Vol.2, No.1, 2019, pp. 56-61
DOI: https://doi.org/10.32698/0662

Contents lists available at Journal Redwhitepress

Journal of Educational and Learning Studies
ISSN: 2655-2760 (Print) ISSN: 2655-2779 (Electronic)

Journal homepage: http://journal.redwhitepress.com/index.php/jles



The evaluation of effectiveness on education and training program
(The Research on Diklat Increasing Added Value of Bauxite Ore Program in West Borneo)

Rangga Ramdhoany Alsyaibany
[1]Insitut Agama Islam Negeri Pontianak, Pontianak, Indonesia

Article Info

Article history:

Received Feb 13th, 2019
Revised Apr 10th, 2019
Accepted Jul 30th, 2019

Keyword:

Program evaluation
Education
Training
Reaction
Learning
Behavioural

ABSTRACT

This research aims to evaluate an education and training program in a government institution, specifically in PNT Education and Training Program of Bauxite Ore in West Borneo which is conducted every year by Pusdiklat MINERBA Bandung, Indonesia. The research purpose is to describe the effectiveness of the existing education and training program (Diklat) so that it could be improved to complete the implementation of similar programs in the future. Specifically, this research focused on measuring level of effectiveness from three aspects, which includes the reaction, learning, and potential behavioural changes aspect. The data was collected by using quantitative approach with descriptive evaluative method. There were 15 participants involved in this research. The result showed that the reaction level of participant toward the Diklat program was quite effective (63.39%). This aspect has a quite significant achievement in that there was a positive attitude of most of the participants in implementing the result of the program in workplace. Learning level of the participant increased with $\bar{x} = 0.42$ based on the pre-test and post-test result, while the measurement of potential behaviour changes level showed that the average score of participants' belief could be classified into high level (74%). In conclusion, the program had been conducted well and could be classified into effective level category.

© 2019 The Authors. Published by Redwhitepress.
This is an open access article under the CC BY-NC-SA license
(https://creativecommons.org/licenses/by-nc-sa/4.0/

Corresponding Author:

Rangga Ramdhoany Alsyaibany,
Insitut Agama Islam Negeri Pontianak
Email: ranggalucky90@gmail.com

Introduction

An education and training program, locally known as "diklat", is one of the attempts conducted by government or private sectors to educate and train the intelligence and aptitude of existing human resources. To support the program, a great APBN funds are used. For instance, a sector in Kementrian ESDM (Ministry of Energy and Mineral Resources of Indonesia) proposed 10 billion Rupiahs with plans to allocate some of the funds for the diklat agency in 2016 (Antara, 2015). Therefore, the development of the competency is hoped to maximize the work productivity and to achieve the objectives of the organization optimally. Besides, combining education concept and training elements that relate to the practice of mastering the knowledge in a relatively short period can hopefully give an effective and efficient contribution in solving workplace problems. In fact, the perception toward that hope does not always run as expected. Several previous pertinent

researchers have found some weak aspects in existing diklat program; the aspects include learning facilities, learning material, method of learning, trainers' competency and mismatch toward trainees' needs (Aftika, 2013; Sari, 2014; Huang, 2014; Rezeki, ddk, 2015). In addition, another problem was discovered by Tim-tim (2012), who concluded that the ineffectiveness of a diklat program was caused by the incompatibility between the curriculum and training needs. It can be said that lack of attention on evaluation process caused problems that hampered the effectiveness of the diklat programs. Therefore, the evaluation sector needs to be optimized.

Today, many evaluation methods have been developed with the help of education world or even consultation experts. Basically, the word evaluation has broader definition depending on its use and objectives. In this study, evaluation is defined as an assessment of a diklat program. In general, evaluation can be defined as an attempt of collecting information in investigating advantages and disadvantages of the evaluation object comprehensively. The urgency of this research was to become a supporting reference in providing accurate data in the decision making process for the improvement of the program in the future. As stated by Kauffeld (2013): It can justify the financial input made, serve for quality management purposes, provide feedback to human resource departments and trainers for improving training courses, and help to make more accurate decisions about the continuation of training courses.

In this study, the evaluation research was aimed to measure the effectiveness level of diklat program. According to Arianty (2014) a diklat program evaluation is a process used to discover whether the program has achieved the aimed result and to measure whether the program has run effectively and efficiently. Stufflebeam and Coryn (2014) stated that "the primary orientation of a context evaluation is to identify the strengths and weaknesses of some object, such as an institution, a program, a target population, or a person, and to provide direction for improvement". This means that evaluation is an activity to improve particular objects, such as institutions, programs, population targets, or individuals. It is believed that the evaluation result can fix the future problems and become a reference in making program regulation. As suggested by Stake (1975), an evaluation is a definite orientation toward program activities, and its results are used to respond to the needed party. As a result, an evaluation is conducted on a program according to its need. Specifically, an evaluation can be defined as an activity to discover, measure, and identify the success of the program, seen from the preparation process, implementation, and diklat evaluation. Moreover, Sukardi (2014) added that an evaluation is an activity that is performed carefully and is planned to discover the level of successes and failures of a program. Astin & Panos (in Stake, 1973) elucidated: "the principal purpose of evaluation is to produce information that can guide decisions concerning the adoption of modification of program".

By analyzing valid data collection process, the evaluation result that consists of its success and obstacles can be achieved. Furthermore, the result of this study is hoped to be able to contribute to the improvement of diklat agencies and their outputs in form of the quality of work productivities, work attitudes, knowledge, and work skills improvement. Considering the importance of the evaluation, it is believed that the evaluation result can fix future problems and become reference in making the program regulation onwards.

Method

This research used quantitative approach and descriptive evaluative method. Quantitative approach was implemented because it is the most suitable approach to answer the research questions of this study according to the research purposes, theories, and previous relevant researches. This study chose descriptive evaluative as the method because this method is the most suitable method to describe the findings and discussions and to communicate the results effectively, so the results can be described and interpreted accurately. This method was used to assess the effectiveness of the diklat program in regards of the objectives of the program, to describe the factual conditions as a whole, and to interpret the results' analysis obtained in form of numbers, verbal and non-verbal statements, documentations, records, and other data such as frequency distribution tables or graphs. The participants of this research were 15 persons from different Mining Bauxite Ore companies in West Borneo. The instrument for data collecting included questionnaire, observation check-list, and interview. The implementation stage of the research evaluation which was conducted by using modified Kirkpatrick model and data analysis plan can be seen in charts below.

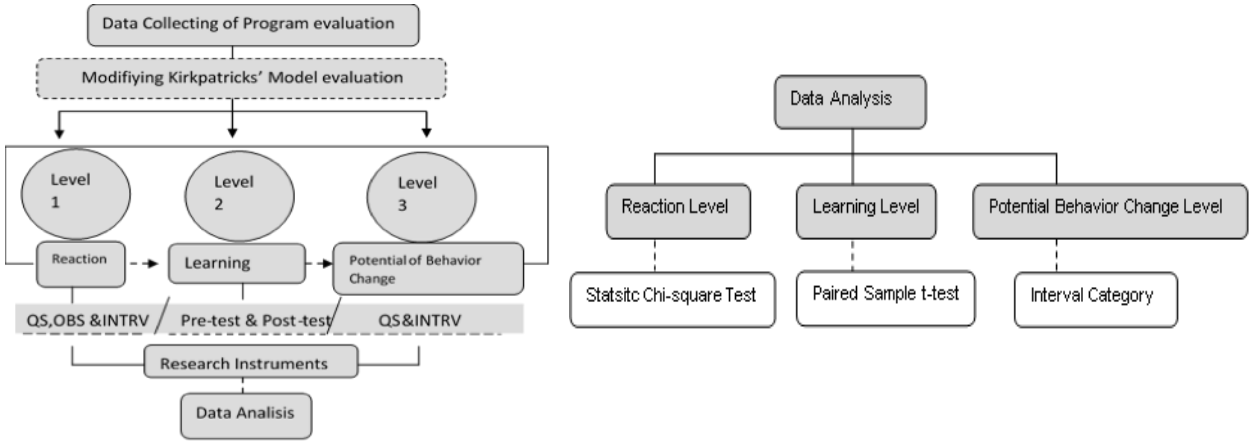


Figure 1 # Implementation of modifying Kirkpatrick Evaluation Model and Data analysis Proses
Figure used by permission ©Alsyaibany, Rangga R. 2017. Evaluasi program diklat bidang peningkatan nilai tambah biji bauksit di kalimantan barat Periode 2016.

Results and Discussions

1. Reaction level Result of Evaluation

The data recapitulation of participants' reaction was analysed by using Chi-Square statistic formula by using SPSS software. A statistic data analysis was conducted to conclude the evaluation assessment toward observation result frequency (fo) compared to expected frequency (fe). The result of Chi-Square calculation of the whole participants' reaction based on their answer choices can be seen in table below.

Table 1.1 fo Recapitulation of 15 (fifteen) Participants' Reaction toward the PTN Ore Bauxite Diklat Programe in West Kalimantan in the Period of 2016

PROGRAM COMPONENTS	Score Participants' Answer Choice					Total ($\sum fb$)
	STS	TS	N	ST	SS	
	1	2	3	4	5	
Material	0	6	17	106	32	161
Organizer performance	2	4	10	112	36	164
Instructors	0	2	28	213	87	330
$\sum fk$	2	12	55	431	155	$\sum T = 655$

Table 1.2 *fe* table (expected frequency)

PROGRAM COMPONENTS	*fe* Value of Respondents				
	STS	TS	N	ST	SS
	1	2	3	4	5
Material	0,49	2,94	13,51	105,94	38,09
Organizer performance	0,50	3,00	13,77	107,91	38,80
Instructors	1,00	6,04	27,70	217,14	78,09

Table 1.3# Chi-Square Value (x^2) of Respondents' Answer Choice

PROGRAM COMPONENTS	*Chi – square*					X^2
	STS	TS	N	ST	SS	
	1	2	3	4	5	
Material	0,491	3,154	0,896	3,346	0,976416	5,518
Facilities service	4,488	0,329	1,032	0,154	0,203338	6,208
Instructors	1,007	2,707	0,003	0,079	1,016236	4,813

$\sum X^2$ = 16,5413538

Table used by permission ©Alsyaibany, Rangga R. 2017. Evaluasi program diklat bidang peningkatan nilai tambah biji bauksit di kalimantan barat Periode 2016.

From the dk value, it was disovered that X2 tabel showed alpha value around 0,05 (5%) with 8 free degrees around 15,507. The answer to hypotheses was made by making a comparison. If X2count ≥ X2tabel, then Ho was rejected, and if X2count ≤ X2tabel , the Ho was accepted. According to the previous calculation, the chi-square (X2count) was around 16,54 and X2tabel value was around 15,507. Therefore, it can be concluded that this result showed that null hypothesis (Ho) was rejected. In other words, X2count ≤ X2tabel value was similar to 16,54 ≥ 15,507, which means that H1 was accepted as an alternative answer which proofed that there were significant differences from participants reaction toward diklat program components, such as diklat material, facilities service, and instructors.

2. Learning level Result of Evaluation

According to the above SPSS output result from Wilcoxon Rank Signed Test calculation, Z value was obtained around 3.415 with p value or Asymp. Sig. (2-tailed) around 0,001 where it was considered as less than critical limit of the research around 0,05 (0,001<0,005).

So that, the hypothesis declined H1 or it can be said that there were significant differences between participants' pre-test and post-test value of PNT Bauxite Ore Diklat Program in West Borneo in the period of 2016.

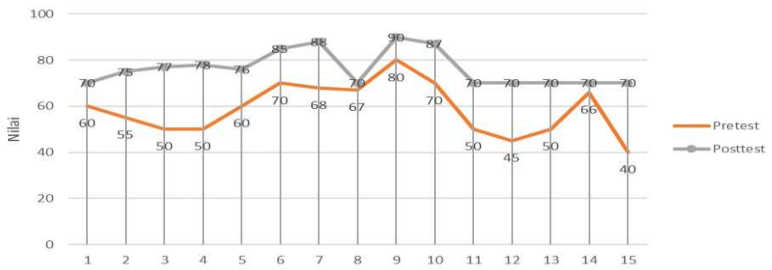


Figure 1.2 # Histogram was the whole result of pre-test and post-test value

Figure used by permission ©Alsyaibany, Rangga R. 2017. Evaluasi program diklat bidang peningkatan nilai tambah biji bauksit di kalimantan barat Periode 2016.

3. Potential of Behaviour Change

The result of the analysis on potential of behaviour changes can be seen in a chart below.

Journal of Educational and Learning Studies
Vol.2, No.1, 2019, pp. 56-61

Figure # 1.3 Potential Behaviour Changes Index
Figure used by permission ©Alsyaibany, Rangga R. 2017. Evaluasi program diklat bidang peningkatan nilai tambah biji bauksit di kalimantan barat Periode 2016.

It can be seen that the average percentage of participants' belief was > 60%, which means that the participants believed that there were behavioural changes in the workplace. To discover the participants' potential behaviour changes in the work place, 16 (sixteen) statements were used. The total 15 (fifteen) respondents obtained actual score around 888 or with $\bar{x}$ percentage value around 74,0%. Related with the result, it be concluded that the participants had potential behaviour changes in the work place, which is considered as "high", as expected from the percentage shown of potential behaviour.

From the research that has been conducted, it can be concluded that the effectiveness level of training programs of PNT Bauxite Ore in the period of 2016 is on effective level. However, based on the results of data processing and analysis that have been done, it can be interpreted that the service of the training program could be improved especially in terms of fulfilling trainees' needs like learning material and instructor; the instructors should be competent in field teaching and learning. The indicators of good quality of learning are when the material used is in accordance with the needs of the trainee (Gustina, 2015). The research has pointed out that the importance of attention to the fulfilment of trainees' demands will affect their perception toward the program. It indicates that the reaction level, whether positive or negative response, is a form of perception based on what was expected from the program. In line with the learning output, unstructured and unsystematic learning can also lead to trainee's understanding and mastery of teaching materials to decline. Previous researches also revealed that the cause or indicator that made the ineffectiveness of learning during the learning process such as limited teaching methods could also reduce the level of learning outcomes and enthusiasm of learners (Rahmawati, 2014; Badu, 2016; Rukmi, et al., 2016). In addition, the lack of teaching ability decreased the quality of learning. Regarding with the result, the level of potential behaviour change was very convincing to change. On other hand, behavioural change was also conditional on the workplace. Wong dan Wong (2015) proves that most of the challenges in evaluation at this level 3 stage are due to internal and external factors. In addition, related to level 3 evaluation results, it needs external support such as supervisor's support, work environment conditions and length of work. Other factors include internal problems, the most commonly reported of self-motivated motivation in improving performance, and self-efficacy which is their belief in their ability to perform the tasks or actions necessary to achieve the outcome of the training in workplace (Davila,et al, 2015). It means that statement given by the trainee (participants) hence also obtained another conclusion that is related to the inherent elements from inside the employee which is personality character (internal) and supporting facility (external). It is suggested that the subsequent research see further related to the measurements of the dominant factors affecting behavioural change directly into the workplace environment.

Conclusions

The research evaluation on effectiveness level in diklat for increasing added value of bauxite ore program provided the importance of evaluation role to measure whether the program ran on track or not. It can be concluded that the result of the evaluation research revealed the components of the program that needs to be optimized for further program activities especially to achieve the learning activities, learning material, and instructor/trainer competency. Besides, it should be noted that the needs analysis of each component of the training, especially in answering the needs of each trainee can affect the potential behavioural changes in the workplace. Hopefully, this result could give some references to stakeholder/manager of the diklat

institution in order to improve the regulation before they decide to design a new program for better outcome in the future.

Acknowledgments

The Evaluation of Effectiveness on Education and Training Program (diklat bidang peningkatan nilai tambah biji bauksit di Kalimantan Barat periode 2016) in Pusdiklat MINERBA Bandung presented in this paper was supported by Lembaga Pengelola Dana Pendidikan, Jakarta, Indonesia. I would like to thank LPDP for the support to finish this research project.

References

Antara. (2015b). *Dana Energi Baru 2016 Diusulkan Rp10 Triliun*. Diakses dari:http://www.antaranews.com/berita/491359/dana-energi-baru-2016-diusulkan-rp10-triliun.

Aftika, Y. (2013). *Evaluasi Efektivitas Program Pelatihan Terhadap Peningkatan Kompetensi Karyawan Pada Pt Indofood Sukses Makmur Tbk Divisi Bogasari*. (Skripsi). Fakultas Ekonomi dan Manajemen, Institut Pertanian Bogor, Bogor.

Sari, D. M. (2014). *Evaluasi Kinerja Penyelenggara Pelatihan Emergency Nursing 2 BAPELKES Batam Dalam Pemenuhan Kompetensi Aparatur Kesehatan*. Jurnal Administrasi Publik dan Birokrasi, 1-11.

Huang, dkk. (2014). *Training Effectiveness and Training Performance In A Voluntary Training Program*: Are really motivated. USA: SAGE.

Rezeki S, dkk. (2015). *Manajemen Pembelajaran Pendidikan dan Pelatihan Prajabatan Pada BKPP Aceh*. Jurnal Administrasi Pendidikan, 1-13.

Tim-Tim. (2012). *Evaluasi Pengembangan Kurikulum Diklat Di Pusdiklat Geologi Bandung*. (Tesis). Sekolah Pascasarajana, Universitas Pendidikan Indonesia, Bandung.

Kauffeld, S. (2013). Evaluating Training Programs: Development and Correlates of the Questionnaire for Professional Training. International Journal of Training and Development. Blackwell Publishing Ltd. US

Arianty, E. (2014b). *Evaluasi Pendidikan Dan Pelatihan (Diklat) Model Kirkpatrick*. Dipetik March 12, 2015, dari www.bppk.depken.go.id.

Stufflebeam, D. l., & Coryn, C. L. (2014). *Evaluation Theory, Models & Application.* San Fransisco: Jossy-Bass.

Stake, E. R. (1975). *To Evaluate An Arts Program*. Sweden: Chas Merrill.

Sukardi. (2014). *Evaluasi Program Pendidikan dan Kepelatihan*. Jakarta: PT.Bumi Aksara.

Stake, R. E. (1973). *Program Evaluation Particulary Responsive Evaluation*. New Trends In Evaluation (hal. 1-40). Sweden: SAGE Journal.

Gustina, A. (2015). *Pengaruh Kualitas Pelatihan Dan Kondisi Lingkungan Pelatihan Terhadap Efektivitas Pelatihan Disentra Pendidikan BRI Yogyakarta.* Yogyakarta: Universitas Negeri Yogyakarta.

Rahmawati, I. (2014). *Bahan Ajar Dan Hasil Belajar Pada Pembelajaran Ekonomi Di Kelas XI*. Pontianak: Universitas Tanjungpura.

Badu, S. Q. (2016b). *Impelementasi Evaluasi Model Kirkpatrick Pada Perkuliahan Masalah Nilai Awal Dan Syarat Batas*. Yogyakarta: Universitas Negeri Yogyakarta.

Rukmi, dkk. (2016b). *Evaluasi Training Dengan Menggunakan Model Kirkpatrick Di PT.Krakatau Industri Estate Cilegon.* Bandung: National Industri Enginering Conference.

Wong, P.-m., & Wong, C.-s. (2015). *The Evaluation Of A Teacher Training Program In School Management*. SAGE Publications, 385-401.

Davila, dkk. (2015). *Non-Communicable Disease Training For Public Health Wokers In Low-And Middle-Income Countries: Lessons Learned From A Pilot Training In Tanzania.* England: Oxford University Press.