing the BLK electrical training program in Special Region of Yogyakarta. The results of the study in the form of an evaluation summary can be used as a consideration for the continuity of the electrical education and training program. If the evaluation results show positive things that are in accordance with the objectives behind the program implementation, then the program can continue running. But if there are many irregularities or things that are not in accordance with the objectives, the education and training program can be repaired and developed, or even dismissed if the implementation is deemed harmful.

## 2. Method

This research is an evaluation approach using the Context, Input, Process, Product (CIPP) model introduced by Stufflebeam. CIPP is very appropriate to be applied to evaluate a non-formal education program that is sustainably carried out. This is due to the general syntax of CIPP which strongly supports evaluators to obtain whole information. Furthermore, the obtained information complexity is very useful to be used as material to guide the program sustainability decisions. Based on the CIPP model, evaluation of the electrical training program at the BLK can be seen as shown below.



**Figure 1.** Flow of BLK electrical field training evaluation

Data collection in this study was conducted by surveying 127 training participants who had completed the training program 1 year earlier. The survey of alumni training was intended to obtain information about their perceptions of the programs they had participated in. The perception in question is the assumption of participants on the competencies they get after attending the training. Meanwhile, the range of one year to start the evaluation is assumed to be the grace period for the training alumni to utilize the skills gained from the training.

Furthermore, the information obtained from the survey will be adjusted with reference to the success of the training program. The success criteria of the training program used refer to the assessment criteria developed by Azwar [9]. Component assessment criteria can be seen as shown in table 1 below:

**Table 1.** Assessment criteria

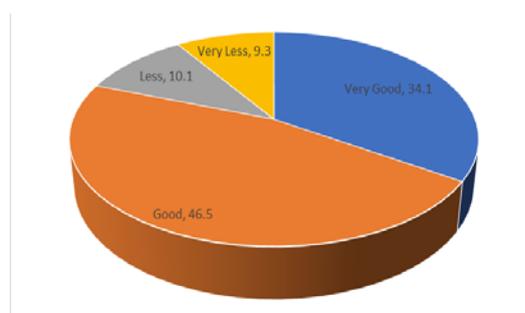
Score Range	Category
$X < Mi - 1.5 Sdi$	Very Not Good
$Mi > X \geq Mi - 1.5 Sdi$	Not Good
$Mi + 1.5 Sdi > X \geq Mi$	Good
$X \geq Mi + 1.5 Sdi$	Very Goog

Noted:

- Mi = The ideal Mean that can be achieved by the instrument  
 =  $\frac{1}{2}$  (highest score + lowest score)
- Sdi = Ideal standard deviation that can be achieved by the instrument  
 =  $\frac{1}{6}$  (highest score – lowest score)
- X = Score achieved

### 3. Results

The evaluation that has been carried out in this study shows that the evaluation results are quite complex according to the evaluation model adopted. Based on the syntax that has been compiled, in total there are 12 factors with 37 indicators evaluated. In the Context aspect, the factors in this study include; 1) the purpose and background of the program's implementation, 2) the suitability of the material taught with the needs of the workforce with 6 evaluation indicators. Input aspects include; 1) participants' readiness, 2) instructor readiness, 3) readiness of the organizing institution with 16 indicators. Process aspects include; 1) instructor teaching techniques, 2) teaching and learning processes in training, 3) implementation of evaluation of learning outcomes of trainees with 9 indicators. Product aspects include; 1) competency of trainees, 2) follow-up post training implementation with 6 indicators. In general, the results of the evaluation of training in the BLK electricity field can be seen in Figure 1.



**Figure 2.** Survey results of participants

Based on Figure 2 it is known that the electricity training program in general can be said to be relatively good. The data is obtained from the accumulation of each indicator that is used as a reference in the aspect of CIPP evaluation, namely Context, Input, Process and Product. Furthermore, the success criteria for each aspect are combined as a general assessment of the BLK electricity field training program that has been implemented. The evaluation results in each aspect of this program can be seen in table 2.

**Table 2.** General evaluation results

	Aspect	Level of success (%)			
		Very Good	Good	Not Good	Very Not Good
Electrical Program Training in BLK	Context	59.1	32.3	2.4	6.3
	Input	18.1	48.8	24.4	8.7
	Process	46.4	45.1	2.2	6.3
	Product	15	64.6	18.1	20.5

Based on table 2, it is known that the response of the training participants shows a variety of assumptions. However, variations in these assumptions still show a tendency based on CIPP evaluation criteria that have been compiled as instruments for evaluating the success of the program.

### 3.1 Context

This aspect is intended to find out 2 factors, namely the purpose and the background of the program implementation and also the competencies taught in the training. The evaluation results show that this aspect tends to be considered very good by the trainees. 59.1% is a very convincing number to say that this training is very superior based on the aspect assessment of the context.

### 3.2 Input

The input aspect is intended to assess the maturity of this training plan. There are 5 factors of concern in this aspect, namely the readiness of participants, instructors, organizers, learning tools in training, as well as facilities and infrastructure. The evaluation results showed that the input from this training tended to be categorized as good with a percentage reaching 48.8% based on the perceptions of the trainees.

### 3.3 Process

The assessment of this aspect is intended to measure the effectiveness of teaching and learning activities in training. There are 3 factors of concern in this aspect, namely the techniques and teaching strategies of instructors, interactions in teaching and learning activities, as well as the measurement of trainee competency. The evaluation results show that this aspect tends to be very good even though it does not show significant differences in either category.

### 3.4 Product

This aspect is intended to measure the success of program implementation based on the training program implementation output. There are 2 factors of concern, namely the competencies possessed by the participants, as well as the follow-up carried out after the training program implementation. The evaluation results show that this aspect can be conclusively called already in the good category with a percentage of 64.6%.

#### 4. Discussion

However, one important thing is an evaluation by using the CIPP model is very efficient to obtain comprehensive information. As the originator of the CIPP evaluation theory, Stufflebeam also emphasized that the structure of the CIPP evaluation model is very suitable for identifying information on systematic sustainable programs [11].

A very good category in the context aspect shows that this training is conceptualized carefully. The objectives and background of the program are very dominant to be considered as good, while the competencies suitability with the needs of the labor market is only in the good category. It can be interpreted that the expansion of society is classified as very high on program implementation [12]. However, the good category seen in the suitability of the material indicates a decrease.

In the input aspect, especially in the participant's readiness, instructors and organizers are in a good category. Readiness is one of the most important factors to note, considering that this factor can be interpreted as the maturity of each party involved in training. [13]. This training is not in a very good category, but it is still very feasible because it has a positive trend in terms of readiness. Meanwhile, in other factors such as learning tools in training are also in the good category. This shows that in general, the participants felt that the learning tools in the training were enough to help them during the training process even though they could not be said to be very helpful [14]. In other factors, facilities and infrastructure also have the same trends as other factors in this aspect, it means that the facilities and infrastructure during the training are considered to be sufficiently represented by the training participants.

Meanwhile, in the aspects of the learning process in training, the instructor's teaching methods are in a very good category. This indicates that according to participants, the teaching approach taken by the instructor is very good. The approach used in learning is a very important factor to note because the approach is very fundamental for good learning interactions [15]. Meanwhile, in the other factors such as interaction in teaching and learning activities in training and also learning outcomes evaluation, according to the trainees, this was good enough. Based on this assumption, the training process can be said to be effective according to the trainees.

In the product aspect, there are two concern factors, namely the participant's competency and follow-up after the training program. Participant competence signifies the entire program embodiment. If participants have accordance competencies with the set targets, then the training process can be said to be effective, and vice versa [6]. Factually, it is known that these factors are in a good category, but also close with an excellent category. This situation indicates that the trainees felt that their competence had increased after attending the training [16]. Meanwhile, on the other factors, namely follow-up after the training program, participants seemed to have a somewhat different opinion. Although in general, it is still in a good category, more than a third of participants also think that the follow-up after the training is still in a poor category. There are several things that make this high assumption, one of them is because of the difficulties for participants to find work [17].

#### 5. Conclusion

The implementation of a job training program in the electricity sector is intended to contribute to overcoming the problem of unemployment. The evaluation was carried out as an effort to measure the effectiveness of the program's implementation. The evaluation result is known that the program runs well according to the criteria set. Based on the evaluation results classified as good, it can be concluded that the electricity training program at the BLK is sufficient to contribute to the response to the problem of unemployment in Indonesia. That is because the CIPP model is an approach that has characteristics to determine the quality of the program holistically.

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