



# Jurnal Pendidikan Edutama

Volumes 12 Number 1 January 2025  
P-ISSN: 2339-2258 | E-ISSN: 2548-821X  
IKIP PGRI Bojonegoro

## Evaluation the Effectiveness of Training Program in Change Management for Indonesian Teachers

Noviah Dwi Putranti<sup>1\*</sup>, Usman Radiana<sup>2</sup>

<sup>1</sup>Fakultas Keguruan dan Ilmu Pendidikan Universitas Tanjungpura, Indonesia

<sup>2</sup>Fakultas Keguruan dan Ilmu Pendidikan Universitas Tanjungpura, Indonesia

<sup>1\*</sup>[noviahdwiputranti@gmail.com](mailto:noviahdwiputranti@gmail.com); <sup>2</sup>[usman.radiana@fkip.untan.ac.id](mailto:usman.radiana@fkip.untan.ac.id)

### \*Corresponding Author

#### Keywords

Change Management,  
Kirkpatrick, Training  
Effectiveness

#### Abstract

The purpose of the study is to evaluate the responsive continuous teacher training program's efficacy. The study provides substantive contributions to education policy makers, because the evaluation findings help improve the quality of teacher training to be more relevant and adaptive. Using quantitative research, an experimental approach, subjects were randomly selected from 40 teachers from 12 high schools in South Pontianak District which have 7,001 students, 207 study groups and 365 teachers. Validity data were collected using valid and reliable questionnaire instruments. Using both descriptive and inferential statistical methods, the gathered data was analysed, using SPSS for hypotheses. Success focuses on improving the pedagogical skills of educators. Kirkpatrick's evaluation model feedback shows that the effectiveness of the teacher training program has increased to 89.90 with a classical completeness of 90%. Teachers in the training program showed an increase in the quality of teaching.

This is an open-access article under the [CC-BY-SA](https://creativecommons.org/licenses/by-sa/4.0/) license.



## Introduction

Training programs as one of the important elements in educational change management have significant relevance in improving the effectiveness of the educational process. The success of training programs is frequently impacted by various factors, such as the quality of the training materials and how well they align with the participants' needs. Pedagogical training greatly enhances teachers' teaching skills in a positive way (Hasibuan et al., 2023). Evaluation of teacher training programs shows improvements in teaching skills that have positive implications for student academic achievement. (Hasibuan et al., 2023). A competency-focused education and training management system provides more optimal results in improving teacher skills. (Julifan, 2017). Evaluation of training using the Kirkpatrick model can identify areas that need improvement, thereby increasing the overall effectiveness of the training (Nisa et al., 2023). Training programs must prioritize the principles of inclusion and diversity (Kraft et al., 2018). Educational training needs to be accompanied by data-based evaluation (Darling-Hammond & Zuckerman, 2020). Thus, increasing the effectiveness of training programs in the context of change management requires a continuous evaluative approach focused on improving pedagogical quality.

Ongoing evaluation and use of feedback from training participants are key elements in improving the effectiveness of training programs (Guskey, 2002). Applying the Kirkpatrick evaluation model to assess training programs demonstrates greater effectiveness when the evaluation outcomes are used to continuously refine the program (Fakhruddin, 2022). Systematic human resource development through training can improve the image and effectiveness of educational institutions (Mukhlison Effendi, 2021). The role of training is not only to improve skills but also to contribute significantly to teachers' career development (Maulyan, 2019). Effective training in educational change management must be tailored to the specific context of the school or educational institution (Fullan, 2016). In conclusion, increasing the effectiveness of training programs in educational change management is achieved through systematic evaluation and implementation of strategies that are relevant to real needs in the field.

Management of Change is a structured and systematic process and approach used to help individuals, teams and organizations by applying knowledge, tools and resources to realize changes from current conditions to new, Improved conditions are implemented effectively and efficiently to reduce the impact of the change process (Kristanti et al., 2023). The main aim of the training is to support teachers in grasping the changes, but also integrate those changes into their teaching practices effectively (Hammond et al., 2017). One of the difficulties in teacher preparation is the absence of technological integration (Borko et al., 2016). Evaluation of the training program showed an increase in teaching skills and student academic achievement when training is designed and implemented effectively (Kuswara, 2024b). However, training is often not tailored to the specific needs of teachers, thus reducing its effectiveness. (Julifan, 2017) highlighted that targeted and relevant competency-based training can significantly

improve teacher performance. Therefore, a tailored approach is needed for each group of teachers so that training results are more optimal.

An effective training program in change management emphasizes not only improving individual competencies, but also implementing comprehensive changes in the educational environment (Nisa et al., 2023) revealed that training evaluation with the Kirkpatrick model can provide more comprehensive insights investigating how training affects the effectiveness of teachers and the institution as a whole. The success of training lies in the ability to adapt the program to the specific conditions and challenges of each school (Maulyan, 2019). In conclusion, to achieve success in change management through training, It demands the active engagement of all parties in the continuous evaluation and enhancement of training programs.

Researchers have conducted an in-depth review of previous studies that focus on the evaluation and development of teacher training. One study highlights how training programs can improve teaching skills and student academic achievement, and shows that the management aspect of training is a key factor in implementing educational change (Kuswara, 2024b). Studies on the effectiveness of competency-based education and training management indicate that this approach is crucial for teacher professional development (Julifan, 2017). Other studies focus more on utilizing Kirkpatrick's evaluation model to assess the success of training programs, offering insights into the attainment of training objectives within an institutional framework (Fakhrudin, 2022). However, each of these studies has not explicitly focused on training optimization in the context of change management, especially holistic change in complex educational environments. The role of training flexibility in responding to school-specific challenges, which is relevant in strengthening change management (Maulyan, 2019). The notes on the independent learning movement highlight the significance of the participatory involvement of all parties in the training process, aligning with the critical need for collaboration in change management (Milaini et al., 2023). Although previous studies have discussed key elements of training and management, there is still a large research gap regarding a holistic and adaptive approach in implementing training to support strategic change management in schools. To fill this gap, this study seeks to assess and create more effective training strategies that address the unique requirements of educators in efficiently and sustainably managing educational change. Offering efficient training programs will provide educators the tools they need to adjust to and oversee changes in the classroom. An important key to ensuring the sustainability and effectiveness of education that is responsive to the demands of the times. The research was conducted on 40 teachers from 12 high schools in the Pontianak Selatan sub-district for 6 months (January-June 2024). This area was chosen because it has a representative number of high schools and can represent the conditions of teachers in the area.

**Table 1.** Senior High School Data in South Pontianak District (Kemdikbudristek, 2024)

No	School name	NPSN	Status	Learners	Class	Teacher
1.	SMA Negeri 1 Pontianak	30105210	Country	1283	35	62

No	School name	NPSN	Status	Learners	Class	Teacher
2.	SMA Negeri 10 Pontianak	30109801	Country	802	23	45
3.	SMA Negeri 3 Pontianak	30105212	Country	1093	31	66
4.	SMA Negeri 7 Pontianak	30105205	Country	886	25	48
5.	SMA Katolik Santu Petrus Pontianak	30105074	Private	965	26	39
6.	SMA Kristen Alam Kudus Pontianak	70030285	Private	30	3	3
7.	SMA Abdi Wacana Pontianak	30105193	Private	61	3	11
8.	SMA Kristen Immanuel	30105064	Private	1004	28	48
9.	SMAS Mujahidin Pontianak	30105067	Private	734	23	28
10.	SMAS Sultam Syarif Abdurrahman	30105192	Private	41	3	2
11.	SMAS Wisuda Pontianak	30105207	Private	48	3	4
12.	SMAS YPK Pontianak	30105208	Private	54	3	9
<b>TOTAL</b>				<b>7,001</b>	<b>207</b>	<b>365</b>

Based on the data in table 1. Pontianak Selatan District has 12 senior high schools consisting of 4 public schools and 8 private schools, with 7,001 students, 207 study groups and 365 teachers. This study offers a valuable contribution to education policymakers through evaluation results designed to enhance the quality of teacher training, making it more relevant and adaptable to changes in the education landscape. Given that change is an inevitable element, effective training is needed so that teachers can develop appropriate and sustainable response strategies. The urgency of this study lies in the urgent need to facilitate better change management in schools through evidence-based training programs and systematic evaluation. This study fills the gap in understanding the design of training strategies that can directly address the challenges faced by teachers, consistent with earlier findings regarding the significance of a comprehensive and flexible approach. By pinpointing and creating relevant training strategies, by improving change management at the school level, this project hopes to create a more vibrant and welcoming learning environment. The results of the study are anticipated to add to the existing literature on training within the context of change management and offer practical guidance for policymakers in developing training programs to address future educational challenges.

## Method

### Research design

This study uses an experimental, quantitative methodology to assess the efficacy of a change management training program for educators using the Kirkpatrick assessment model. The participants in this study were teachers involved in a change management training program at high schools in the Pontianak Selatan sub-district. The research design uses an experimental design.

## Population and sample

Population in this research is teachers in a particular school. Sample in this research is 40 teachers comprising Twenty teachers were assigned to the experimental group, while another twenty teachers comprised the control group. The sampling method was purposive.

## Instrumentation

The pretest and posttest consist of assessments of teaching skills and 20 multiple choice questions to measure abilities before and after training. Kirkpatrick's model-based questionnaire to assess responses, learning, behaviour, and results.

## Implementation procedure

The training program was implemented for 5 days, followed by a post-training evaluation.

## Data analysis

### Descriptive analysis

Determine the pretest and posttest scores' mean, median, mode, and standard deviation. Present data in tables for visualization.

### Inferential statistics

Analysing and contrasting the experimental group's pretest and posttest results with those of the control group using the t-test.

### Apply of SPSS

Data is input into SPSS, analysis is carried out through the statistical analysis menu to acquire reliable outcomes.

The indicators of achievement in this study are the improvement of teachers' teaching skills, feedback from the Kirkpatrick evaluation model, and the level of active involvement of training participants in the change management process. The program evaluation model used is the Kirkpatrick model, which is commonly utilized worldwide to assess the effectiveness of training. The Kirkpatrick model encompasses four stages: initial response, knowledge acquisition, behavioral change, and outcomes assessment.

- a. Response Evaluation. Assessing participant satisfaction using a Likert scale questionnaire to measure their level of satisfaction with the training program.
- b. Learning Evaluation. Assess the learning achievement of participants by determining how participants achieve learning targets.

- c. Behavioral Evaluation. Focus on changes in participant behavior after they return to the workplace.
- d. Evaluation of Results. Concentrates on the ultimate outcomes attained from participants' involvement in the training program (Alamsyahril, 2020).

This model aims to offer a complete overview of the effectiveness of teacher training within the framework of educational change management.

## Results and Discussion

### Results

The study sample was randomly selected from 40 high school teachers in the Pontianak Selatan sub-district, to measure the change management skills of teachers after receiving training. There were 2 sample groups, the experimental group (20 teachers) was the group that received the research treatment, the way teachers in the experimental group followed a change management training program designed to improve their skills in dealing with and managing change in the educational environment. The control group (20 teachers) was the group that did not receive the research treatment, namely not following the change management training program and continuing their usual routines without any extra intervention.

**Table 2.** Level of Implementation of Teacher Training

Number of meetings	1 <sup>st</sup> Day	2 <sup>nd</sup> Day	3 <sup>rd</sup> Day	4 <sup>th</sup> Day	5 <sup>th</sup> Day	Average (%)
Average (%)	100%	93%	94%	89%	100%	95.2%
Category	Excellent	Excellent	Excellent	Good	Excellent	Excellent

Table 2 shows that the level of implementation of the 5-day teacher training was carried out very well, with an attendance rate of 89% to 100%. The categories used in table 2 are as follows:

- a. Category score > 90 – 100 Excellent
- b. Category number > 80 – 89 Good
- c. Category number > 70 – 79 Good Enough
- d. Category number > 60 – 69 Poor
- e. Category number < 60 Very Poor

**Table 3.** Criteria for Teaching Competence

No	Grade	Category
1	$1.00 \leq \text{\_value} \leq 1.75$	Poor
2	$1.75 \leq \text{\_value} \leq 2.50$	Poor

No	Grade	Category
3	$2.50 \leq \text{\_value} \leq 3.25$	Good
4	$3.25 \leq \text{\_value} \leq 4.00$	Excellent

**Table 4.** Assessment of Experimental Group Teaching Skills Before and After Training

Competence	Skills					Average Rating	Assessment Category
	1	2	3	4	5		
Pretest	3.0	2.9	3.2	2.7	2.8	2.94	Good
	0	0	5	5	0		
Post Test	3.6	3.6	3.7	3.5	3.5	3.61	Excellent
	5	0	5	0	5		

**Table 5.** Assessment of Teaching Skills Before and After in the Control Group

Competence	Skills					Average Rating	Assessment Category
	1	2	3	4	5		
Pretest	3.00	2.90	3.00	2.75	2.80	2.89	Good
Post Test	3.20	3.00	2.90	2.90	3.00	3.00	Good

The assessment categories used in tables 4 and 5 are based on table 3, while the skill competencies are based on the following criteria:

- a. Number 1 is basic teaching skills
- b. Number 2 is pedagogical competence
- c. Number 3 is the skill of asking questions
- d. Number 4 is the skill of making variations
- e. Number 5 is classroom management skills.

The study's results indicated that teachers made improvements in their teaching skills after participating in a change management training program. The average score on the teaching skills test that was administered before and after the training increased, indicating this. If teacher training outcomes satisfy these requirements, they are considered successful.

- a. Descriptively
  - (1) The average score of teacher training results from the knowledge aspect for post-test questions reached the completion value.  $\geq 80$  and from the aspect of teaching skills, the completion value is  $> 2.50$  with a good category.
  - (2) The average normalized gain is at least in the medium category
  - (3) The classical teacher completion rate is more than 85%.
  - (4) Positive feedback from training participants achieved satisfaction.
  - (5) Evaluation of training effectiveness by comparing direct assessment of training with the abilities of teachers as participants.
  - (6) Achievement of training objectives at the evaluation level.

(7) Follow-up and support after training is completed.

**Table 6.** Descriptive Statistical Analysis of Teacher Training Results

	Descriptive Analysis					
	N	Range	Minimum	Maximum	Mean	Std. Deviation
Pre Test Experiment	20	49	40	89	64.80	12,714
Post Test Experiment	20	28	70	98	83.90	7,055
Pre Test Control	20	49	34	83	69.55	11,441
Post Test Control	20	25	60	85	74.80	6,630
Valid N (listwise)	20					

Descriptive analysis derived from teacher training results, based on responses to a 20-question questionnaire from the pre-test and post-test scores, is presented in Table 6.

**Table 7.** Completion of Teacher Training Results

	Minimum Completion Value	Experimental Group		Control Group	
		Completed	Not Completed	Completed	Not Completed
Pretest	80	2	18	3	17
Pretest Completion Percentage (%)	85	10	90	15	85
Posttest	80	18	2	8	12
PostTest Completion Percentage (%)	85	90	10	40	60

Table 7 shows that there is a relationship between the criteria for achieving the minimum knowledge completion value (80). This allows it to be divided into two groups in the experimental and control groups: complete and incomplete. The completion of teachers in the classical way who participated in the training was 90% complete.

#### b. Inferentially

The hypothesis test of learning outcomes (Posttest and NGain) was analyzed using the One Sample t-test by testing each hypothesis as follows:

(1) The typical measure of students' academic achievements for the posttest reached a minimum passing score of 80.

$$H_0: \mu = 79.9 \text{ against } H_1: \mu > 79.9$$

$H_0$  is a sample taken from a population with a normal distribution.

$H_1$  is a sample taken from a population that is not regularly distributed.

$\mu$  is the parameter of the average score of teacher training results

(2) The average normalized NGain is at least in the medium category ( $>0.3$ )

$$H_0: \mu = 0.29 \text{ vs. } H_1: \mu > 0.29$$

$H_0$  is a sample taken from a population with a normal distribution.



$H_1$  is a sample taken from a population that is not regularly distributed.

$\mu$ : the parameter of the average score of the normalized Gain of the students.

Normality is satisfied when the test results do not reach statistical significance at a given confidence threshold ( $\alpha$ ) (Usually  $\alpha = 0.05$  or  $0.01$ ). Conversely, if the test results are significant then normality is not met. The way to find out whether the normality test results are significant or not is by paying attention to the numbers in the significance column (Sig.). The applicable criteria are as follows.

1. Set the level of significance of the test, for example  $\alpha = 0.05$
2. Compare  $\alpha$  with the significance level (Sig.) obtained.
3. If  $\text{Sig.} > \alpha$ , then the sample comes from a normally distributed population.
4. If  $\text{Sig.} < \alpha$ , then the sample does not come from a normally distributed population.

**Table 8.** Normality Test of Training Result Data (Post Test and PreTest) Knowledge Aspect

	Tests of Normality					
	Kolmogorov-Smirnova			Shapiro Wilk		
	Statistics	df	Sig.	Statistics	df	Sig.
Pre_Test	.156	20	.200*	.967	20	.694
Post_Test	.260	20	.001	.919	20	.095

The results in table 8 after the normality test (kalmogorf-smirnov) obtained a significance of 0.200 for the pre-test value and 0.001 for the post-test value. In the normality test (Shapiro-Wilk) obtained a significance of 0.967 for the pre-test value and 0.919 for the post-test value. If the significance  $> 0.05$ , then the sample comes from a normally distributed population.

**Table 9.** Normality Test of Training Result Data (Posttest and Pretest) Teaching Practice Aspect

	Tests of Normality					
	Kolmogorov-Smirnova			Shapiro Wilk		
	Statistics	df	Sig.	Statistics	df	Sig.
Pre_Test_Skills	.181	5	.200*	.923	5	.547
Post_Test_Skills	.141	5	.200*	.979	5	.928

The results in table 9 after conducting a normality test (kalmogorf-smirnov) on 20 teachers based on 5 categories of teaching skills. obtained a significance of 0.200 for the pre-test value and 0.200 for the post-test value. In the normality test (Shapiro-Wilk) obtained a significance of 0.923 for the pre-test value and 0.979 for the post-test value. If the significance  $> 0.05$ , then the sample comes from a normally distributed population.

**Table 10.** One-sample test PostTest Aspect of Teaching Skills Practice

One Sample Test						
Test Value = 2.5						
t	df	Significance		Mean Difference	95% Confidence Interval of the Difference	
		One-Sided p	Two-Sided p		Lower	Upper

Post_Test_Skills	25,807	4	<.001	<.001	1.11000	.9906	1.2294
------------------	--------	---	-------	-------	---------	-------	--------

Table 10 shows the results of the one sample t-test for the posttest data, indicating that  $0.0005 < 0.005 = \frac{p\text{-value (two tailed)}}{2} = \alpha$ , so  $H_0$  rejected. This means that the results of teacher training after the teaching skills learning process reached the Minimum Completion Value (2.5).

**Table 11.** Normality Test of Training Result Data (Post Test and NGain) Knowledge Aspect

	Kolmogorov-Smirnova			Shapiro Wilk		
	Statistics	df	Sig.	Statistics	df	Sig.
_Test	.260	20	.001	.919	20	.095
NGain_Score	.151	20	.200*	.964	20	.626

Table 11 shows the results of the normality test, which obtained a significance of  $> 0.05$ , meaning the sample came from a normally distributed population.

**Table 12.** One sample test PostTest Knowledge Aspect

One Sample Test							
Test Value = 79.9							
	t	df	Significance		Mean Difference	95% Confidence Interval of the Difference	
			One-Sided p	Two-Sided p		Lower	Upper
Post_Test	3.106	19	<.003	<.006	4.90000	2.5332	7.2668

Table 12 shows the results of the one sample t-test for the posttest data, indicating that  $0.003 < 0.005 = \frac{p\text{-value (two tailed)}}{2} = \alpha$ , so  $H_0$  rejected. This means that the results of teacher training after the learning process reached the Minimum Completion Value (80).

## Comprehensive Examination of Response Metrics Related to Training Effectiveness Evaluation

In the first level of testing of Kirkpatrick's method, the focus is on participants' reactions after they have completed the training. Table 11 below shows the frequency distribution of a study that included 10 questions for 20 respondents.

**Table 13.** Evaluation of Reaction to Training Effectiveness

No	Statement	Answer					N	Overall Score	Average	TCR (%)	Category
		STS	TS	N	S	SS					
		1	2	3	4	5					
1.	How do you feel about the independent learning training materials delivered?	0	0	0	20	0	20	80	4.00	80	Good

No	Statement	Answer					N	Overall Score	Average	TCR (%)	Category
		STS	TS	N	S	SS					
		1	2	3	4	5					
2.	Is the material presented useful to you in the context of your work as a teacher?	0	0	0	0	20	20	100	5.00	100	Excellent
3.	Do you think the interactivity in training is good?	0	0	0	20	0	20	80	4.00	80	Good
4.	Is the theoretical material in the training sufficient to be implemented in real situations at school?	0	0	0	15	5	20	85	4.45	85	Good
5.	After participating in the independent learning training, did your motivation increase?	0	0	0	5	15	20	95	4.75	95	Excellent
6.	The topics presented are relevant to you in the context of implementing independent learning in schools?	0	0	0	2	18	20	98	4.90	98	Excellent
7.	Is the support of facilities and infrastructure provided during training good?	0	0	0	5	15	20	95	4.75	95	Excellent
8.	Do you feel that this training has provided you with sufficient tools and strategies to implement change management in your school?	0	0	0	3	17	20	97	4.85	97	Excellent
9.	Are you satisfied with the implementation of this change management training?	0	0	0	5	15	20	95	4.75	95	Excellent
10.	Do you think it is important to provide recommendations to improve the effectiveness of future Merdeka Belajar training?	0	0	0	0	20	20	100	5	100	Excellent

## Learning Evaluation Testing of Training Effectiveness

Testing at the second level of the Kirkpatrick method aims to assess participant learning from the knowledge aspect after they complete the training. Table 13 presents Detailed examination of both pre- and post-test metrics involving means, sample size (N=20), standard deviations, and standard errors derived from data collected on 20 training participants.

**Table 14.** Paired Samples Statistics

		Paired Samples Statistics			
		Mean	N	Std. Deviation	Std. Error Mean
Pair 1	Pre_Test	64.8000	20	12.71385	2.84290
	Post_Test	83.9000	20	7.05542	1.57764

Based on Table 14, It is evident that the training participants' learning scores improved from an initial average of 64.80 to 83.90. These observations reveal improvements in the learning journey after participants completed the training. The pre-test standard deviation was 12.71385, but the post-test standard deviation dropped to 7.05542. Additionally, the standard error mean values were calculated as 2.84290 prior and 1.57764 afterward. Researcher may draw the conclusion that this evaluation provides strong evidence for the training program's efficacy because average learning outcomes increased from 64.80 on the initial assessment to 83.90 after training.

**Table 15.** Paired Sample Correlation

		Paired Samples Correlations			
		N	Correlation	Significance	
				One-Sided p	Two-Sided p
Pair 1	Pre_Test & Post_Test	20	.540	.007	.014

The correlation coefficient between the factors evaluated in the pretest and posttest is shown in Table 15. The significance values (0.007 for one-tailed and 0.014 for two-tailed) are both below the alpha level, indicating that the correlation is statistically significant. The output shows how the Pre-Test and Post-Test variables correlated with one another. The table shows that the correlation coefficient is 0.54 and that the significance values are 0.014 and 0.007, respectively. Since these significant values fall below the 0.05 cutoff, it is feasible to draw the conclusion that there is a relationship between the Pre-Test and Post-Test variables.

**Table 16.** Paired Sample Test

		Paired Samples Test	
		Paired Differences	Significance

	Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference		t	df	One-Sided p	Two-Sided p
				Lower	Upper				
Pair 1 Pre_Test - Post_Test	-19.10000	10.70612	2.39396	-24.11062	-14.08938	-7.978	19	<.001	<.001

Based on Table 16, the mean column reveals an average decrease of 19.10 points in learning outcomes from before to after training. This discrepancy arises from comparing the averages of the Pre-Test (64.80) and Post-Test (83.90), resulting in a net reduction of 19.10 points. The 95% Confidence Interval ranges from -24.11 to -14.08, indicating that the true difference likely falls within this interval. The standard deviation column reports a value of 10.70 for the variation among individual differences in learning outcomes between the Pre-Test and Post-Test assessments. The Standard Error Mean column provides a diversity metric with a value of 0.19. In the 't' column, we observe a negative t-count (-7.978), but since the average Pre-Test scores were lower than those of the Post-Test, this negativity signifies positive change. Therefore, interpreting this negatively gives us a positive result, effectively making our calculated t-value 7.978. To evaluate this against the critical region defined by degrees of freedom ( $df= 19$ ) and a significance level ( $\alpha/2\alpha/2 = 0.025$ ), we consult the t-statistic distribution table. Here, researcher see that, given these circumstances, the equivalent t-table value is around 2.09302. Researcher accept the alternative hypothesis ( $H_1$ ) and reject the null hypothesis ( $H_0$ ) since our computed t-value ( $7.978 > 2.09302$ ) is greater than this cutoff. This study demonstrates that there is statistically significant evidence of an average difference in learning outcomes between instructors who got training prior to their examinations and those who did so following them. Therefore, we confirm that there exists a discernible change in learner achievements following instruction

### Comprehensive Examination of Behavioral Assessment Metrics Related to Training Effectiveness

At the third stage of the Kirkpatrick model, attention shifts towards observing participant behaviors following attendance at the training session. The following table presents the frequency distribution of the study consisting of 10 questions, as well as the frequency distribution of the results of data processing from 20 respondents who are participants in teacher training.

**Table 17.** Behavioral Evaluation of Training Effectiveness

No	Statement	Answer					N	Over all Scor e	Avera ge	TCR (%)	Category
		STS	TS	N	S	SS					
		1	2	3	4	5					
1.	I can apply the new skills I learned during the training in the teaching process in the classroom.	0	0	0	5	15	20	95	4.75	95	Excellent
2.	I can change my teaching methods based on the techniques learned from the training.	0	0	5	9	6	20	81	4.05	81	Good
3.	I strive to share the knowledge and skills I gained from the training with other fellow teachers.	0	0	2	5	13	20	91	4.55	91	Excellent
4.	I am more active in using the educational resources available after attending the training.	0	0	2	5	13	20	91	4.55	91	Excellent
5.	I am more open to feedback from students and colleagues after attending the training.	0	0	4	10	6	20	82	4.10	82	Good
6.	I can see an increase in students' motivation in learning after implementing new techniques from the training.	0	0	9	10	1	20	72	3.60	72	Pretty good
7.	I realized the weaknesses in my teaching methods and tried to improve them after the training.	0	0	5	10	5	20	80	4.00	80	Excellent
8.	I feel more motivated to continue developing myself professionally after attending the training.	0	0	0	8	12	20	92	4.60	92	Excellent
9.	I use technology more often in teaching after receiving training on using digital tools.	0	3	5	8	4	20	73	3.65	73	Pretty good
10	I conducted evaluation of student learning outcomes in a more effective way after attending the training, so that it can improve the quality of learning.	0	0	0	10	10	20	90	4.50	90	Excellent

### Assessment of Outcomes Regarding Training Efficiency

In the final phase of the Kirkpatrick methodology, focusing on examining outcomes among participants after completing training. Table 18 below displays comparative test findings between pre-test and post-test scores of trainees concerning their knowledge and teaching abilities.

**Table 18.** Evaluation Testing of Results on Training Effectiveness

Paired Samples Statistics					
		Mean	N	Std. Deviation	Std. Error Mean
Pair 1	PRE_TEST	76.1000	20	6.43101	1.43802
	POST_TEST	89.9000	20	3.55261	.79439

According to the table provided, it can be observed that the learning scores of training participants rose from an initial average of 76.61 to 89.90. This indicates a significant improvement in knowledge before and after participating in the training. The standard deviation values show a decrease from 6.43101 for the Pre Test to 3.55261 for the Post Test. Additionally, the standard error mean values decreased from 1.43892 for the Pre Test to 0.79439 for the Post Test. Given that the average learning outcomes were higher post-training (89.90 compared to 76.61 pre-test), it can be concluded that there was a statistically significant impact on participant learning due to this training intervention. Therefore, the evaluation confirms its effectiveness.

**Table 19.** Correlation Test of Evaluation Results on Training Effectiveness

Paired Samples Correlations					
		N	Correlation	Significance	
				One-Sided p	Two-Sided p
Pair 1	PRE_TEST & POST_TEST	20	.546	.006	.013

The correlation is deemed significant since, as the table shows, the significance value (sig) of 0.006 is below the alpha threshold. The result shows the relationship between the Pre-Test and Post-Test variables and provides specifics on the correlation analysis's findings. In particular, the table indicates that the correlation coefficient is 0.546 and that the associated significance value is 0.006. A significant association between the Pre-Test and Post-Test variables may be deduced because the significance value (0.006) is less than the 0.05 cutoff. Thus, it is possible to claim that these two sets of data points are related.

**Table 20.** Evaluation Testing of Results on Training Effectiveness (paired t-test)

		Paired Samples Test								
		Paired Differences			t	df	Significance			
		Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference		One-Sided p	Two-Sided p		
					Lower	Upper				
Pair 1	Pre_Test	-	5.3861	1.2043	-	-11.27921	-	19	<.00	<.00
	Post_Test	13.80000	4	8	16.32079		11,458	1	1	1

According to the data in the table, the mean column shows that learning outcomes decreased by an average of 13.80 points between before and after training. This disparity stems from contrasting the average Pre-Test scores (76.10) with the average Post-Test scores (89.90), yielding a net drop of 13.80 points. Moreover, the 95% Confidence Interval spans from -16.32 to -11.28, suggesting that the actual difference lies within this range. The dispersion of individual variations in learning outcomes between the Pre-Test and Post-Test assessments is represented by a value of 5.39 in the Standard Deviation column. As a measure of variability, the Standard Error Mean has a value of 1.204. Notably, the computed t-value of -11458 in the t column is very negative. Although initially appearing negative, this figure takes on a positive interpretation due to the fact that the average Pre-Test scores were lower than those of the Post-Test. Hence, reinterpreting this yields a positive calculated t-value of 11458. To assess this against established thresholds, we refer to the t-distribution table. With a degree of freedom (df) set at 19 and utilizing half of the significance level ( $\alpha = .025$ ), we locate the corresponding t-table value at approximately 2.09302. Researcher reject the null hypothesis ( $H_0$ ) and accept the alternative hypothesis ( $H_1$ ) as our calculated t-value above this threshold ( $11458 > 209302$ ). This conclusion affirms the presence of a statistically significant difference in learning outcomes between high school teachers undergoing training in the South Pontianak sub-district. Therefore, it can be deduced that there exists an observable distinction in achievement levels between pre-and-post-intervention periods among these educators.

Furthermore, the Kirkpatrick assessment model response indicates that the training participants are content with the techniques and materials used in the program. Based on the results of the study, it can be concluded that the training program was successful in altering instructors' management techniques. Teachers who took part in the training program responded favourably to the adjustments implemented and were able to enhance their teaching abilities. This suggests that the training course is applicable and has the potential to be very beneficial for teachers.

## Discussion

Research by Kuswara (2024a) supports the findings of this study by showing that teacher training programs significantly improve teaching abilities and student academic achievement. Teachers who participate in training are able to create more interactive learning, which improves



student academic outcomes. This is reinforced by the results of Yasri's research at Madrasah Tsanawiyah that the evaluation of the impact of the training program on teacher performance showed an increase in the preparation of learning administration and assessment processes, with an average impact value in the good category (Yasri, 2020). In addition, the results of research Sabon (2018) regarding the Teacher Professional Education and Training (PLPG) program are also effective in improving teacher pedagogical and professional competence, the research data shows that teacher competency values increase after participating in training. Well-designed training will affect the results, this is reinforced by research conducted by Kurniawan & Hutagaol (2014) at SMK found that well-designed training can significantly improve teacher performance, thereby helping them face educational challenges.

Research on the impact of the effectiveness of training programs for other teachers that strengthen the results of this study occurred in Riau, Andryan (2024) stated that more than 70% of teachers in Riau Province had participated in training that improved their competence, especially in the use of technology and classroom management, so that there was a significant increase in the quality of teaching and student learning outcomes. Training programs must be carried out continuously, this is reinforced by research conducted by Masbullah et al. (2024) that training programs that are carried out periodically have succeeded in improving teacher skills and competence. According to L. G. Kurniawan et al. (2024) training that focuses on innovative teaching strategies can increase student motivation and their involvement in the teaching and learning process.

## Conclusion

The findings of a study on the efficacy of change management training programs for teachers in different high schools in the Pontianak Selatan sub-district suggest that the training has been successful in raising teachers' proficiency levels. The average score on the teaching skills test taken before and after the training increased, indicating the effects of the development in teaching abilities. In addition, feedback from the training participants also showed their satisfaction with the materials and methods applied in the training program. A key takeaway from the study's findings highlights the crucial role of training programs in change management in enhancing the overall quality of teaching by teachers. With the improvement in teaching skills, teachers can provide more effective and quality learning for students. In addition, teachers are also able to respond to change better and faster.

## Authorship Contribution Statement

Fill in contributions from all authors by following the steps below. Example. Hasanudin: Generating ideas and conceptualization, developing the research design, translating, and managing the entire research process. Hidayat: Field research including data collection. Safitri:

Writing the literature review, organizing the discussion and conclusion, and supervising the research. Amin: Data analysis, data presentation, results composition, and final editing.

The following are the authors' contributions: Putranti: which includes generating ideas, designing research plans, translating, supervising the entire process, conducting fieldwork and data collection, compiling literature reviews, planning research and conclusions, and managing research, data analysis, data presentation, preparation of results, and final editing. Radiana: served as the main supervisor during this research.

## References

- Alamsyahril. (2020). Model Kirkpatrick Dalam Evaluasi Program Pelatihan Kepemimpinan Tingkat IV. *Cendekia Niaga*, 4(1), 35–43. <https://doi.org/10.52391/jcn.v4i1.490>
- Andryan, M. I. (2024). ANALISIS IMPLEMENTASI PERUBAHAN RENCANA STRATEGIS DINAS PENDIDIKAN PROVINSI RIAU TAHUN 2019-2024 : *Jurnal Manajemen Pendidikan Islam*.
- Borko, H., Koellner, K., & Jacobs, J. (2016). Meeting the Challenges of Scale: The Importance of Preparing Professional Development Leaders. *Teachers College Record*, 116(2), 1–41.
- Darling-Hammond, L., & Zuckerman, K. (2020). *Using Data to Support Teacher Development and Instructional Improvement*. Learning Policy Institute.
- Fakhrudin, M. I. K. & M. (2022). Evaluasi Program Pelatihan Model Kirkpatrick. *CERMIN: Jurnal Manajemen Dan Pendidikan Berbasis Islam Nusantara*, 1(2), 42–46. <https://ejournal.staida-krempyang.ac.id/index.php/CERMIN>
- Fullan, M. (2016). *The New Meaning of Educational Change* (5th ed.). Teachers College Press.
- Guskey, T. R. (2002). Professional Development and Teacher Change. *Teachers and Teaching*, 8(3), 381–391. <https://doi.org/10.1080/135406002100000512>
- Hammond, L. D., Hyler, M. E., & Gardner, M. (2017). Effective Teacher Professional Development in the evolution of human and non-human animals. *Learning Policy Institute*, June.
- Hasibuan, R., Raflika, L., Hamdi Siregar, F., Avira, D., Basid, H., & Nasution, I. (2023). Pengaruh Pelatihan Profesioanal Pedagogik Guru Terhadap Keterampilan Mengajar. *Jurnal Pendidikan Berkarakter*, 1(6). <https://doi.org/10.51903/pendekar.v1i6.468>
- Julifan, J. A. (2017). Efektivitas Manajemen Pendidikan Dan Pelatihan Berbasis Kompetensi Bagi Guru. *Jurnal Administrasi Pendidikan*, 12(2). <https://doi.org/10.17509/jap.v22i2.5382>
- Kemdikbudristek. (2024). *Data Pokok Pendidikan Direktorat Jenderal Pendidikan Anak Usia Dini, Pendidikan Dasar dan Pendidikan Menengah*. <https://dapo.kemdikbud.go.id/pd/3/136001>

- Kraft, M. A., Blazar, D., Hogan, D., Rimm-Kaufman, S., McQueen, K., Pianta, R., & Tipton, B. (2018). El efecto del coaching docente sobre la instrucción y el rendimiento. *Review of Educational Research*, 88(4), 547–588. [https://scholar.harvard.edu/files/mkraft/files/kraft\\_blazar\\_hogan\\_2018\\_teacher\\_coaching.pdf](https://scholar.harvard.edu/files/mkraft/files/kraft_blazar_hogan_2018_teacher_coaching.pdf)
- Kristanti, D., Charviandi, A., Juliawati, P., & Harto, B. (2023). Manajemen Sumber Daya Manusia Manajemen Sumber Daya Manusia. *Edisi Revisi Jakarta: Bumi Aksara*, 4(1), 391. <https://books.google.com/books?hl=en&lr=&id=e2ppEAAAQBAJ&oi=fnd&pg=PA1&dq=manajemen+pengetahuan&ots=gV368HYLR3&sig=ugm1Twmq-r6Ya9ITLRHYA6ieJi0>
- Kurniawan, L. G., Ahman, E., & Setiawan, Y. (2024). Analisis Manajemen Kinerja Guru Melalui Human Capital Measurment dan Sikap Kerja. 9(1), 25–36. <https://doi.org/10.17509/jpm.v9i1>
- Kurniawan, M., & Hutagaol, S. (2014). EFEKTIVITAS PROGRAM PELATIHAN GURU DI SMAK METHODIST-JAKARTA. *Jurnal Manajemen Pendidikan*, 3(2), 222–240. [http://ejournal.uki.ac.id/index.php/jmp/article/view/Efektivitas%3B Pelatihan%3B Perencanaan%3B Pengorganisasian%3B Pelaksanaan%3B Monitoring dan Evaluasi Pelatihan](http://ejournal.uki.ac.id/index.php/jmp/article/view/Efektivitas%3B%20Pelatihan%3B%20Perencanaan%3B%20Pengorganisasian%3B%20Pelaksanaan%3B%20Monitoring%20dan%20Evaluasi%20Pelatihan)
- Kuswara. (2024a). Evaluasi Program Pelatihan Guru terhadap Keterampilan Mengajar dan Prestasi Akademik Siswa. *Jurnal Pendidikan Indonesia*, 5(8), 443–449.
- Kuswara, K. (2024b). Evaluasi Program Pelatihan Guru Terhadap Peningkatan Keterampilan Mengajar Dan Prestasi Akademik Siswa. *Jurnal Pendidikan Indonesia*, 5(8), 443–449. <https://doi.org/10.59141/japendi.v5i8.2714>
- Masbullah, M., Salmi Yuniar Bahri, & Moh. Juhad. (2024). Efektivitas Pelatihan Dan Pengembangan Sumber Daya Manusia Untuk Meningkatkan Kualitas Pendidikan di TK PKK Majidi. *OPTIMAL Jurnal Ekonomi Dan Manajemen*, 4(2), 242–255. <https://doi.org/10.55606/optimal.v4i2.3548>
- Maulyan, F. F. (2019). Peran Pelatihan Guna Meningkatkan Kualitas Sumber Daya Manusia dan Pengembangan Karir: Theoretical Review. *Jurnal Sain Manajemen*, 1(1), 40–50. <http://ejournal.univbsi.id/index.php/jsm/index>.
- Milaini, Rosnawati, L., Hasibuan, W. F., Novita, E., Tan, T., & Noe, R. M. (2023). *Catatan Penggerak Merdeka Belajar*. Stiletto Book.
- Mukhlison Effendi. (2021). Pengembangan Sumber Daya Manusia dalam Meningkatkan Citra Lembaga di Lembaga Pendidikan Islam. *Southeast Asian Journal of Islamic Education Management*, 2(1), 39–51. <https://doi.org/10.21154/sajiem.v2i1.40>
- Nisa, I. T., Sutarsih, C., & Sudarsyah, A. (2023). Efektivitas Pelaksanaan Diklat Calon Guru Penggerak Angkatan 4 Berdasarkan Model Evaluasi Kirkpatrick di Balai Besar Guru Penggerak (BBGP). *Jurnal Tata Kelola Pendidikan*, 5(2), 111–126. <https://doi.org/10.17509/jtkp.v5i2.64848>

- Sabon, S. S. (2018). Efektivitas Pelatihan Guru Melalui Pendidikan Dan Latihan Profesi Guru. *Jurnal Penelitian Kebijakan Pendidikan*, 11(3), 159–182. <https://doi.org/10.24832/jpkp.v11i3.210>
- Yasri. (2020). Analisis Evaluasi Dampak Program Pelatihan Guru pada Aspek Kinerja Guru Madrasah Tsanawiyah di DKI Jakarta. *Jurnal Widyaaiswara Indonesia*, 1(2), 72–86. <https://doi.org/10.56259/jwi.v1i2.8>