The Impact of Training and Pedagogical Competence on The Performance of Madrasah Aliyah Teachers in Jembrana Regency

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Abstract:

The success of education implementation is more influenced by the most influential teachers. The purpose of the research is to examine and explain the impact of training, pedagogical competence on teachers of Madrasah Aliyah Jembrana Regency. The research is ex-post facto on a population of 239 teachers, sampling using the Morgan and Warwick Lininger formula obtained a sample of 168 people. Data collection using a closed questionnaire with 5 answer choices provided. The research data were analyzed using the Structural Equation Modeling (PLS-SEM) technique. The results of the analysis are as follows; (1) Direct training has a significant influence on pedagogical competence as shown in the T-Statistic score of 19.580 and P-Values of 0.000 (2) Direct training has a significant influence on teacher performance as shown in the T-Statistic score of 3.695 and P-Values of 0.000 (3) Direct pedagogical competence has a significant influence on teacher performance as shown in the T-Statistic score of 4.423 and P-Values of 0.000 (4) Indirect training has a significant influence on teacher performance through pedagogical competence as shown in the T-Statistic score of 4.285 and P-Values of 0.000. The variable that has the strongest direct impact on performance is pedagogical competence, in addition, pedagogical competence is able to mediate training that has an indirect influence on teacher performance. It is stated that training and pedagogical competence are predictors that have an impact on teacher performance.

Keywords, training, pedagogical competence, teacher performance

INTRODUCTION

Teachers are a very important element in the implementation of national education, especially for schools/madrasahs. Because what teachers do is directly related to instilling attitudes, transferring knowledge and preparing skilled generations so that they become moral and independent people in facing a life that continues to develop (Utami et al., 2019). Anything prepared in educational institutions does not play much of a role except for the presence of competent teachers (Setiyadi & Rosalina, 2021). Productive teachers are needed so that education continues to develop in accordance with the demands of the times. The quality of education is largely determined by teachers (Mohammad Rizal Padly et al., 2022). The role of teachers in schools/madrasahs is so great and important that improving the quality of teachers is the obligation of the institution (Berliani et al., 2022). Therefore, in order to achieve high quality, various constructive efforts are needed to build professional teachers who have good qualifications and competencies (Putra & Kumalaputra, 2020).

The problems of education in Madrasah Aliyah in Jembrana Regency are; (1) teachers have not fully mastered the learning material, (2) Implementation of teaching methods that are less interesting, (3) weak teacher personality such as: attitude, discipline, integrity, and determination to make education a success, (4) Supervisors and principals are still not optimal in carrying out supervision, (5) Principal leadership has not fully influenced teachers, (6) Teacher competency improvement activities are rarely held, in addition, teachers do not take the initiative to take professional training. External factors that have a strong influence on a teacher's performance include training, there is a significant influence of training on teacher performance. Training is a short-term process that uses systematic and organized procedures. Training includes teaching planning techniques and ways to improve learning effectively. The more often teachers take training, the more their performance is expected to improve. Based on the results of observations conducted by researchers at SMP Negeri 2 Ambal, by comparing teachers who often take training, it was proven that their work results increased compared to teachers who did not take training (Putri et al., 2022). Meanwhile, internal factors that affect teacher performance include their competence. Teacher performance is also seen from how high the pedagogical competence they have is applied in carrying out their work. The results of the study show that if teachers have competence, they will certainly

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be able to improve their performance. Supported by research results that are in line (Prawira & Nugraha, 2021) The difference between reality and theory and research studies on training, pedagogical competence and performance of Madrasah Aliyah teachers in Jembrana Regency is a problem that needs to be considered and a solution must be found so that the implementation of education at the madrasah runs smoothly. Therefore, it is necessary to conduct an in-depth study by means of research, the aim of which is to examine, elucidate and explain the influence of training and pedagogical competence on teacher performance which is designed with a quantitative research model using a survey approach.

LITERATURE REVIEW

Training is an activity carried out and followed by someone to improve their competence and skills. Teachers are required to continue to improve their ability to teach, including through relevant training so that it will improve the quality of learning which ultimately improves the quality of teaching according to the demands of the development of student needs. The training attended by teachers is certainly related to the development of teaching methods, so that the learning system can meet the specified standards. Training is an ongoing process that must be followed by teachers in order to improve their performance (Luh et al., 2023). Training is an important forum for teachers to increase their abilities in order to achieve the learning standards implemented by teachers, in addition, training can also change a person's mindset and attitude as well as motivation to improve their performance According to training is a strategic activity to improve quality through improving a person's skills, expertise, attitudes and knowledge. According to (Mertayasa, I. Nengah EkaAgustini et al., 2020). Training is a short-term program that is carried out several times a year using procedures and systems that are adjusted to the objectives so that the results of the training will have a very real impact on the quality of a teacher (Sulindawati, 2020). Training is a process that is regulated by a system and the material is adjusted to the objectives so that the training results will have an impact on increasing teacher competence in carrying out teaching duties. To measure training variables, indicators are determined, namely; (1) education, (2) skills, (3) competence (4) independence (5) personality (6) discipline.

Pedagogical competence is the science of teaching that must be possessed by teachers in teaching by having material that is appropriate to the development of the child, guidance to students according to the potential of the students. In this science, there are many abilities of teachers in choosing subject matter, how to use the correct teaching methods, how to develop even and student interests, how to motivate students to study hard, how to assess student learning outcomes and follow up on the results so that there is an increase and improvement in teaching (Perry et al., 2022). Pedagogy also contains the ability of teachers to guide, direct and even the ability to provide guidance on student problems. A teacher is required to have pedagogical knowledge because the teacher's task is very important in improving students' attitudes, knowledge and skills according to their potential (Wong & Kan, 2022). According to the teacher competency standards in pedagogy, it is explained that a teacher is required to have pedagogical competencies including; mastering the characteristics of each child, mastering the theory and principles of educational learning, being able to develop a curriculum according to school goals, implementing learning that inspires students, the ability to utilize technological advances and developments, guiding students in developing their potential, communicating effectively and politely with students, the ability to evaluate and implement follow-up programs to improve learning (van Geel et al., 2022). Thus, it is concluded that pedagogical competence is the ability possessed by teachers in carrying out tasks related to teaching management starting from preparation, implementation process, guidance, communication with students during the teaching process, conducting assessments and follow-ups so that there is an increase in the quality of teaching. To measure pedagogical competence, among others; (1) understanding student characteristics, (2) implementing teaching, (3) developing student potential, (4) evaluating learning outcomes and follow-ups, (5) utilizing technology.

Teacher performance is the real work result of someone who has the teaching profession in carrying out teaching starting from making preparations, selecting materials, implementing rooting, communicating with students during the process, conducting assessments and follow-ups carried out within a certain period of time according to the program (Bahri & Korespondensi, 2020). Performance describes the real results of the work carried out by teachers in their main task of teaching, in addition, teachers also develop their competence with good results (Gultom, 2020). Teacher performance is also seen in how teachers contribute to improving the quality of education at the school where they work. Teacher performance is the work result shown by teachers in carrying out teaching and other tasks related to educational interests

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at school within a certain period of time (Uzunboylu, 2022). It is concluded that teacher performance is the level of achievement and success of teachers in carrying out their main duties, namely teaching and carrying out relevant tasks to improve learning within a specified time period. To measure teacher performance, among others; (1) making learning plans; (2) implementing educational learning, (3) building effective relationships with students, (4) conducting assessments and evaluations (5) following up on assessment results; (6) responsibility; (7) school development.

METHODS

3.1. Research Design

This quantitative study was designed in the form of ex-post facto consisting of training variables (X) as exogenous variables, pedagogical competence (Y1) as endogenous as well as mediation, and teacher performance (Y2) as endogenous variables. The study was conducted on Madrasah Aliyah teachers in Jembrana district, using a survey approach using questionnaires distributed to teachers who were members of the sample. The study lasted for 4 months in March - May 2025. The constellation of research variables that illustrate the constellation of research variables in Figure 1 below.

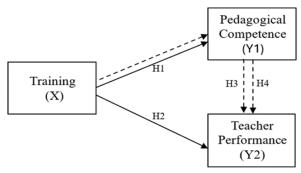


Figure (1). Desain Penelitian

The problems studied in this research are observed from the field of research concepts categorized with a survey approach. In this survey, it is conducted to examine large or small populations by sorting and examining illustrations selected from the population to create incidents, distributions, and relative intercorrelations of related variables (Garson, 2016). In relation to the survey, it is usually attempted to cite an abstraction from observations that are not in-depth (Widarto, 2018). The research method is expost facto by distributing questionnaires or surveys to teachers who are selected to be used as random samples and the proportion of their area.

3.2. Subjects and Research Samples

Subjek pada penelitian ini yaitu guru di Madrasah Aliyah kabupaten Jembrana merupakan satuan pendidikan sederajat dengan SMA yang menjadi pembinaan Kementerian Agama Provinsi Bali. Jumlah populasi adalah 239 orang yang tersebar pada 11 madrasah. Populasi guru merupakan adalah seluruh guru yang menjadi subyek penelitian atau menjadi bagian yang diteliti (Budiastuti & Bandur, 2018) Sampel harus menggambarkan populasi yang telah diketahui jumlahnya, menurut teknik penentuan sampel menggunakan random sampling agar setiap orang memiliki peluang yang sama. Cara yang dilakukan antara lain metode undian, atau metode randomisasi dari bagan angka random. Teknik pengambilan sampel dengan menggunakan cara yang diformulasikan oleh (Morgan, 1970) diperoleh sampel minimal 148 ditambah sesuai rumus Warwick dan Lininger sehingga memperoleh 173 sampel. namun pada penelitian ada 5 orang yang tidak mengembalikan kuesioner sehingga yang menjadi responden adalah 168 orang. Hal ini menunjukkan bahwa yang menjadi anggota responden adalah lebih besar dari sampel minimal (Agung, 2014).

3.3. Research Instruments

There are two types of questionnaires, namely the fill-in type and the choice type. The fill-in questionnaire where respondents respond to statements by writing answers according to the events they feel or experience, on the other hand, the choice questionnaire is answered by respondents according to the choices available on the questionnaire (Agung, 2014). The instrument used is a questionnaire using a

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Likert scale with closed questions with 5 choices filled in by respondents online via the Google Form application. The questionnaire was created using Likert with 5 choices and the score weights were strongly agree at 5, agree at 4, neutral at 3, disagree at 2 and strongly disagree at 1. The creation of the questionnaire refers to variables and indicators such as the questionnaire grid seen in table 1

Table (1). Research Variable Grid

Variable's	Indicators	Number
	marcatoro	of Items
Training	X1 Education	5
(X)	X2 Skills	7
	X3 Competence	7
	X4 Independence	7
	X5 Personality	5
	X6 Discipline	4
	Total	35
Pedagogical	Y1.1 Understanding student characteristics	5
Competence	Y1.2 Managing learning	7
(Y1)	Y1.3 Material development	6
	Y1.4 Evaluation of learning outcomes	5
	Y1.5 Learning technology	6
	Y1.6 Development of student potential	6
	Total	35
Teacher	Y2.1 Learning planning	5
Performance	Y2.2 Learning implementation	8
(Y2)	Y2.3 Building relationships;	5
	Y2.4 Conducting assessments	4
	Y2.5 Following up on assessment results	4
	Y2.6 Responsibilities	4
	Y2.7 School development	5
	Total	35

3.4. Data Collection

How to obtain data using a questionnaire, the method is to randomly distribute to teachers a number of samples, the questionnaire contains positive or negative questions or statements that are answered online via google form, then the respondents return to the researcher via the link. With this method, the diversity of research instruments by collecting the information needed. The questionnaire is an instrument to help obtain data on research variables for analysis (Sugiyoyo, 2010). In this questionnaire, respondents answer statements by describing the answers according to what they experience or feel, while in the questionnaire, respondents answer the ones that best suit their wishes (Firmansyah & Dede, 2022).

3.5. Teknik Analisis

Research data analysis uses two methods, namely descriptive statistical analysis aimed at explaining data quantitatively, data distribution. Statistical analysis was carried out using SPSS version 26.0. While inferential analysis uses a structural equation model, namely the Structural Equation Model Alternative Partial Least Square technique. This technique is used to test hypotheses on relatively complex constellations between variables simultaneously (Garson, 2016). In this analysis, the data processed is in the form of nominal data, ordinal data, interval data and ratio data. Testing the structural model is useful for testing theories in the context of prediction. In this case, the alternative Structural of Equation Model approach using the Smart-PLS application is very suitable because all variance measures can be explained to estimate latent variables as a linear combination of indicators (Arya Pering, 2020)

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RESEARCH RESULTS

4.1. Statistical Analysis Results

Testing on training data (X), pedagogical competence (Y1) and teacher performance (Y2) using SPSS Version 26, the results are displayed as in table 2.

Table (2). Statistics

Statistic	Training (X)	Pedagogical Competence (Y1)	Teacher Performance (Y2)
Valid Data	168	168	168
Number Item	34	35	33
Mean	142,05	146,88	136,53
Std. Deviation	11,131	12,678	11,424
Range	52	51	45
Minimum Score	118	124	120
Maximum Score	170	175	165
Values	83,56	83,93	82,75
Category	high	high	high

Table 2 above shows the results of descriptive statistical analysis of the quantitative value of the research variable (X) obtained an average of 241.05 from a total maximum score of 170, so the value is 83.56 in the high category, the pedagogical competence variable (Y1) obtained an average of 146.88 from a total maximum score of 175, so the value is 83.93 in the high category, and teacher performance (Y2) obtained an average of 136.53 from a total maximum score of 165, so the value is 82.75 in the high category. Furthermore, the results of the correlation test to determine the relationship between variables showed a positive correlation, thus it was concluded that the variables were statistically descriptively high. Furthermore, the results of the inferential analysis on the Structural Equation Model technique using the SmartPLS application on the outer and inner models and the results are described as follows.

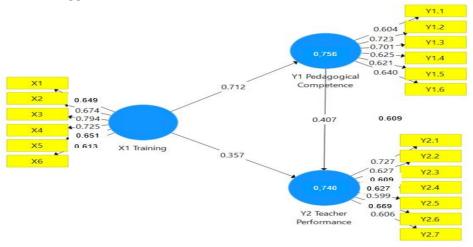


Figure (2). Results of Outer and Inner PLS-SEM Model Analysis

4.2. Outer Model Analysis Results

Analysis of the outer model regarding convergent validity, including determining the validity and reliability produced, can be seen in Table 3.

Table (3). Outer Loading for Validity and Reliability

Variables	Outer loading	Original Sample	T Statistic	P Values	Cronbach's Alpha	Composite Reliability	Average Varian Extract
Training (X)	X1 < X X2 < X	0,649 0,674	10,280 15,872	0,000	0,900	0,897	0,683
	X3 < X	0,794	25,739	0,000			

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	X4 <- X	0,725	13,079	0,000			
	X5 <- X	0,651	10,675	0,000			
	X6 < - X	0,613	9,440	0,000			
Pedagogical	Y1.1 ← Y1	0,604	9,523	0,000	0,836	0,817	0,643
Competence	Y1.2 ← Y1	0,723	15,745	0,000			
(Y1)	Y1.3 ← Y1	0,701	13,724	0,000			
	Y1.4 ← Y1	0,625	10,738	0,000			
	Y1.5 ← Y1	0,621	12,817	0,000			
	Y1.6 ← Y1	0,640	12,169	0,000			
Teacher	Y2.1 ← Y2	0,727	15,426	0,000	0,814	0,783	0,628
Performance	Y2.2 ← Y2	0,627	9,788	0,000			
(Y2)	Y2.3 ← Y2	0,609	7,348	0,000			
	Y2.4 <- Y2	0,627	7,209	0,000			
	Y2.5 <- Y2	0,699	10,280	0,000			
	Y2.6 <- Y2	0,669	10,963	0,000			
	Y2.7 ← Y2	0,606	11,744	0,000			

Next, to see the discriminant validity, namely how the position of the variable is compared to the others in the Root Square Average Variance Extractes, which is related to other variables, can be seen in Table 4

Table (4). Root Square Average Variance Extractes

	X1 Training	Y1 Pedagogical Competence	Y2 Teacher Performance
X1 Training	0,835		
Y1 Pedagogical Competence	0,712	0,854	
Y2 Teacher Performance	0,646	0,661	0,788

The training variables, pedagogical competence and performance of teachers are stated to meet the validity, namely the square root value of RSAV is stated that all show a value greater than the correlation between variables, namely the numbers compared to below and to the left are greater. Thus it is stated that the measurement variables of the equation structure model in this study meet the validity and reliability criteria (McNaughton & Cowell, 2020).

4.3. Inner Model Evaluation

Inner model testing on Goodness of Fit to check the suitability of the model formed from the construct using the R2 formula on the dependent variable in table 5 below.

Table (5). R Square Result

Dependent Variable	R Square	Adjusted R Square	Result
Pedagogical Competence (Y1)	0,756	0,754	Strong
Teacher Performance (Y2)	0,740	0,747	Strong

The R2 score obtained on pedagogical competence is 0.756 in the strong category and teacher performance is 0.740 in the strong category. It is stated that the structure of the model formed is suitable. The next test is to see Stone-Geiser using the Q2 formula calculated in the following way.

$$Q^2 = 1 - (1 - R1)(1 - R2)$$

 $Q^2 = 1 - (1 - 0.756) (1 - 0.740)$

 $Q^2 = 1 - (0.244 \times 0.260)$

 $Q^2 = 1.0,0634$

 $Q^2 = 0.9366$

The Q2 value is 0.9366 or proves that 93.66% of teacher performance is influenced by training and pedagogical competence, the remaining 6.33% is influenced by other variables. It is stated that the structural model formed is feasible to predict the results of the analysis in the very strong category.

4.4. Hypothesis Test Results

The results of the tests related to the hypothesis about the direct impact of training on pedagogical competence and teacher performance and the indirect impact of training on teacher performance through pedagogical competence are shown in table 6 below.

Table (6). Hypothesis Result

Direct-Indirect Effect	Original	Standard	T	P	Result	
Direct-indirect Effect	Sample	Deviation	Statistic	Values	Result	
X Training >> Y1 Pedagogical Competence	0,712	0,036	19,580	0,000	significant	
X Training -> Y2 Teacher Performance	0,357	0,097	3,695	0,000	significant	
Y1 Pedagogical Competence -> Y2 Teacher Performance	0,407	0,092	4,423	0,000	significant	
X Training >> Y1 Pedagogical Competence -> Y2 Teacher Performance	0,290	0,068	4,285	0,000	significant	

The results of the empirical research to answer the statistical hypothesis that has been set refer to table 6 above as follows:

- 1. The direct relationship of training (X1) to pedagogical competence (Y1) is indicated by a coefficient value of 0.712 and the Statistic Value is 19.580 greater than 1.96 while the P-Values are 0.000. In this condition the hypothesis is accepted. It is concluded that training has a significant direct impact on pedagogical competence. This means that if the training value is high, it can cause pedagogical competence to be high, conversely if the training value is low, it can cause pedagogical competence to be low.
- 2. The direct relationship of training (X1) to teacher performance (Y2) is indicated by a coefficient value of 0.357 T-Statistic 3.695 more than 1.96 while the P-Values are 0.000. In this condition the hypothesis is accepted. It is stated that training has a significant direct impact on teacher performance. This means that if the training value increases high, it can also cause teacher performance to increase, conversely if the training value is low, it can also cause teacher performance to be low.
- 3. The direct relationship between pedagogical competence (Y1) and teacher performance (Y2) is shown in the coefficient value of 0.407 while the T-Statistic is 4.423, which is greater than 1.96 and the P-Values are 0.000. In this condition, the hypothesis is accepted. It is concluded that pedagogical competence directly has a significant influence on teacher performance. This means that for example, if the pedagogical competence value is high, it can cause the teacher's performance value to be high, but conversely, if the pedagogical competence value is low, it can also cause the teacher's performance value to be low.
- 4. The indirect relationship between training (X) and teacher performance (Y2) is mediated by pedagogical competence (Y1) is shown in the total coefficient value of 0.290 while the T-Statistic is 4.285, which is more than 1.96 and the P-Values are 0.000. In conditions like this, the hypothesis can be accepted. It is stated that indirect training has a significant impact on teacher performance through pedagogical competence. It is explained that training that directly affects teacher performance, then mediated by pedagogical competence that directly affects teacher performance, then training indirectly affects teacher performance through pedagogical competence. This means that if the training value increases, it will cause the pedagogical competence value to increase and cause the teacher performance value to increase.

DISCUSSION

The discussion of research results refers to quantitative data on the research object, in addition to qualitatively viewing the results of descriptive statistics and the results of hypothesis analysis with consideration of theoretical studies supported by relevant previous research results.

5.1. Training Has a Direct Influence on Pedagogical Competence

The collected data shows that the respondents' answers to training and pedagogical competence as a whole are good, the dominant answers for training score 4 are 56.68% and score 5 is 32.46% while the average is 4.22 or 84.40 in the high category. While the respondents' answers to pedagogical competence for score 4 are 56.68% and score 5 is 32.46% while the average score is 4.20 or 84.00 in the high category. In quantitative descriptive statistics, the training and pedagogical competence variables are in the very high category. Furthermore, the results of the hypothesis test on the direct influence of training on pedagogical competence are shown in the coefficient value of 0.712 with T-Statistics of 19.580 and P-Values of 0.000. It is stated that training has a direct significant influence on pedagogical competence.

The training variables consist of indicators; education, skills, competence, independence, personality and discipline to improve teacher mastery. Training is tailored to the needs of teachers to improve their competence so that teachers can carry out their main tasks, namely carrying out the learning process optimally (Wang et al., 2021). In relation to the duties of teachers, training is a series of efforts made by teachers according to their fields of science to form better attitudes and personalities in order to be able to carry out their duties (Poonsawad et al., 2022). In relation to pedagogical competence, training has a very important and strategic role as well as being a solution to overcome the problems of pedagogical competence of teachers at Madrasah Aliyah Jembrana Regency, and the results of training so that teachers can be ready to carry out their main tasks, utilizing technological advances for effective and efficient learning. In this study, there was a very close relationship between training and pedagogical competence, thus training directly affects pedagogical competence. This is evident in research conducted by (Suryani et al., 2023) which obtained training results that can improve pedagogical competence. Research on training to improve teacher competence was also conducted. where the results proved that training had an impact on pedagogical competence, similar results in (Putri et al., 2022) dan (Suryani et al., 2023).

5.2. Training has a direct impact on teacher performance

The collected data shows that the perspective of respondents' answers to training and teacher performance as a whole is good, as evidenced by the dominant answers for training in the explanation above in the high category. While the dominant teacher performance variable respondents' answers are score 4, which is 59.91% and score 5, which is 27.23% with an average score of 4.14 or 82.80, also in the high category. While in quantitative descriptive statistics, these variables are in the very high category univariately. Then seen from the results of the partial correlation analysis of the training variable with teacher performance is 0.773 stated that training is directly related to teacher performance positively and significantly. Furthermore, the results of the hypothesis test of the direct effect of training on teacher performance are analyzed seen from the coefficient value is 0.357 while the T-Statistic is 3.695 and the P-Values are 0.000. In this case H1 is accepted while H0 is rejected. It is stated that training directly has a significant effect on teacher performance. Training carried out to improve teacher skills, competence, independence, personality and discipline plays a very important role in improving teacher competence, especially in implementing the learning process such as learning planning activities, implementing learning, building relationships with students, helping students overcome learning difficulties (Suwartono & Nitiasih, 2020). In relation to teacher duties, training is a series of efforts followed by teachers to form better attitudes and personalities in order to be able to carry out their duties.

Teachers who receive training and often attend training clearly differ in their abilities in carrying out their work. Training materials that are focused on improving teacher competence are related to the curriculum, learning planning, communication skills, using methods that are oriented towards the development of information and technology and how to create evaluation questions and how to follow up on evaluation results for improving learning if carried out on teachers at Madrasah Aliyah Jembrana Regency will certainly be able to improve teacher abilities so that they have an impact on teacher performance (Divayana et al., 2023). The existence of a very relevant and synergistic relationship between training and teacher performance, this is proven in real terms. So that training directly has a significant effect on the performance of Madrasah Aliyah teachers in Jembrana Regency. It is also confirmed by other studies

whose results show that training has an impact on a person's abilities and skills. Research that is in line also states that training has a significant impact on teacher performance. (Putra & Kumalaputra, 2020): (Rabialdy, 2020).

5.3. Pedagogical Competence Has a Direct Influence on Teacher Performance

Data from the collected respondents' answers about the respondents' perspectives on pedagogical competence and overall performance are good, as evidenced by the dominant answers for pedagogical competence as mentioned earlier being in the high category as well as teacher performance in the high category. Statistically, the quantitative descriptive variables are in the very high category univariately. Then, seen from the results of the correlation analysis, it is 0.817, thus it can be stated that pedagogical competence is directly related to teacher performance positively and significantly. Furthermore, the results of the hypothesis testing of the direct influence of pedagogical competence on teacher performance were analyzed using the Structural Equation Modeling and Partial Least Squares technique, indicated by the variable coefficient value of 0.407 with a T-Statistic value of 4.423 and P-Values of 0.000. In this case, H1 is accepted while H0 is rejected. Pedagogical competence in this study has indicators including understanding student characteristics, managing learning, developing materials, learning technology, in this condition pedagogical competence is a mandatory requirement for teachers in carrying out their duties, especially to improve the quality of learning (Suwartono & Nitiasih, 2020). In this case, pedagogical competence is the ability to manage student learning. In essence, competence refers to a person's ability to carry out their duties (Agung et al., 2024). Pedagogical competence is the teacher's ability to carry out teaching tasks, first preparing materials, taking notes, carrying out teaching performances including assessing student learning outcomes and facilitating student talents to develop (Nitiasih et al., 2025). In relation to teacher performance, pedagogical competence occupies a very necessary position so that teachers are able and skilled at teaching in class and mastering the class with interesting materials so that students can enjoy learning (Leba et al., 2021). Empirical research proves that respondents' answers are strong with the relationship between pedagogical competence and teacher performance. Therefore, pedagogical competence directly has a significant impact on the performance of Madrasah Aliyah teachers in Jembrana Regency. This is also reinforced by (Werang & Leba, 2022) who conducted research on pedagogical competence with teaching quality, as well as the results of the study conducted (Poonsawad et al., 2022) which are similar in their results stating that pedagogical competence has an impact on teacher performance (Putra & Kumalaputra, 2020); (Supriyono, 2020)

5.4. Training has an indirect effect on teacher performance through Pedagogical Competence.

Data from the collected respondents' answers about the respondents' perspectives on training, pedagogical competence and overall teacher performance are good, as evidenced by the dominant answers for training, pedagogical competence and teacher performance on the average score of respondents' answers in the high category. Then the hypothesis testing about the relationship that forms the path on the training variable with pedagogical competence and teacher performance analyzed using the Structural Equation Modeling technique is proven by the variable coefficient is 0.290 with a T-Statistic of 4.285 more than 1.96 and P-Values is 0.000. In this case the hypothesis is accepted. It is stated that training has a significant indirect effect on teacher performance through pedagogical competence. In path analysis as a way of testing to determine the relationship of several variables in a multivariate manner that determines the intervening variable or mediating variable that acts as an intermediary, in this case the one that plays a big role is the mediating variable, if the mediating variable has a large coefficient value and seen from the results of the T-Statistic test is greater than 1.96 while the P-Values are 0.000 then the mediating variable will be able to mediate well, in this case pedagogical competence indirectly has an impact on teacher performance, therefore pedagogical competence becomes a very strong mediation to help training for teacher performance.

The training in this study has indicators including; education, skills, competence, independence, personality and discipline so that training is needed that is connected to the teacher's pedagogical competence which has indicators including understanding student characteristics, managing learning, developing materials, learning technology there is a close relationship with pedagogical competence having indicators of knowing student characteristics, managing learning, developing materials, learning technology both of these variables have an impact on teacher performance (Danupranata & Masykur, 2020). Thus, training has an impact on pedagogical competence and then its impact on teacher

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performance. Therefore, training has an indirect impact on teacher performance through pedagogical competence. This means that if training at Madrasah Aliyah Jembrana increases consistently, pedagogical competence in teachers will also increase and ultimately have an impact on increasing the performance of teachers at Madrasah Jembrana Regency. Research conducted by (Suryani et al., 2023) the results explain that the significant impact of training on teacher performance is through pedagogical competence. In line with empirical research (Putra & Kumalaputra, 2020); (Suryani et al., 2023)

CONCLUSION

Based on the research and discussion, the following conclusions were drawn; (1) Direct training has a significant effect on pedagogical competence and performance, in addition it also has an indirect effect on performance mediated by pedagogical competence. (2) Direct pedagogical competence has a significant effect on teacher performance and (3) The component that has the strongest direct effect on teacher performance is pedagogical competence and in such conditions pedagogical competence becomes a strong mediator for the indirect effect of training on teacher performance.

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REFERENCES

- 1. I. G. A. L. P. Utami, S. Prestridge, A. Saukah, and F. A. Hamied. 2019. "Continuing Professional Development and teachers' perceptions and practices A tenable relationship," Indones. J. Appl. Linguist., vol. 9, no. 1, pp. 108–118, 2019, doi: 10.17509/ijal.v9i1.12463.
- 2. B. Setiyadi and V. Rosalina. 2020. Motivasi Pembelajaran Perspektif Guru dan Siswa. Bandung PT. Remaja Rosdakarya.," Edunesia J. Ilm. Pendidik., vol. 2, no. 1, pp. 75–84, 2021.
- 3. Mohammad Rizal Padly, D. Davani, and Adimas Djuanda Panjaitan. 2022. "Pelatihan Peningkatan Kompetensi Guru," Abdi Cendekia J. Pengabdi. Masy., vol. 1, no. 1, pp. 18–21, 2022, doi: 10.61253/abdicendekia.v1i1.31.
- 4. T. Berliani, R. Wahyuni, E. M. Helencia, A. Maretin, and S. M. Putra. 2022. "Equity in Education Journal (EEJ)," Equity Educ. J., pp. 82–87, 2022.
- 5. B. A. M. Putra and I. Kumalaputra. 2020. "Pengaruh Kompetensi dan Pelatihan Terhadap Kinerja Guru Mata Pelajaran," Ilmu Manaj. dan Bisnis, vol. 12 (01), no. 1, pp. 55–72.
- 6. L. Putri, A. Mujib, and D. A. Padmo Putri. 2022. "Pengaruh Pelatihan Berbasis Teknologi Informasi Komunikasi Dan Kompetensi Pedagogik Terhadap Profesionalisme Guru," J. Pendidik. Glas., vol. 6, no. 1, p. 89, doi: 10.32529/glasser.v6i1.1317.
- 7. Y. A. Prawira and F. Nugraha. 2021. "Peningkatan Kompetensi Pedagogik Guru Madrasah Melalui Pelatihan Partisipatif Secara Daring Berbasis Heuristik," Aksara J. Ilmu Pendidik. Nonform., vol. 7, no. 2, p. 307, 2021, doi: 10.37905/aksara.7.2.307-316.
- 8. N. Luh, Sulindawati, G. Erni, Wahyuni, and M. Arie. 2023. "Material Requirements for Computer-Assisted Inquiry Models Development in Investment Assessment Learning," J. Edutech Undiksha, vol. 11, no. 1, pp. 138–145, [Online]. Available: https://doi.org/10.23887/jeu.v11i1.54014.
- 9. K. Mertayasa, I. Nengah EkaAgustini, I. G. M. Darmawiguna, and I. K. D. Artayasa. 2020. "Evaluation of the teachers' acceptance to E-report card applications with the hot-fit model approach," Int. J. Instr., vol. 13, no. 3, pp. 475–490, doi: 10.29333/iji.2020.13333a.
- 10. N. L. G. E. Sulindawati. 2020. "Testing the Design and Implementation of Teaching Materials Developed for Writing Budget Reports Using Microsoft Excel Media," JPI (Jurnal Pendidik. Indones., vol. 9, no. 2, p. 266, doi: 10.23887/jpi-undiksha.v9i2.24545.
- 11. M. Perry, M. S. Bates, J. R. Cimpian, S. O. Beilstein, and C. Moran. 2022. "Impacting teachers' reflection on elementary mathematics classroom videos in online asynchronous professional learning contexts," Teach. Teach. Educ. Leadersh. Prof. Dev., vol. 1, no. March, p. 100003, doi: 10.1016/j.tatelp.2022.100003.
- 12. F. M. F. Wong and C. W. Y. Kan. 2022. "Online Problem-Based Learning Intervention on Self-Directed Learning and Problem-Solving through Group Work: A Waitlist Controlled Trial," Int. Journal Enviranment Res. Public Heal.
- 13. M. van Geel, T. Keuning, and I. Safar. 2022. "How teachers develop skills for implementing differentiated instruction: Helpful and hindering factors," Teach. Teach. Educ. Leadersh. Prof. Dev., vol. 1, no. February, p. 100007, 2022, doi: 10.1016/j.tatelp.100007.
- 14. S. Bahri and P. Korespondensi. 2020. "Studi Evaluasi Kinerja Guru Bimbingan Dan Konseling Di Sekolah," J. Pencerahan, vol. 14, no. 1, pp. 1–23.
- 15. T. Gultom. 2020. "Penilaian Kinerja Guru Mengenai Profesionalisme Guru Di Smp Negeri 2 Pangaribuan Kabupaten Tapanuli Utara Tahun 2020," J. Educ. Teach. Learn., vol. 2, no. 3, pp. 29–43, doi: 10.51178/jetl.v2i3.66.
- 16. H. Uzunboylu. 2022. "Features and characteristics of problem based learning," Cypriot J. Educ. Sci.

International Journal of Environmental Sciences

ISSN: 2229-7359 Vol. 11 No. 21s, 2025

https://theaspd.com/index.php

- G. D. Garson. 2016. Partial Least Squares. Web: www.statisticalassociates.com.
- 18. Widarto. 2018. "Penelitian Ex Post Facto," Penelit. Pendidik., vol. 10, pp. 1-8.
- 19. D. Budiastuti and A. Bandur. 2018. Validitas dan Reabilitas Penelitian.
- 20. K. & Morgan". 1970. Table for Determining Sample Size for a Finite Population Morgan," in Educational and Psychological Measurement.
- 21. A. A. G. Agung. 2014. "Metodologi Penelitian Pendidikan. (Edisi 2). Malang: Aditya Media Publishing."
- 22. Sugiyoyo. 2010. "Metode Penelitian Kuantitatif, Kualitatif. Bandung: Alfabeta." Alfabeta, Bandung.
- 23. D. Firmansyah and Dede. 2022. "Teknik Pengambilan Sampel Umum dalam Metodologi Penelitian: Literature Review," J. Ilm. Pendidik. Holistik, vol. 1, no. 2, pp. 85–114, doi: 10.55927/jiph.v1i2.937.
- 24. I. M. A. Arya Pering. 2020. "Kajian Analisis Jalur Dengan Structural Equation Modeling (Sem) Smart-Pls 3.0," J. Ilm. Satyagraha, vol. 3, no. 2, pp. 28–48, doi: 10.47532/jis.v3i2.177.
- 25. D. B. McNaughton and J. M. Cowell. 2020. "Determining Sample Size For Research Activities," Adv. Public Community Heal. Nurs. Pract. Popul. Assessment, Progr. Plan. Eval. Second Ed., vol. 38, pp. 127–153, doi: 10.1891/9780826138446.0006.
- 26. H. Wang, J. Xuan, L. Liu, X. Shen, and Y. Xiong. 2021. "Problem-based learning and case-based learning in dental education," Ann TRansl Med, vol. 9, no. 14, pp. 8–15, doi: 10.21037/atm-21-165.
- 27. A. Poonsawad, J. Srisomphan, and C. Sanrach. 2022. "Synthesis of Problem-Based Interactive Digital Storytelling Learning Model Under Gamification Environment Promotes Students' Problem-Solving Skills," vol. 17, no. 05, pp. 103–119.
- 28. Suryani, E. Syaodih, Y. R. Widjaja, and r oke Andikarya. 2023. "Pengaruh Pelatihan Dan Kompetensi Pedagogik Terhadap Kualitas Mengajar Guru," e-Prosiding Magister Manaj. ARS Univ., vol. 1, no. 2, pp. 62–66.
- 29. T. Suwartono and P. K. Nitiasih. 2020. "ProDev Participation and Teaching Performance: A Case Study of two Urban School EFL Teachers in Indonesia," Univers. J. Educ. Res., vol. 8, no. 7, pp. 3230–3235, doi: 10.13189/ujer.2020.080752.
- 30. D. G. H. Divayana, I. G. Ratnaya, and G. A. P. B. Aryati. 2023. "Evaluation of Character Education in Public High School Using the CIPP Model," J. Pendidik. dan Pengajaran, vol. 56, no. 2, pp. 349–358, doi: 10.23887/jpp.v56i2.66144.
- 31. F. Rabialdy. 2020. "Analisis Hubungan Motivasi dan Program Pelatihan terhadap Kinerja Guru di Kota Pekanbaru," J. Pendidik. Tambusai, vol. 4, no. 3, pp. 3495–3504, [Online]. Available: https://jptam.org/index.php/jptam/article/view/893.
- 32. A. A. G. Agung, Y. U. Lede, I. P. Wisna, and K. R. Dantes. 2024. "The Influence of Transformational Leadership on Work Motivation Has an Impact on Teacher Performance in Senior High Schools in Southwest Sumba Regency," Int. J. Relig., vol. 5, no. 3, pp. 366–376, doi: 10.61707/sf310r03.
- 33. P. K. Nitiasih, Ns. W. S. Mahayanti, I. N. Jampel, N. M. Asril, I. D. A. M. Budhyani, and A. Nakaya. 2025. "Future development of peace education in Bali: Lessons from a critical analysis of the peace education curricula of Hiroshima," Edelweiss Appl. Sci. Technol., vol. 9, no. 2, pp. 37–50, doi: 10.55214/25768484.v9i2.4427.
- 34. S. M. R. Leba, R. Butarbutar, and B. R. Werang. 2021. "Exploring the english learning strategies of an indigenous papuan student of Indonesia," Qual. Rep., vol. 26, no. 9, pp. 2745–2768, doi: 10.46743/2160-3715/2021.4881.
- 35. B. R. Werang and S. M. R. Leba. 2022. "Factors Affecting Student Engagement in Online Teaching and Learning: A Qualitative Case Study," Qual. Rep., vol. 27, no. 2, pp. 555–577, doi: 10.46743/2160-3715/2022.5165.
- 36. A. Supriyono. 2020. "Pengaruh Kompetensi Pedagogik, Profesional, Dan Motivasi Kerja Terhadap Kinerja Guru Sekolah Dasar," J. Pendidik., vol. 18, no. 2, pp. 1–12, doi: 10.33830/jp.v18i2.269.2017.
- 37. G. Danupranata and A. A. Masykur. 2020. "Pengaruh Servant Leadership Terhadap Kinerja Guru dengan Motivasi Kerja Sebagai Variabel Intervening (Studi Pada Guru SMP/MTS Muhammadiyah Dan Aisyiyah Sekabupaten Bantul)," pp. 1–13.