



The Effect of Training Material and Instructor on the Behavior of Graduates of Teacher Academy Program with Learning Outcome as Intervening Variable (Case Study at XYZ Company)

Sally Arianita Dewi¹, Ahmad Badawi Saluy²

¹) Universitas Mercu Buana, Jakarta, dewi.sally83@gmail.com

²) Universitas Mercu Buana, Jakarta, ahmad.badawi@mercubuana.ac.id

*Corresponding Author: Sally Arianita Dewi¹

Abstract: This study aims to determine and analyze the effect of training material and instructor on the training graduates' *behavior* with *learning* outcome as an intervening variable in Teacher Academy batch 3 program at XYZ company. *Learning* outcome and *behavior* are level 2 and 3 of Kirkpatrick evaluation model. The method used in this research is descriptive quantitative research with a causal relationship approach. The population in this study is the participants of Teacher Academy batch 3 program. The number of samples in this research is 100 respondents. Data analysis is done using Structural Equation Model (SEM) with SmartPLS (Partial Least Square) 3.0. The results show that there is a positive and significant effect of training material on participants' *learning* outcome, a positive and significant effect of training instructor on participants' *learning* outcome, a positive and significant effect of training material and training instructor on participants' *learning* outcome, and a positive and significant effect of participants' *learning* outcome on the training graduates' *behavior*. *Learning* outcome can mediate the effect of training material and instructor on the training graduates' *behavior*.

Keywords: Training Material, Instructor, Kirkpatrick, Learning Outcome, Behavior

INTRODUCTION

Human resources are competitive advantage for companies because employees cannot be duplicated or imitated by the competitors. Companies evolve through their employees, so the continuous employee development is needed. An organization or institution provides training for its employees as a forum to improve quality both for the organization and for the individual employees. Furthermore, training is an effort to improve the employee skills to achieve the expected performance in an organization or company, so the employees have more skills in carrying out their work [1]. The success and the achievement of a training program must be measured by conducting an evaluation of the program. If the training program is not implemented properly, the program objectives may not be achieved.

Teacher Academy is a teaching training scholarship program to provide job opportunities to become better teachers and is held online with a reach of participants from all over Indonesia. XYZ Company itself is an Indonesian company engaged in the field of educational technology. The purpose of the Teacher Academy program is to produce qualified teacher graduates who have the potential to be recruited by XYZ company. These qualities include skills in teaching foreign languages, classroom planning and management, as well as the use of technology to support online learning. Moreover, some candidates who apply are still unfamiliar in teaching, the other candidates already have experience in teaching offline classes who still need enrichment regarding online classroom teaching strategies.

The Teacher Academy program started in mid-2021 in 2 batches. In 2021, XYZ company managed to have 1,000 graduates from the Teacher Academy program. However, this amount still did not meet the number of demands or needs for teachers at XYZ company, so XYZ company is committed to opening more batches in 2022 with a target of 2 times the number of graduates. In accordance with the initial purpose of the program, it is hoped that the program can produce more qualified teachers in teaching foreign languages, classroom planning and management, as well as using technology to support online learning.

Researchers were interested in measuring the quality of Teacher Academy training and its impact on participants through evaluation. The evaluation model that the researchers used is the Kirkpatrick evaluation model. Kirkpatrick's evaluation model consists of evaluation of reactions, learning outcome, behavior, and impacts [2]. Kirkpatrick's evaluation model is commonly used in training activities because it can be applied in various conditions and types of training and can be carried out thoroughly. Recent studies have shown that even though there are other evaluation models that were proposed later on, Kirkpatrick's model remains relevant and can be applied in various methods [3].

The initial survey conducted on 30 training participants showed that the learning outcome of participants after participating in the training needed to be improved. Also, it was found that only 30% from the participants managed to get a minimum score of 65 on the final test. Another preliminary survey found that the respondents' skills in teaching foreign languages, classroom planning and management, and the use of technology to support online learning need to be improved. On the other hand, training material and instructor are the important factors that are potential to influence the learning outcome and behavior of training graduates. Reflecting on the preliminary survey on the material and instructor of the Teacher Academy program in 2021, it showed that the quality of the material and the competence of the training instructor need to be improved.

The existing explanation is in line with previous research that training has an effect on increasing employee competence, knowledge, and skills. The previous research stated that training provided benefits for individual trainees in the form of increasing competence, satisfaction, and employee performance as well as the benefits for the organization in the form of economic growth, organizational performance, and employee retention [4]. In line with this statement, other studies have shown that training has a positive and significant effect on employee performance [5]. Employee performance is the result of work achieved by an individual that is adjusted to the role or task of the individual in a company within a certain period which is associated with a measure of value or a certain standard of the company where the individual works [6]. Furthermore, the previous research also stated that training and employee development programs have a positive impact on employees through improving technical and interpersonal skills, increasing performance effectivity, better teamwork skills, confidence in work, and work motivation [7]. In the context of teacher training, previous research stated that training has a positive and significant effect on teacher performance and competence [8]. The standard competence of a teacher includes mastery of

the material, understanding of students, educational learning, personal development and professionalism [9].

Based on the description above, it is necessary to evaluate the Teacher Academy training program batch 3 which will take place on April 1 – May 31, 2022. The evaluation model used is the Kirkpatrick evaluation model with a focus on the learning and behavior stages. In the learning evaluation stage, trainees may have successfully learned if they have undergone changes such as increasing knowledge, changing attitudes for the better and skills development. Furthermore, behavioral assessment is focused on changes in behavior after participants return to the workplace [10]. Changes in employees’ behavior should be seen after attending training in which there is enthusiasm and work motivation [11]. This study will analyze the effect of training material and instructor on the behavior of training graduates with learning outcome as an intervening variable at company XYZ.

RESEARCH METHOD

The study used a survey research design with quantitative descriptive methods with a causal relationship approach. The research location is the XYZ company with the Teacher Academy program batch 3 on April 1 – May 31, 2022. Participants accessed the learning materials and videos independently through the Learning Management System (LMS). The population is all of the participants of the Teacher Academy program batch 3 of company XYZ, the number of which is not known with certainty because of the company privacy. The sampling technique used was non-probability purposive sampling.

The determination of the sample size is carried out with the understanding that the minimum sample size is ten times the indicator of the variable with the most indicators [12]. The variable with the most indicators is the behavior variable of training graduates, totaling 9 indicators, so the minimum sample size is 90 respondents. In this study, researchers used 100 respondents. The data used are primary data by distributing Likert scale questionnaires via Google Form, and learning outcome variable is obtained from the final test scores which are converted to an ordinal scale of 1-5. The testing of the research hypothesis uses the Structural Equation Model (SEM) with SmartPLS (Partial Least Square) 3.0. Further acceptance criteria can be seen in the table of Rules of Thumb PLS [12], [13] below.

Table 1. Rules of Thumb PLS

Criteria	Parameter	Rules of Thumb
Convergent	Outer Loading	> 0,5
Validity	AVE	> 0,5
Discriminant	Fornell-Larcker Criterion	Correlation of indicators with latent variables >
Validity	Cross Loading	Correlation of indicators with other variables
Reliability	Composite Reliability	> 0,7
	Cronbach Alpha	> 0,6
Goodness of	R-Square	> 0,50
Fit	f-Square	> 0,15
Hypothesis	Path Coefficient	P-Values < 0,05
	Indirect Effect	P-Values < 0,05
Testing	T-Statistic	> 1,96 (significance level 5%)

RESULTS AND DISCUSSION

Descriptive Analysis of Research Variables

Based on the data collection that has been carried out, the result shows that the dominant respondent is female as much as 85%. The most dominant age of respondents lies in the age range of 21-30 years by 50%, ages 31-40 years by 45%, ages 41-50 years by 5%. The dominant respondent's education is 85% undergraduate education, 15% postgraduate

education. Furthermore, the most dominant foreign language teaching experience for respondents is 52% experience of less than 3 years, 28% of 3-5 years experience, and 20% of respondents have experience of more than 5 years.

The training material variable uses 3 indicators. Based on the analysis conducted on the data that has been collected, it was found that on average 36% of respondents strongly agree, 50% of respondents agree, 14% of respondents are neutral, and 0% of respondents disagree and strongly disagree. This proves that the quality of the training material provided in the Teacher Academy batch 3 program is very good. The strongest statement value according to the respondents' perception is the statement item number 1 with a percentage of 91%, while the statement item with the smallest value according to the respondents' perception is statement item number 2 at 82%. The average total score for the training material variable is 4.22 out of 5, so it is included in the very good category.

The training instructor variable uses 3 indicators. Based on the analysis conducted on the data that has been collected, it was found that on average 34% of respondents strongly agree, 57% of respondents agree, 9% of respondents are neutral, and 0% of respondents disagree and strongly disagree. This proves that the competency of the training instructor in the Teacher Academy batch 3 program is very good. The strongest statement value according to the respondents' perception is the statement item number 3 with a percentage of 95%, while the statement item with the smallest value according to the respondents' perception is statement item number 2 at 86%. The average total score for the training material variable is 4.24 out of 5, so it is included in the very good category.

The data collection of the learning outcome of the trainees uses the final test scores with five moduls taught during the training in five value categories. Based on the analysis that has been carried out, it was found that as many as 35% of respondents obtained final test scores in the range of 80-100, 56% of respondents in the range of scores of 60-79, 9% of respondents in the range of values of 40-59, 0% of respondents in the range of values of 20 - 39 and 0-19. This proves that the learning outcome of the program training participants is very good. The highest score obtained is in module 4 at 95%, while the lowest score obtained is in module 3 at 88%. The average total ordinal score for the variable learning outcome of the trainees is 4.26 out of 5 and is included in the very good category.

The data on behavior variable of training graduates was obtained using 9 indicators. Based on the data analysis, the results showed that as many as 35% of respondents stated strongly agree, 54% of respondents agreed, 11% were neutral, 0% of respondents said they disagreed and strongly disagreed. By looking at this, it proves that the behavior change of graduates from the training program is very good. The largest statement is in statement number 6 at 95%, while the smallest statement item is in statement number 8 at 82%. The average total score for the behavior variable of training graduates is 4.23 out of 5 and is classified as very good.

Validity and Reliability

This test includes testing of construct validity (convergent validity and discriminant validity) and testing of construct reliability. Both tests use the outer model. In order to test convergent validity, the outer loading value or loading factor is used. Based on the results of the analysis, it was found that each research indicator all had an outer loading value > 0.5 but in order to maximize the AVE value, the variable items with the lowest outer loading value were deleted. The final output loading value of each indicator was > 0.6 so it was declared valid. The next convergent validity test is by looking at the AVE value. Based on data processing, it can be seen that the AVE value of each research variable is more than 0.5. Thus, it can be stated that each variable has good convergent validity.

Discriminant validity can be seen by looking at the cross loading value and the Fornell-Larcker Criterion value. After processing the data, it was found that the correlation value of the latent variable with its indicators was greater than the correlation value with other variables. Thus, all latent variables have good discriminant validity.

Research reliability testing uses composite reliability. Based on data analysis, it can be seen that the composite reliability value on all research variables is more than 0.7 which shows that each variable is reliable and is included in the high category. Reliability testing is reinforced by the Cronbach Alpha value. Based on data processing, it is shown that the Cronbach Alpha value of each research variable is more than 0.6. These results show that each research variable has met the requirements of the Cronbach Alpha value. It can be concluded that all variables have a high level of reliability.

Inner Model Evaluation

Hypothesis testing is carried out based on the results of the Inner Model test which includes the output of R-square, F-square, parameter coefficients, and T-statistics. The results of the bootstrapping research model can be described as follows:

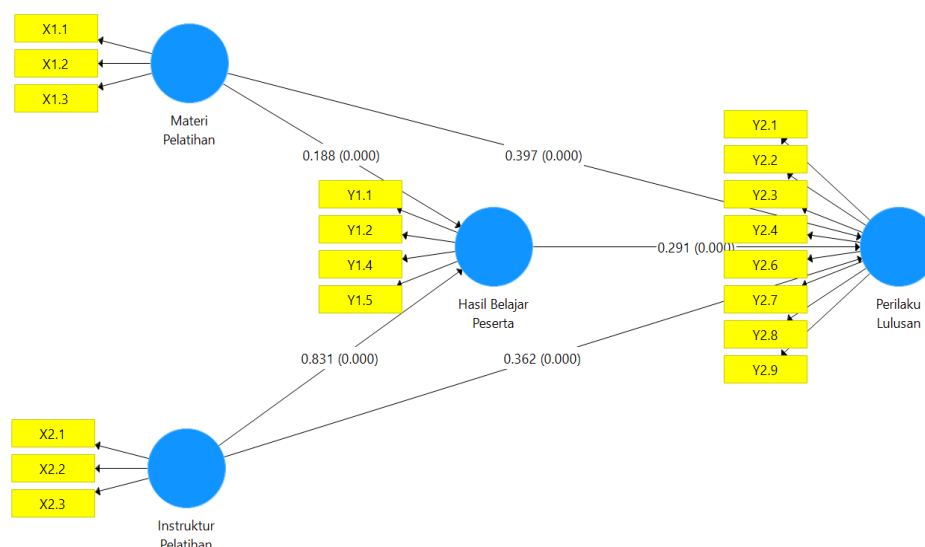


Figure 1. Inner Model

R-square is used to measure the effect of other variables on endogenous variables. Based on the data processing by SmartPLS 3.0, the obtained values are as follows:

Variable	Value of R-Square
The Trainees' Learning Outcome (Y1)	0,962
The Graduates' Behavior (Y2)	0,984

Based on the data processing, it is known that the learning outcome of the trainees is influenced by the variables of training material and training instructor by 96.2% which is in the strong category. Meanwhile, 3.8% is influenced by other not examined variables. Then, the behavior of training graduates is influenced by the variables of training material, training instructor, and learning outcome of trainees by 98.4% and is in the strong category, while the rest can be influenced by other not examined variables.

Next is to examine the F-square value which is used to measure the effect of exogenous variables on endogenous variables. Based on data processing, the following values are obtained:

Table 3. Value of F-Square

	Trainee Learning Outcome	Training Instructor	Training Material	Graduate Behavior
Trainee Learning Outcome				0,204
Training Instructor	7,874			0,405
Training Material	0,403			3,086
Graduate Behavior				

Based on the data above, it shows the F-Square value for the training material variable on participant learning outcome is in the large category of 0.403, the training material on graduate behavior is 3.086 and is included in the large category. The training instructor on participant learning outcome of 7.874 is classified as large category, the instructor training on graduate behavior of 0.405 is included in the large category, and participant learning outcome on graduate behavior of 0.204 is included in the medium category.

Hypothesis testing

The direct effect of training material and training instructor on participant learning outcome and graduate behavior, as well as participant learning outcome on graduate behavior can be seen from the path coefficient in Table 4.

Table 4. Direct Effect

Hypothesis	Effect	Original Sample	T-Statistic	P-Values	Result
H1	Training Material => Trainee Learning Outcome	0,188	5,553	0,000	Accepted
H2	Training Instructor => Trainee Learning Outcome	0,831	29,340	0,000	Accepted
H3	Training Material => Graduate Behavior	0,397	15,752	0,000	Accepted
H4	Training Instructor => Graduate Behavior	0,362	5,200	0,000	Accepted
H7	Trainee Learning Outcome => Graduate Behavior	0,291	4,288	0,000	Accepted

Based on the data processing, it can be seen that all P-Values are below 0.05 so that the correlation between variables is significant. Based on the T-Statistic, the data obtained is bigger than 1.96, which means the training material variable has a positive and significant effect on the learning outcome of the trainees, the training instructor variable has a positive and significant effect on the learning outcome of the trainees, the training material variable has a positive and significant effect on behavior training graduates, the training instructor variable has a positive and significant effect on the behavior of the training graduates, and the trainee learning outcome variable has a positive and significant effect on the behavior of the training graduates. The indirect effect of training material and training instructor on the behavior of training graduates through the learning outcome of trainees can be seen from the specific indirect effects presented in Table 5.

Table 5. Indirect Effect

Hypothesis	Effect	Original Sample	T-Statistic	P-Values	Result
H5	Material Training => Trainee Learning Outcome => Graduate Behavior	0,055	3,233	0,001	Accepted
	Training Instructor => Trainee Learning Outcome => Graduate Behavior				
H6	Training Instructor => Trainee Learning Outcome => Graduate Behavior	0,242	4,279	0,000	Accepted

Based on Table 5, the P-Values are below 0.05 so that the correlation between variables mediated by the intervening variable is significant. Based on T-Statistics, it is obtained that the calculation value is bigger than 1.96. It means that the training material can improve the application of the skills of training graduates in their work environment if they have high learning outcome, and training instructor can improve the application of the skills of training graduates in their work environment if they have high learning outcome.

Result and Discussion

Based on the results of the study, it was found that the training material has a significant and positive effect on the learning outcome of the 3rd batch Teacher Academy training participants. The better quality of the training material, the better the training learning outcome. The results of this study are supported by the other studies which state training material has a significant and positive effect on the learning outcome of trainees [14]. Training material is an essential part of any activity that involves knowledge acquisition and retention. Good training material must be in accordance with the training objectives, clear contain and comprehensive content, and can be applied in real work situations so that trainees can gain good knowledge and understanding of the training content.

The results also show that the training instructor has a significant and positive effect on the learning outcome of the Teacher Academy training participants in batch 3. The better the competency of the training instructor, the better the learning outcome of the trainees. This is supported by the previous research which states that the training instructor has a positive and significant effect on the learning outcome of trainees [15]. Instructor competence is important so that the training process can be carried out properly. In addition to a strong educational background and experience, a competent instructor must master the materials presented, be able to explain the material in a good way for the participants and be able to answer participants' questions comprehensively.

The training material has a significant and positive effect on the training behavior of Teacher Academy batch 3. The results of this study are in line with other studies which state that training material has a positive effect on the behavior of training graduates [16]. In addition, the results of this study support research conducted by Gutara showing that training material has a positive and significant effect on the behavior of training graduates [9]. The better the quality of the training material, the better the behavior of the training graduates when they return to their work environment. Training materials that can provide contextual and practical examples will be easily applied by training graduates in their work environment.

Testing the fourth hypothesis shows that training instructor has a significant and positive effect on the behavior of training graduates of Teacher Academy batch 3. This result is in line with other studies which show that training instructor has a significant and positive effect on the behavior of training graduates [16], [17]. The better the competency of the

training instructor, the better the behavior of the training graduates when they return to their work environment. In training sessions, participants often encounter various implementation problems that may be encountered in the work environment and ask the instructor about the best solution. A competent instructor provides comprehensive advice and best practices based on their experience. Later on, the participants and the training graduates are expected to implement or develop the best practices to their work environment.

Testing the fifth hypothesis shows that learning outcome can mediate the effect of training material on the behavior of training graduates. Learning outcome act as partial mediation where training material can improve the application of training graduates' skills in their work environment if they have high learning outcome. The results of the sixth hypothesis test indicate that learning outcome can mediate the influence of training instructor on the behavior of training graduates. Training instructor can improve the application of the behavior of training graduates in their work environment if they have high learning outcome. The results of the seventh hypothesis test show that the learning outcome of the trainees have a significant and positive effect on the behavior of the graduates of the Teacher Academy training batch 3. The better the learning outcome of the trainees, the better the behavior of the training graduates when they return to their work environment. Learning outcome and behavior are stages 2 and 3 of Kirkpatrick's evaluation model [18]. The results of this study support the concept of Kirkpatrick's evaluation model where all the evaluation stages are interconnected, so that learning outcome have a positive and significant effect on the behavior of training graduates.

CONCLUSIONS

Reflecting on the results of the existing research and presentations, several conclusions can be drawn, namely there is a positive and significant effect of training material on the learning outcome of Teacher Academy participants in batch 3, there is a positive and significant effect of training instructor on the learning outcome of Teacher Academy participants in batch 3, there is a positive and significant effect of training material on the behavior of Teacher Academy batch 3 graduates, there is a positive and significant effect of training instructor on the behavior of Teacher Academy batch 3 graduates, there is a positive and significant effect of training material on the behavior of training graduates mediated by learning outcome, there is a positive and significant effect of training instructor on the behavior of training graduates mediated by learning outcome, there is a positive and significant effect of participants' learning outcome on the behavior of Teacher Academy graduates in batch 3.

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