

The Effect of Training and Development, ICT Skills, and Additional Employee Allowances on Teacher Performance

Ria Irawati ^{1*}, Ahmad Syarief Iskandar ², St. Marwiyah ³, Jalil ⁴

^{1, 2, 3} Institut Agama Islam Negeri (IAIN) Palopo, Indonesia

⁴ Universitas Terbuka, Indonesia

¹ SMA Negeri 1 Palopo, Indonesia

* riairawat393@gmail.com

Abstract

This study highlights the effect of (1) training and development, (2) Information and Communication Technology (ICT) skills, and (3) additional employee allowances (Tambahan Perbaikan Penghasilan or TPP) on teacher performance at UPT SMA Negeri I Palopo. This is a quantitative study in an ex post facto correlational design. The population includes the 60 entire teachers at UPT SMA Negeri 1 in Palopo City, from which a sample size is calculated using Slovin's formula at a 5% confidence level. Instrument of data collection fits in a 5-scale Thurstone questionnaire that measures four variables, i.e., training and development(X1), ICT skills (X2), additional employee allowances(X3), and teacher performance (Y). SPSS 23 is used to run multiple regression for data analysis. Findings indicate that the partialeffect of X variables on teacher performance at UPT SMA Negeri 1 Palopo is 25,7% (training and development-X1), 43,1% (ICT skills-X2), and38,2% (additional employee allowances-X3). In terms of simultaneity, the influence of X variables on teacher performance is 45%. These findings suggest that the constructs of training and development, ICT skills, and additional employee allowance, both partially and simultaneously, are helpful for aiding in the improvement model of teacher performance. UPT SMA Negeri 1 Palopo can use these findings to define performance quality plan for its entire teacher workforce.

Keywords: *Performance, Education, Traning, High School, Allowances*

Introduction

School as an educational body has its primary responsibility to carry out learning in accordance with students' levels and needs. The critical importance of quality education lies in the high competences of the teaching profession. These competences are the cornerstone around which effective learning is built, which include professional competence, pedagogical competence, social competence and personality competence (Novauli. M, 2015). Some competences of a good teacher include skills in Information and Communication Technology (ICT) (Destiana, 2013; Sitanggang, 2020). Fostering ICT skills in teaching profession involves seeking out training and development carried out by either the Department of Education in which teachers are designated by the school, or other educational institutions or communities in which teachers represent themselves independently (Novauli. M, 2015).

Another key aspect in improving teacher performance is its benefits plans. Since 2018, the government of South Sulawesi has adopted a policy regarding the provision of Tambahan Penghasilan Pegawai or TPP (Additional Employee Allowances). During the Covid-19 pandemic, teacher employees at UPT SMA Negeri 1 Palopo are entitled to additional employee

allowances providing that they submit a weekly report of learning-from-home activities to the school principal. This policy is regulated in the Circular of the Ministry of Education and Culture Number 15 of 2020. In the early 2020 when COVID-19 set off global pandemic, the world faced a unprecedented global crisis affecting all fabrics of life including education landscape. In response to that, the Ministry of Education and Culture stipulated online home-based learning in accordance with the Circular of the Ministry of Education and Culture of the Republic of Indonesia Number 15 of 2020.

A number of prior studies shed light on teacher performance that is influenced by numerous factors, including the leadership of a school principal, workplace environment, and teacher training and development among others. Teacher training and development is revealed to have contribution of 9.18% to teacher performance (Novitasari et al., 2012). A more recent study concerning the influence of ICT use in a learning management system amid COVID-19 briefly concludes that the capacity to fully leverage ICT infrastructure is not optimal (Adisel & Pranansa, 2020). However, the findings in a study, which highlights the effectiveness of Google Form as a tool for collecting documents for the distribution of teachers' professional allowances, point to a positive conclusion; Google Form is an effective tool to create forms for data collection purposes (Sururiyah, 2020). A 2018's study examines the effect of four variables—one of which is economic factor—on teacher performance with findings indicating that the simultaneous effect accounts for 62,3% (Pramesti & Muhyadi, 2018).

While the existing literature provides a myriad number of prior studies that investigate the construct of training and development, ICT skills, and teacher allowances (economic factor) separately in the framework of the improvement of teacher performance, and human resources and learning management, those that particularly delve into the simultaneous link between those constructs and teacher performance remain underdeveloped. This justifies the need for the present study on the basis of the background evidence previously presented.

This study is based on the observation results from UPT SMA Negeri 1 Palopo, where the researchers identify a major issue that indicates teacher underperformance when it comes to conducting Belajar dari Rumah or BDR (Home-Based Learning). This underperformance is subject to the lack of teachers' ICT skills, the inadequacy of ICT preparation during learning, and varied accessibility of internet access where for some providing internet quota requires a high cost. This existing issue on the research topic identifies why it is important to address these three constructs in terms of their simultaneous effect on teacher performance.

The research topic fits into the objective of the study, i.e., to observe (1) the effect of training and development on teacher performance at UPT SMA Negeri 1 Palopo; (2) the effect of ICT skills on teacher performance at UPT SMA Negeri 1 Palopo; and (3) the effect of Tambahan Penghasilan Pegawai or TPP (Additional Employee Allowances) on teacher performance at UPT SMA Negeri 1 Palopo.

Method

Research Design

This design of the study is an ex post facto correlational research using a quantitative approach. In an ex post facto design, the study is based on the already-existing data at the study site without involving any form of manipulation of any of the variables. This design fits the measurable variables of the study, i.e., training and development, ICT skills, and Tambahan Penghasilan Pegawai or TPP (Additional Employee Allowances) to identify the performance quality of the teacher workforce at UPT SMA Negeri 1 Palopo.

Population and Sample

The population of the study is the entire 60 teachers at UPT SMA Negeri 1 in Palopo City. Slovin's formula (Wati, 2018) is adopted at a 5% confidence level to calculate the necessary sample size, given that the individuals within the given population, i.e., the entire teachers at UPT SMA Negeri 1 Palopo, are homogeneous in nature. Lottery method is used to randomly choose samples.

Research Instrument

Instrument of data collection fits in a 5-scale Thurstone questionnaire (Wati, 2018). The rate of respondents' participation in training and development is subject to 5 options from 1= I have never attended training to 5= I have attended training for 4 times. Respondents' participation is calculated using a mean of – 1. As for the use of self-directed learning applications (for variable X1, X2, X3, and Y), the questions are subject to 5 options, i.e., 1= strongly disagree, 2=disagree, 3= hesitate, 4=agree, and 5=strongly agree.

Variables and Research Instrument

This research project is based around four variables; training and development(X1), ICT skills (X2), Tunjangan Tambahan Penghasilan Pegawai or TPP (Additional Employee Allowances—X3), and teacher performance (Y).

Data Analysis

Data analysis is run using multiple regression that follows the equation below:

$$Y = \alpha + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \varepsilon$$

Where

Y = teacher performance

β_1 = regression coefficient of training and development (X1)

β_2 = regression coefficient of ICT skills (X2)

β_3 = regression coefficient of additional employee allowances(X3)

X1 = training and development

X2 = ICT skills

X3 = additional employee allowances

ε = error

Validity and reliability tests are run prior to hypothesis testing. Each instrument item is tested in SPSS 23 to make sure it is valid for data entry. According to Lela Nurlelawati, an instrument item is valid if $r \geq 0,3$, while it is not valid if $r < 0,3$. Items that lack validity are subsequently excluded from data analysis (Wati, 2018).

Table 1. Results of Item Validity and Reliability for Each Variable

Variable	The number of items	Valid items	R value	Cronbach's Alpha (reliability)
Training and development(X1)	25	10	0,361 – 0,876	0,884
ICT skills (X2)	15	13	0,322 – 0,765	0,899.
Additional Employee Allowances (X3)	9	8	0,319 – 0,875	0,880
Teacher performance (Y)	16	16	0,465 – 0,843	0,940

Results

Description of questionnaire results based on variables

The variable of training and development consists of a set of 25 question items with a mean ranging between 1,222 and 4,6481 from responses that range between 66 and 251. The recapitulation of respondents' answers regarding ICT skills (X2) is provided in the Appendix. The number of responses is 54 of a 15-item instruments with a mean ranging between 3,0741 – 4,8889 that culminates in a score ranging between 166 and 264. In terms of additional employee allowances, the number of responses is 52 with a mean ranging between 3,8148 and 4,463 in a score between 206 and 241.

Hypothesis Testing

Regression is run for variable X1, X2, and X3 as Table 2 presents below.

Table2. Descriptive Statistics of the Influence of Training and Development, ICT Skills and Additional Employee Allowances on Teacher Performance at UPT SMA Negeri 1 Palopo

	Mean	Std. Deviation	N
Teacher performance	72,5000	8,40878	54
Training and Development	20,9259	7,39161	54
ICT Skills	52,1111	8,73654	54
Additional Employee Allowances	32,9630	6,58748	54

Based on the statistical analysis, the mean of teacher performance of UPT SMA Negeri 1 Palopo is 72,5; training and development is 20,92; ICT skills is 52,11; and additional employee allowances is 32,96 out of 54 respondents.

Hypothesis 1: Training and development influences teacher performance at UPT SMA Negeri 1 Palopo

In a multiple regression test for the variable of training and development, the alpha (constant) is 31,723, and the beta is 0,257. Training and development influences teacher performance at UPT SMA Negeri 1 Palopo at a significance level of $0.046 = 0,05$. While the significance level is approaching 0,05, the $t_{count} > t_{table} = 2,051 > 2,0076$. Beta of 0,257 indicates that an increase in training and development for every 1 unit of change accounts for a 25,7-increase in teacher performance. Accordingly, H_0 is rejected in favor of H_a .

Hypothesis 2: ICT skills influence teacher performance at UPT SMA Negeri 1 Palopo

ICT skills significantly influence teacher performance at UPT SMA Negeri 1 Palopo with the alpha (constant) of 31,723 and beta of 0,431. As such, the regression equation $Y = a + bx$ is constructed into $Y = 31,732 + 0,431X + \epsilon$. ICT skills influence teacher performance at UPT SMA Negeri 1 Palopo at a significance level of $0.000 < 0,05$, and the $t_{count} > t_{table} = 2,013 > 2,0076$. Beta of 0,431 indicates that an increase in ICT skills for every 1 unit of change accounts for a 43,1%-increase in teacher performance. Accordingly, H_0 is rejected in favor of H_a .

Hypothesis 3: Additional employee allowances influence teacher performance at UPT SMA Negeri 1 Palopo

Likewise, additional employee allowances significantly influence teacher performance at UPT SMA Negeri 1 Palopo at a significance level $0.006 < 0,05$, and the $t_{count} > t_{table} = 2,898 > 2,0076$. Beta of 0,382 indicates that an increase in additional employee allowance for every 1 unit of change accounts for a 38,2%-increase in teacher performance. Accordingly, H_0 is rejected in favor of H_a .

Testing hypothesis 4: the simultaneous effect of training and development, ICT skills and additional employee allowances on teacher performance at UPT SMA Negeri 1 Palop

The simultaneous effect of variable X1, X2 and X3 on variable Y is presented below.

Table 3. Model Summary^b

Model	R	R Squared	Adjusted R Squared	Std. Error of the Estimate
1	0,675 ^a	0,455	0,423	6,38973

a. Predictors: (Constant), Training and Development, ICT Skills, Additional Employee Allowances

b. Dependent Variable: Teacher Performance

R squared of 0,455 suggests that the effect of training and development (X1), ICT skills (X2), and additional employee allowances (X3) on teacher performance (Y) is 45,5%. The remaining 55,5% accounts for irrelevant or unknown variables. Accordingly, training and development, ICT skills, and additional employee allowances are statistically significant to teacher performance at UPT SMA Negeri 1 Palopo. H₀ is therefore rejected in favor of H_a.

Discussion

The effect of training and development on teacher performance

In the regression analysis, results describe the relationship between training and development for teachers and their performance at UPT SMA Negeri 1 Palopo at an estimated output of 25,7%. In a study on Junior High School teachers across Poso City (Gala & Ramadhan, 2010), the effect of training and development on teacher performance is 13,7%. This is in line with a study on Senior High School teachers across Kendal Regency (Novitasari et al., 2012) that finds a correlation of 11,9% between training and development and teacher performance.

This statistical finding points to the importance of improving the frequency of teacher training and development, most particularly concerning ICT skills, within the framework of teacher performance scheme at UPT SMA Negeri 1 Palopo. Leveraging ICT-based training and development may incorporate basic Microsoft Office applications such as Word, Excel and PowerPoint. Integrating other online platforms into learning design, implementation and evaluation are equally vital to current teacher development. Oftentimes, the emphasis of training is on teachers' professional competencies to gain insights into exploring extensive catalog of teaching materials as well as capitalizing on online learning resources.

Teachers are the most valuable asset in education landscape, and, therefore, investing in their training and development is one of the core functions within human resources management. The commitment to enhancing human resources fosters workforce engagement to help an organization achieve its important benchmarks and objectives. This commitment manifests in strategic initiatives and planning to engage employees through consistent training to improve their competency and performance (Proyono, 2007). School Operational Assistance Grant may be used for the allocations for training expenditures.

The effect of ICT skills on teacher performance

Among the three predictor variables, ICT skills represents the most significant variable for teacher performance at UPT SMA Negeri 1 Palopo, standing firm at 43,1%. Bonita Destian finds a similar finding in her study in Gunung Kidul Regency that finds a correlation of 26,8%

between ICT skills and teacher performance (Destiana, 2013). Elisa Marhamah Sitanggang also confirms the positive relationship between ICT skills and teacher performance at SMP Strada Tangerang (Sitanggang, 2020).

Wide-ranging ICT tools have become increasingly integral to the overall educational affairs from learning design, implementation to its evaluation. K. Ratheeswari argues that the overall use of ICT in education provides students with tremendous opportunity to fulfill their learning needs and navigate them toward comprehensive 21st-century skills. ICT creates numerous platforms for teachers to design educational environment for nurturing successful teaching and learning interactions. It also provides options to help them use more technology for making teaching and learning more attractive (Ratheeswari, 2018). The current finding is similar to a prior study that involves a control group and an experimental group, with each comprising 60 student samples. While the control group receives a lecturing method, the experiment group is subject to ICT-based learning. Results show that the latter represents a better outcome than the former group (Khan et al., 2019). Ensuring educational policies aimed at ICT use is effective for quality learning performance schemes. However, it is important to note that understanding how to integrate ICT components into learning should work in both home-based, self-directed learning and its offline counterpart.

ICT, with its range of options and resources, benefits learning in many ways; cost-effectiveness, paperless classroom (which is more eco-friendly), better efficiency in learning and teaching, time-effectiveness and minimum risks, interactive and collaborative approaches to teaching and learning, direct instructions, independent learning resources for students, attractive audio-visual presentations for teaching, well-designed activities that nourish learning spirit (Adebayo, 2020). Notwithstanding its great benefits in education, ICT has its shortcomings, i.e., economic issues, technical factors, and lack of design and capacity to adopt ICT in learning (Tikam, 2013). Mitigation efforts are therefore critical to tackling challenges and creating opportunities for a more optimal use and sustainable growth of ICT-based learning.

The effect of additional employee allowances on teacher performance

Additional employee allowances are statistically significant to teacher performance at UPT SMA Negeri 1 Palopo with an effect size of 39,2%. Once teachers submit home-based learning (Belajar dari Rumah or BDR) reports, they may qualify for additional employee allowances, which are usually paid on time. These allowances are in accordance with teachers' workloads and are regulated in a fair manner that best meets teachers' expectations. Teachers may expend these allowances on teaching resources and paid lesson applications. In addition to weekly BDR reports, additional employee allowances are provided according to the scores of Teacher Competencies Test.

The current finding is consistent with several prior findings at different study sites. A study in Bayumanik Sub-district of Semarang Regency reveals that additional employee allowances moderate the effect of work discipline and job satisfaction on employee performance (Widia & Rusdianti, 2018). A study at the Department of Communication and Informatics in Manado finds an effect size of 80% of additional employee allowances on employee performance (Abriando, 1390). A similar statistic finding is found in a study at the Department of Public Works and Spatial Planning in Talaud Islands Regency where additional employee allowances contribute 87,34% to employee performance (Umbeang et al., 2020).

The simultaneous effect of training and development, ICT skills, and additional employee allowances on teacher performance

The simultaneous effect of training and development, ICT skills and additional employee allowances on teacher performance at UPT SMA Negeri 1 Palopo is statistically significant. This finding points to the importance of teacher-competency improvement plans that essentially set the standard of performance within the workforce. Creating and empowering a set of essential teacher competencies call for strategic investments in teacher training and development by schools, the Department of Education, and other associated agencies. Training and development programs must align with teachers' needs particularly pedagogical digital competencies, i.e., teacher competencies for ICT use when it comes to planning, preparing, implementing and evaluating learning through a myriad of educational applications and platforms.

Teacher training and development is fundamental when the need to equip teachers with core skills around the use of educational applications and platforms becomes imperative in the learning processes. Oftentimes, teachers must cover the ed-tech (educational technology) expenses out of their own pocket to purchase or access paid apps or online resources. Thus, it makes sense that teachers need additional allowances to cover the cost of individual online lessons or units.

Prior studies have highlighted the significant correlation between training and development and teacher performance with the overall strength of association exceeding 50%. A study at Agricultural Technical Training Center reports that the effect of training and development on employee performance is 67,9% (Turere, 2013). Another study on teachers at SMA Muhammadiyah Marthapura reveals the effect of training and development on teacher performance is 53,7% (Audah, 2020). A higher percentage is found in a study at SMPN 2 Bangkinang where the effect of training and development on teacher performance stands at 68.6% (Yulizar, 2019).

Conclusion

The effect of training and development, ICT skills, and additional employee allowances on teacher performance is statistically positive and significant, both in a partial and simultaneous term. With respect to partial effects, the effect of training and development on teacher performance stands at 25,7%; ICT skills at 43,1% (which ranks the highest among the predictors); and additional employee allowances at 39,2%. In simultaneity, the effect of the three predictor variables is 45,5% on teacher performance. These findings suggest that the constructs of training and development, ICT skills, and additional employee allowances, both partial and simultaneous, are helpful for aiding in the improvement model of teacher performance to empower performance quality for teacher workforce at all levels most notably at senior secondary education.

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