Effect of Supervision and Training on Elementary School Teachers' Performance

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Abstract

Teachers' low competence in teaching can be the reason for poor performance. Teachers' competency is the result of effective training and supervision. The purpose of this study was to test the training and supervision effects on teachers' performance through the mediation of teachers' competence in primary schools in the Ethiopian Tigray Regional State Bureau of Education. The correlation and the causal relationship of the variables in this study were done using a quantitative approach. The sample in this study was 80 elementary school teachers who were taken from Mekelle, the capital of Tigray Regional State, by using purposive sampling. Data were collected using a 5-point Likert-scale questionnaire. This study uses SmartPLS4 and SPSS software to analyze the data. Data analysis techniques like outer loadings, composite reliability, p values, discriminant validity, R^2, Fornell-Larcker criteria, and path coefficients were employed in this study. The result revealed that training and supervision have a significant positive effect on teachers' competence and performance a p-value of 0.000 in all cases. Teachers' competence also has a significant positive effect on their performance at p=0.000.

Keywords: Teacher training, Educational supervision, Teacher competency, Teacher performance

Introduction

The root cause of poor performance may be the teachers' lack of educational competence. Competency in teaching comes from effective supervision and training.Training passes the process of identifying training needs using effective techniques to address learning needs within the organizational context, designing training programs by considering learning events and strategies, developing training materials, conducting the training using participative delivery techniques, and evaluating training programs. With this regard, Hunein (2018)said that employee training, incentive, and supervision influence employee performance. Employee motivation can be affected by training, incentive, supervision, and employee performance. This may include onboarding programs for new hires, skill enhancement workshops, leadership development initiatives, and continuous learning opportunities. By investing in employee development, organizations aim to enhance their knowledge, skills, and abilities, thereby improving performance(Giday & Elantheraiyan P., 2023). According to Syukkur and Fauzan (2021), teachers are the cornerstone of an educational institution's success. Training in the education sector is very much important to train, update and upgrade employees. Especially teachers should have to be up-to-date because their students need updated information about the world. For this reason, schools and educational organizations are using training and supervision to improve their teachers' competency and performance.

Teacher Training

Training is an important part of personal development, allowing teachers to develop their professional qualities and skills(Nongna et al. 2023). Other author, Idris (2018), said that while education and training, work discipline, and business culture are influential factors, there are other aspects that can also impact employee performance, such as job design and opportunities for growth and development. Organizations that recognize and address these factors can create an environment that supports and motivates employees, ultimately leading to improved performance and productivity. Hankir (2020)concluded that employee performance is influenced by salary, training, information transfer, and creative culture. Training and development, according to Jehow, Gikandi and Mwencha (2018), improve employees' knowledge

and skills. It increases job happiness, and the organization can retain qualified employees who help it reach its goals. Employee career advancement is also supported by training and development. Elantheraiyan.P and Thandayuthapani. S (2022) asserted that today, not only in business but also in academic institutions, training is a crucial organizational activity. Many companies have recognized the need for training, built infrastructure, and offered financial assistance. Classroom preparedness is a term that appears in theories of teacher education programs and regulations all throughout the world(Rushton et al., 2022).

Educational Supervision

 Maritasari et al. (2020) stated in their study that supervision is commonly perceived as an oversight. Supervision plays a crucial role in supporting teachers and facilitating successful collaboration with their students.Principals in education institutions serve as educators, managers, administrators, supervisors, leadership, innovators, and motivators (EMASLIM). Principals and supervisors play a key role in teachers' capacity building through training and supervision. Especially school principals have to supervise and create a conducive environment for the internal and external supervision of teachers. Supervision must be followed by effective feedback which identifies the gaps and best qualities of individual teachers provided for supervisees(Hakim et al., 2021). Jehow, Gikandi and Mwencha (2018) said that the supervisory skills of supervisors/managers affect employee motivation. Individuals who are assigned as supervisors must be better skillful and knowledgeable in the area than the teachers. In the supervision process of teaching, supervisors must encourage teachers, and inspire teachers to develop their abilities. Other authors, Manajemen and Indonesia (2021) asserted thateffective and reactive staff performance is critical for all organizations, particularly government organizations, both individually and in linked groups in educational supervision.By considering dedication, active participation, preparation, and contribution when evaluating their peers' performance, student teachers gain a comprehensive understanding of their colleagues' commitment to their teacher education program(Lindqvist et al., 2022).

Teacher competence

According toSyukkur & Fauzan (2021), the good and bad behavior of instructional procedures would harm the image of educational institutions. An in-service training programis the teacher competency development approach for increasing educational quality. Competence is regarded as a crucial quality in a person and is made up of knowledge, skills, and attitudes relevant to the task at hand. Knowledge, skills, work attitudes, and personalities all play a role in how well people perform their jobs in organizations. According to Siri et al. (2020), teacher competency and dedication affect teacher performance. Teachers with high social competence can build strong relationships, foster a sense of community, and effectively work with others to support student learning. Additionally, Shin and Shim (2021), admitted that involvement and success in the subject matter were indicators of the teacher's perceived competence.Other authors, Sulaiman and Ismail (2020), argued that teachers have numerous opportunities and capabilities to vary their teaching techniques, and the availability of technology. This facilitates the creation of a more engaging and relevant teaching environment. This, in turn, increases student engagement in all activities.Even though some competencies are necessary for excellent teaching, they are never sufficient because there is always a need for judgment regarding which competencies should be used in each particular and unique educational setting(Ljungblad, 2022).To meet the demand for high-quality teaching, instructors need to have strong core competencies(Nongna et al., 2023).

Teacher performance

According to Shayegan et al. (2022), Among the most crucial and successful methods for developing human resources are employee engagement, training and development, and professional development. Training and remuneration have yet again had a significant impact on employee satisfaction. Employee placement, according to Virdanty et al. (2022),was the starting point for performance enhancement activities.In addition to this, Virdanty et al. (2022), agreed that training and motivation highly affect employee performance. Well-trained employees can be motivated and energetic. Those motivated employees who can perform best in the organization become productive and goal achievers.

The Ethiopian Tigray Regional State Bureau of Education is providing intensive training and supervision for teachers and education institution leaders to enhance the employees' competence and performance. However, students' results

and the quality of education, in general, are still unsolved problems. This study is designed to have two independent variables, educational supervision and education training,one dependent variable(teachers' performance), and one mediator variable, teacher competence. To address the above problem, the researchers designed the following basic questions.

To what extent does training affect teachers' competence?
To what extent does educational supervision affect teachers' competence?
How does training affect teachers' performance?
How does educational supervision affect teachers' performance?
To what extent does teachers' competence affect their performance?

Hypotheses construction

This research is expected to test the following four hypotheses.

H1: Training has a significant positive effect on the competence of teachers.
H2: Educational supervision has a significant positive influence on teachers' competence.
H3:Educational training has a significant positive effect on teachers' performance.
H4: Educational supervision has a significant influence on teachers' performance.
H5: Teachers' competence has a significant effect on teacher performance.

Methodology

A quantitative approachwas employed for this study. It was designed to have two independent,a mediator and dependent variables. Each factor also has its own items (Questions) under it. This study is typically a cross-sectional study in which the data were collected once from government school teachers inMekelle, Ethiopia, during the academic year 2022.Specifically, 80 respondents were selected from the four elementary schools in the city. The respondents were chosen using the purposive sampling technique.Data were collected using a five-point Likert Scale questionnaire. The questionnaire was distributed to 80respondents. After collecting data using questionnaires, this study analyzed the data using data analysis techniques inSmartPLS4 software. Those are outer loadings, composite reliability, p values, discriminant validity, R^2, Fornell-Larcker criteria, and path coefficients. This study's SEM model was created with Smart PLS4 software.

Data Analysis and Interpretation

Table 1: Descriptive Statistics

Variables	N	Minimum	Maximum	Mean	SD
Training	80	1.000	4.657	2.261	0.821
Supervision	80	1.000	5.000	2.359	0.923
Teacher competence	80	1.000	4.200	1.948	0.969
Teacher performance	80	1.000	5.000	2.392	1.068

Table 1 shows the descriptive statistics of the five variables. According to the table, the mean values of all the variables are less than 2.5, which is half of a five-point Lickert scale. This indicates respondents were not satisfied with training and supervision practices in their institutions at M =2.261 and 2.359 with SD = 0.821 and 0.923 respectively.

Outer loadings and p-values

Table 2:Outer loading coefficient

Variable	Code	Outer Loading	P-values	Information
supervision	SUP1	0.935	0.00	supported

	SUP2	0.897	0.00	supported
	SUP3	0.895	0.00	supported
	SUP4	0.897	0.00	supported
	SUP5	0.912	0.00	supported
Teacher Competence	TC1	0.904	0.00	supported
	TC2	0.865	0.00	supported
	TC3	0.901	0.00	supported
	TC4	0.885	0.00	supported
Teacher performance	TP1	0.971	0.00	supported
	TP2	0.908	0.00	supported
	TP3	0.898	0.00	supported
	TP4	0.975	0.00	supported
Training	TRA1	0.954	0.00	supported
	TRA2	0.941	0.00	supported
	TRA3	0.944	0.00	supported
	TRA4	0.941	0.00	supported
	TRA5	0.96	0.00	supported

The above tablecontains information on confirmatory factor analysis, and the p-value for all items. Items with a factor loading of 0.5 or higher are referred to as strong-loading items. The p-value results of variables are expected to be less than 0.05 to show the significance of its effect on the main factor. If the result of the p-value of the constructs was greater than 0.05, we can say that the impact of the constructs is insignificant on the mother factor.

Table 3: Cronbach's alpha and composite reliability

Variable	Cronbach's	Composite reliability	AVE	Information
SUP	0.946	0.959	0.823	Reliable
TC	0.911	0.938	0.79	Reliable
TP	0.954	0.967	0.881	Reliable
TRA	0.972	0.978	0.899	Reliable

Cronbach's alpha indicates the dependability of the data collection. Table 3shows the square root of the Average Variance Extracted (AVE) for all constructs: supervision (0.823), teachers' competence (0.790), teachers' performance (0.881), and training (0.899). In all cases, the values of each variable were higher than the threshold of 0.70. The Cronbach's alpha value ranges from 0.911 to 972, indicating high reliability.

Discriminant Validity

Discriminant validity findings are good when the variables have AVE values greater than 0.5. Discriminant Validity tests are being performed to determine whether or not non-related thoughts or measures are really unrelated. In this work, discriminant validity was tested by the Fornell-Larcker criteria. The following table will go throughtheFornell-Larcker criteria values.

Table4: Discriminant validity

Variables	SUP	TC	TP	TRA
SUP	**0.907**			
TC	0.831	**0.889**		
TP	0.862	0.865	**0.939**	
TRA	0.802	0.817	0.876	**0.948**

Table 5: R-square (R^2) coefficient

Variables	R-square	R-square adjusted	Fit Level
TC	0.755	0.748	Large
TP	0.749	0.745	Large

Table 5 shows the R-Square values of the model. From the R-square values Q^2 was calculated using the formula to show predictive relevance, $Q^2 = 1-(1-R^2_1)(1-R^2_2)$. It can be calculated as $Q^2 = 0.939$ (large).

The other criterion to test the accuracy of the research model is Goodness of Fit (GoF). The following formula is used to calculate GoF the value. GoF $= \sqrt{\text{Average of AVE} * \text{Average of } R^2}$

GoF= 0.798 (large).

The model fit of the research was evaluated based on the three parameters Q^2, R^2, and GoF. The results show the research model built has a strong degree of accuracy; therefore, it is possible to proceed to test the research hypotheses.

Hypotheses testing

Testing hypothesis was based on the results of data processed with SmartPLS software, shown in table 6.
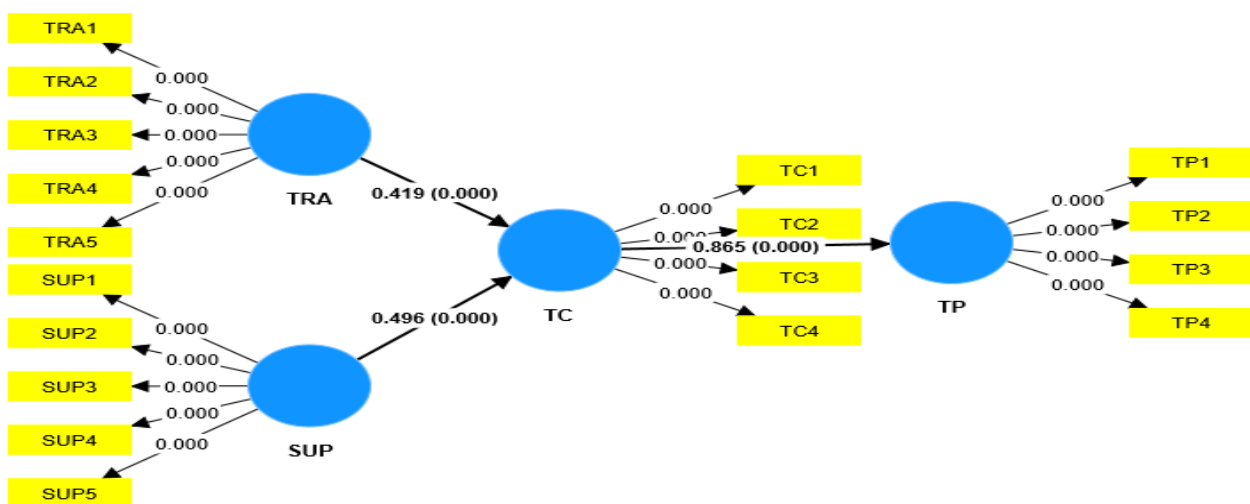
Figure 1: PLS Algorithm

Table 6: Path coefficient direct and indirect effects

Hypotheses	Relationships	Path Coefficient	P values	Information
H1	SUP -> TC	0.496	0.000	Hypothesis 2 accepted
H2	SUP -> TP	0.429	0.000	Hypothesis 4 accepted

H3	TC -> TP	0.865	0.000	Hypothesis 5 accepted
H4	TRA -> TC	0.419	0.000	Hypothesis 1 accepted
H5	TRA -> TP	0.362	0.000	Hypothesis 3 accepted

Based on figure 1 and table 6, the independent variable supervision shows a significant positive effect on teacher competence and teachers' performance at a p-value of 0.000 and 0.000, respectively, while the decision criteria for p-values are less than 0.05. This leads to the acceptance of alternative hypotheses one and two. This indicates that the low competence and performance of teachers in (Tigray Regional State Bureau of Education) are the result of ineffective educational supervision. That means if schools' supportive educational supervision is provided for teachers, their level of competence improves (Hakim et al., 2021). Due to improved teachers' competency, the performance of teachers will be better than before(Maritasari et al., 2020).

The second independent variable, training, also had a significant positive effect on teacher competency and teachers' performance, with a p-value of 0.000 and 0.000, respectively. According to the statistical results, alternative hypotheses 4 and 5 are accepted. This indicates that the low competence and performance of teachers are the result of ineffective educational training. That means, if the school's educational training is provided for teachers, their competence will be significantly improved (Jin et al., 2022).

The mediating role of teachers' competence in the relationship between supervision and training and teachers' performance also appeared to be significantly positive. This can be seen from the path p-value of 0.000, where the decision criterion is p < 0.05. According to the results, alternative hypothesis 3 was accepted, showing that there is a significant positive influence of teachers' competence on teachers' performance. This indicates that low performance of teachers is the result of teachers' unsuccessful competence in the schools. That means if the schools' teachers' competence is increased, their performance will be significantly improved (Baten, 2018).

Conclusion

The research concluded that training and supervision have a considerable influence on teachers' competence and performance. Teachers' competency has a strong favorable influence on their performance as well. This conclusion was supported by Sulaiman and Ismail (2020), teacher competency has the ability to assist instructors in enhancing their potential in line with 21st-century learning principles. The comprehensive teacher development programin the context of Chinese vocational education has favorable effects on rookie instructors' retention, classroom management effectiveness, and student engagement(Jin et al., 2022).The implication of this study internationally relays on creating awareness among educational experts, HR managers in the education sector, supervisors, and the school community about the association among teacher training, teacher competence, teacher supervision, and their impact on teachers' performance.

Limitations of the Study

This investigation into the impact of supervision and training on teachers' performance was the main goal of the study. So, the study is restricted to three factors that influence teachers' performances. Teachers' performance can be affected by factors that are not included in this study like managerial support, resource availability, school atmosphere, etc. In addition, the study used respondents from four schools in Mekelle City. This shows limitation in terms of sampling. The study suggested that further studies could be done in the area, considering other factors of teacher performance.

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