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The Influence of Academic Supervision and Professional Learning Community (PLC) on Teacher Professional Competency: Does the Mediation of Self-Confidence Matter?

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Abstrak

This research explores self-confidence's role as a mediator in the influence between academic supervision, the Professional Learning Community (PLC), and teacher professional competence. The survey method was used to collect data based on purposive sampling from 60 teachers at SMAN 2 Ponorogo who were involved in the PLC program. Data collection was carried out using a questionnaire consisting of a Likert scale with 4 alternative answers. PLS-SEM analysis was used to analyze data and test the conceptual model. The results of the analysis show that academic supervision does not have a significant effect on teachers' self-confidence and professional competence. In addition, self-confidence was proven not to mediate the influence between academic supervision and PLC professionalism on teacher professional competence. These findings highlight the importance of self-confidence in facilitating the development of teachers' professional competence through academic supervision and participation in learning communities. The practical implication of this research is the need for a holistic approach to teacher development, which does not only focus on the technical aspects of expertise but also psychological aspects such as self-confidence. Research supports efforts to design professional development programs that strengthen teachers' self-confidence and integrate academic supervision and PLC professionalism to enhance their professional competence.
Kata kunci: *Self-confidence, academic supervision, professional learning community, teacher professional competence, PLS-SEM.*

Introduction

A teacher's competency is the ability to apply professional knowledge and skills in the work environment, which is supported by the values or attributes inherent in him or her. Teacher professionalism includes conditions, direction, values, goals, and quality of expertise and authority in the field of education and teaching related to their work (Hizam et al., 2021; Kurup et al., 2019; Rahimi & Mosalli, 2024). The quality of this expertise is reflected in the possession of special competencies, minimum education level, and expertise certification. To carry out their duties effectively, a teacher as a professional educator certainly needs to have the four basic teacher competencies (Ştefan et al., 2023; Zeinabadi, 2022; Zhu et al., 2023).

In this research, teacher competence will be discussed in depth, which is very inherent in someone who works as a teacher, namely professional competence. Professional competence is a skill related to a comprehensive and in-depth understanding of learning material in a field of study (Rahimi & Mosalli, 2024; Zeinabadi, 2022). This includes mastering the substance of the school curriculum content, as well as a deep understanding of the scientific aspects involving the curriculum material (J.-C. Huang, 2023; Kurup et al., 2019; Yildiz Durak et al., 2023). Apart from that, this competency also includes expanding scientific insight as part of efforts to become a professional teacher.

The attitude that a teacher needs to develop is the willingness to recognize oneself and continue to improve one's teaching abilities (Hizam et al., 2021; J.-C. Huang, 2023; Yang et al., 2022). Someone who wants to become a teacher must be willing to learn and spend time developing themselves. A teacher who does not want to learn will not feel comfortable or proud to be a teacher (Ramanan & Mohamad, 2020; Wang et al., 2023). Feeling comfortable and proud of the teaching profession is a step towards professionalism. Teachers with high-quality human resources and professional competence play a role as a determining factor in the quality of education, along with other equally important factors (Mbato, 2023; Ştefan et al., 2023; Zeinabadi, 2022).

However, based on the results of the pre-survey, it was found that there are still many teachers who teach without fulfilling the professional competencies that an educator should have. The learning process is not structured systematically, is not comprehensive, and does not involve collaboration with students. Mastery of subject matter, including the ability to convey material systematically and with good quality, tends to contribute to improving the quality of learning. The preliminary results of this study are in line with research by Noor *et al.* (2020) which shows that when a teacher lacks mastery of the subject matter, this can hurt student learning outcomes. Teacher competency in Indonesia is still not satisfactory and is still below the targets set by the government. Teachers who teach subjects outside their field of study and have not mastered information and communication technology will experience problems in transferring knowledge to students (Hizam et al., 2021; Sulistiani et al., 2023).

As an effort to improve teacher competency, the government program offers academic supervision. Academic supervision is an action to provide support to teachers so they can improve their skills in achieving learning goals (X. Li et al., 2023; Suyatno et al., 2023). Academic supervision is essential as a step to carry out supervision and guidance to continue to improve teacher competence on an ongoing basis. Based on a study by Herman & Khalaf (2023), shows that if the principal's academic supervision program is implemented effectively, the results have been proven to improve teachers' professional abilities in planning and managing learning in the classroom. This is also by Suyatno *et al.* (2023) research which shows that academic supervision can improve teachers' professional competence. However, teachers need to improve their professional competence beyond the implementation of school principal supervision (Herman & Khalaf, 2023; Noor et al., 2020; Suyatno et al., 2023). In this way, the delivery of learning material can run well, when teacher competence increases.

Apart from carrying out supervision, it is an effort to develop their professional competence. Teachers can develop professional competencies by joining the Professional Learning Community (PLC). PLC is an alternative solution because its implementation does not require significant costs, is very efficient in terms of energy, place, and time, and includes knowledge exchange activities between teachers (Ken et al., 2023; Voelkel Jr., 2022). Based on Singh & Loh (2024) study, it shows that implementing PLC can improve their skills and professionalism in the classroom. Teachers also stated that PLC could help them improve the delivery of subject matter in the learning process in the classroom. Research conducted by Q. Li (2022) also revealed that PLC is very relevant in improving teacher competency because PLC members always focus on learning, identifying and stopping fewer effective practices, and replacing them with methods that are proven to provide better results. In this way, teachers can significantly increase their competence, this will also have a positive impact on student learning achievement (Singh & Loh, 2024; Voelkel Jr., 2022).

The novelty of this study lies in the holistic approach that combines two important factors, namely academic supervision and PLC, which have rarely been studied together in the Indonesian educational context. Previous studies found that academic supervision directly

improves teachers' professional competence, but did not examine the mediating role of self-confidence.(Szabó et al., 2021; Yang et al., 2022). In contrast, research by (Putri and Santoso., 2020) shows that PLC has a significant influence on professional competence, but does not consider aspects of self-confidence. Meanwhile,.Hashim *et al.* (2023) indicated that self-confidence plays an important role in the development of professional competence, but did not relate it to academic supervision or PLC.

This study fills the gap by exploring how self-confidence mediates the influence of academic supervision and PLC simultaneously. Therefore, it provides a holistic view of the factors that influence teachers' professional competence that is analyzed in a complex manner using PLS SEM. The results of this study are expected to make theoretical and practical contributions to the development of teacher training programs and education policy. The purpose of this study is to explore and understand the role of self-confidence as a mediator in the relationship between academic supervision and PLC on improving teachers' professional competence. by focusing on the element of self-confidence, this study aims to identify the extent to which teachers' self-confidence can mediate the effect of academic supervision and their participation in learning communities on improving their teaching quality.

Literature Review and Hypothesis Development

The Influence of Academic Supervision on Self-Confidence and Teacher Professional Competency

The influence of academic supervision on teacher professional competence has great urgency in improving educational standards and teaching quality. Academic supervision helps improve the quality of teacher teaching through feedback provided by the supervisor (Mbato, 2023; Noor et al., 2020). It helps teachers to improve their teaching techniques, adapt more effective learning strategies, and face challenges in student learning. Academic supervision provides opportunities for teachers to be involved in professional development activities, such as additional training, seminars, or workshops (Hizam et al., 2021; Ștefan et al., 2023; Zeinabadi, 2022; Zhu et al., 2023). This helps them to continually update their knowledge and skills in the ever-evolving field of education. Regarding the continuity between the concept and the results of previous research, we formulate the following hypothesis:

H-DIR$_1$: *Academic supervision has the effect of increasing teacher professional competence.*

By receiving constructive feedback from supervisors, teachers can increase their confidence in teaching. This is important to motivate them to face challenges in teaching and develop a strong sense of confidence in their abilities as educators (C. Huang et al., 2023; X. Li et al., 2023). Academic supervision can help teachers to overcome the uncertainty and anxiety they may experience in teaching (Suyatno et al., 2023). Regarding the continuity between the concept and the results of previous research, we formulate the following hypothesis:

H-DIR$_3$: *Academic supervision has the effect of increasing teacher self-confidence.*

The Influence of the PLC on Self-Confidence and Teacher Professional Competency

The Professional Learning Community (PLC) has significant urgency in improving teacher professional competence. In a PLC, teachers have the opportunity to collaborate with colleagues in a supportive and open environment (Cui et al., 2022; Voelkel Jr., 2022). Through the exchange of ideas, experiences, and knowledge, teachers can broaden their horizons about effective teaching practices and innovative learning strategies. PLCs provide a platform for shared learning, where teachers can learn from the experiences and expertise of their colleagues (Hyndman, 2017; Ken et al., 2023). By sharing experiences and providing feedback to each other, teachers can improve their skills in teaching, classroom management, and interaction

with students. Regarding the continuity between the concept and the results of previous research, we formulate the following hypothesis:

H-DIR$_2$: *PLC has the effect of increasing teachers' professional competence.*

PLCs provide a platform for teachers to collaborate with colleagues in a supportive and open environment. Through the exchange of ideas, experiences, and resources, teachers can feel supported and valued by fellow professionals, which can increase their confidence in their abilities as educators (Singh & Loh, 2024; Voelkel Jr., 2022). PLC encourages teachers to regularly self-reflect on their teaching practices. By reflecting on their teaching experiences and receiving feedback from peers, teachers can continually improve and become more confident in their abilities as educators (Cui et al., 2022; Hyndman, 2017). Regarding the continuity between the concept and the results of previous research, we formulate the following hypothesis:

H-DIR$_4$: *PLC has the effect of increasing teacher self-confidence.*

The Influence of Self-Confidence on Teacher Professional Competency

The urgency of the influence of self-confidence on teacher professional competence is very significant. High self-confidence can have a positive impact on teacher performance and effectiveness in various aspects, such as teaching, classroom management, and interaction with students (Hizam et al., 2021; Rahimi & Mosalli, 2024). Teachers who have high self-confidence tend to be more effective in delivering lesson material and implementing effective teaching strategies (Ștefan et al., 2023; Zhu et al., 2023). They can explore new approaches and innovate in their teaching, which in turn improves student learning outcomes.

High self-confidence helps teachers manage the classroom well and handle challenging situations calmly and confidently. Confident teachers can maintain classroom discipline and create a positive learning environment for students (Rahimi & Mosalli, 2024; Yildiz Durak et al., 2023; Zeinabadi, 2022). Regarding the continuity between the concept and the results of previous research, we formulate the following hypothesis:

H-DIR$_5$: *Teacher self-confidence has the effect of increasing teacher professional competence.*

The Mediating Role of Self-Confidence on the Influence of Academic Supervision and PLC on Teacher Professional Competency

The role of mediation in the context of academic supervision also has significant urgency in influencing teacher professional competence. Mediators in academic supervision act as intermediaries between teachers and supervisors, helping to facilitate the evaluation process and teacher professional development (Mbato, 2023; Noor et al., 2020; Suyatno et al., 2023). Mediators help facilitate effective communication between teachers and supervisors. Regarding the continuity between the concept and the results of previous research, we formulate the following hypothesis:

H-IND$_1$: *Self-confidence mediates a positive influence on the influence of academic supervision on teacher professional competence.*

Mediation is a process that facilitates communication and collaboration between PLC members so that it can increase the effectiveness and impact of the PLC in improving teacher competency. Mediators in PLCs act as facilitators to promote effective collaboration between PLC members (Ken et al., 2023; Q. Li, 2022; Singh & Loh, 2024). They assist in organizing meetings, facilitating discussions, and directing group activities so that PLC members can work together productively to achieve established learning goals (Cui et al., 2022; Hyndman, 2017; Q. Li, 2022; Singh & Loh, 2024). Regarding the continuity between the concept and the results of previous research, we formulate the following hypothesis:

H-IND$_2$: *Self-confidence mediates a positive influence on the influence of PLC on teacher professional competence.*

Method

Research Design and Participants

This research applies a quantitative approach with survey research methods (Apriliani et al., 2023; Putra et al., 2022; Widayanto et al., 2021). This research design uses an explanatory and correlational approach using Partial Least Squares Structural Equation Modelling (PLS-SEM) which is an approach used to explore the relationship between variables in a conceptual model. PLS-SEM is a multivariate statistical method used to analyse the relationship between latent or measured variables in a structural model. The selection of partial least squares structural equation modeling (PLS-SEM) as a data analysis method is based on the advantages of this methodology in handling complex models, predictive hypothesis testing, non-normally distributed relationships, and its ability to overcome multicollinearity problems and relatively small sample sizes. By using this approach, this research combines explanatory and correlational elements to better understand the complexity of the relationships between variables in a conceptual model. PLS-SEM allows researchers to test models holistically, including identifying cause-and-effect relationships and correlation relationships between variables, thereby providing a deeper understanding of the observed phenomenon. This research uses probability sampling with a random sampling technique. The sample in this research was 60 teachers at SMAN 2 Ponorogo.

Measures

The data collection technique uses a questionnaire with four variables. The independent variables include Academic Supervision (X_1) and Professional Learning Community (PLC) (X_2), the mediator variable is Self-Confidence (Z), and the dependent variable is Teacher Professional Competency (Y). This research uses a Likert scale consisting of 4 alternative answers from never (1) to always (4) (Daryono et al., 2020; Widyastuti et al., 2023). Research instrument variables are shown in **Table 1.**

Table 1. The Construct of the Research Variables

No	Variable	Indicators	Construct	References
1	Academic Supervision	Goals identification	AS1	(C. Huang et al., 2023; X.
2	(X_1)	Schedule preparation	AS2	Li et al., 2023; Mbato,
3		Approaches and techniques	AS3	2023; Noor et al., 2020; Suyatno et al., 2023)
4		Instrument identification	AS4	
5		Class observations	AS5	
6		Feedback	AS6	
7		Inspection	AS7	
8		Implementation	AS8	
9		Follow-up	AS9	
10	Professional Learning	Mentoring	PLC1	(Cui et al., 2022;
11	Community (PLC) (X_2)	Support	PLC2	Hyndman, 2017; Ken et
12		Collaboration	PLC3	al., 2023; Q. Li, 2022;
13		Cooperation	PLC4	Singh & Loh, 2024;
14		Power sharing	PLC5	Voelkel Jr., 2022)
15		Standard setting	PLC6	
16		Learning focus	PLC7	
17		Human relations	PLC8	
18		Structural factors	PLC9	

No	Variable	Indicators	Construct	References
19	Self-Confidence (Z)	Self-confidence	SC1	(Hashim et al., 2023; Ramanan & Mohamad, 2020; Szabó et al., 2021; Wang et al., 2023; Yang et al., 2022; Yuan et al., 2023)
20		Decision-making	SC2	
21		Self-understanding	SC3	
22		Act independently	SC4	
23		Think positively	SC5	
24		Self-concept	SC6	
25		Firmness	SC7	
26		Decision-making	SC8	
27	Teacher Professional	Material understanding	TPC1	(Hizam et al., 2021; Rahimi & Mosalli, 2024; Ştefan et al., 2023; Yildiz Durak et al., 2023; Zeinabadi, 2022; Zhu et al., 2023)
28	Competency (Y)	Field control	TPC2	
29		Competency mastery	TPC3	
30		Concept understanding	TPC4	
31		Developing material	TPC5	
32		Professionality	TPC6	
33		Training Program	TPC7	
34		Teaching methods	TPC8	
35		Utilize technology	TPC9	

Data Analysis

Statistical analysis of this research uses the PLS-SEM measurement technique ((Daryono et al., 2024; Fauzan et al., 2023; Supriyanto et al., 2022). The outer model testing stage is a measurement model testing stage that aims to prove the validity and estimate the reliability of indicators and constructs. Several requirements that must be met are the indicator loading factor >0.70, and the reflective construct AVE >0.50. Reliability estimates use Cronbach Alpha, Rho_A, and CR values >0.70 (Daryono et al., 2023; Hariyanto et al., 2022). The goodness of fit model testing stage aims to test the predictive power of the model and the feasibility of the model. The criteria that must be met include predictive relevance to see the predictive power of the model on the blindfolding output. The inner model testing stage is to test the significance of the direct (H-DIR1-5) and indirect effects (H-IND1-2).

Results

Evaluation of Measurement Models

Evaluation of measurement models is very important to ensure that the indicators used to measure latent constructs or variables are by the research objectives and have good quality. Examining construct validity is the primary goal of measuring model evaluation. Analysing the relationship between the indicator and the measured construct can ensure that the indicator truly reflects the intended aspect of the construct. By analysing factor loadings, reliability, and discriminant validity, researchers can decide which indicators should be included in the analysis and which should be omitted.

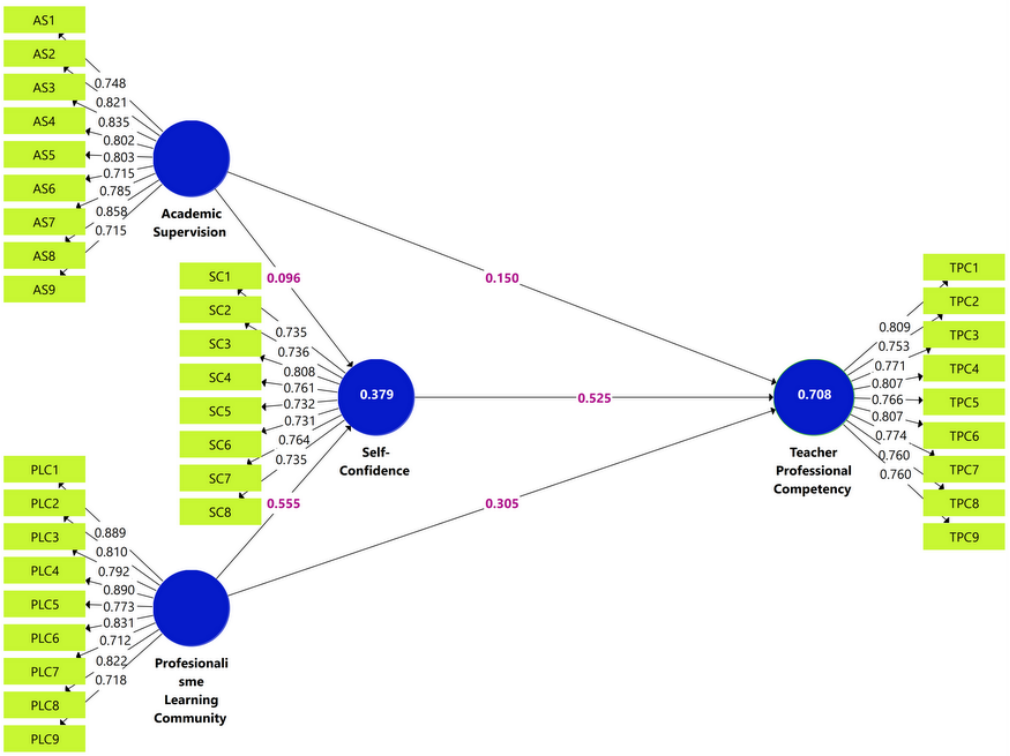

Figure 1. Evaluation of the Measurement Model

The convergent validity measurement uses a factor loading value limit of 0.70. Based on the loading factor coefficient value in **Tabel 2**, the most dominant statement item in measuring teacher professional competence is the Collaboration construct of 0.890 (PLC4). This can be interpreted that the Guidance construct can measure teacher professional competence by 89.00%. Meanwhile, the weakest item is the Learning Focus construct at 0.712 (PLC7 or 71.20%). The Average Extracted Variance (AVE) value for each variable has a value of >0.50 (0.564–Self Confidence (Y) to 0.650-PLC (X_2). So, it can be concluded that each sub-variable and variable in the instrument in the research model has supported convergent validity requirements.

Table 2. Outer Model: Convergent Validity and Reliability

No	Variable	Indicator	Conver Validity		Consistency Reliability		
			FL (λ>0.70)	AVE (>0.50)	CA (α>0.70)	rho_A (φ>0.70)	CR (δ>0.70)
1	Academic	AS1	0.748	0.622	0.924	0.929	0.936
2	Supervision (X_1)	AS2	0.821				
3		AS3	0.835				
4		AS4	0.802				
5		AS5	0.803				
6		AS6	0.715				
7		AS7	0.785				
8		AS8	0.858				
9		AS9	0.715				
10	Professional	PLC1	0.889	0.65	0.932	0.939	0.943
11	Learning	PLC2	0.81				
12	Community (PLC)	PLC3	0.792				
13	(X_2)	PLC4	0.89				
14		PLC5	0.773				

No	Variable	Indicator	Conver Validity		Consistency Reliability		
			FL (λ>0.70)	AVE (>0.50)	CA (α>0.70)	rho_A (φ>0.70)	CR (δ>0.70)
15		PLC6	0.831				
16		PLC7	0.712				
17		PLC8	0.822				
18		PLC9	0.718				
19	Self-Confidence	SC1	0.735	0.564	0.89	0.893	0.912
20	(Z)	SC2	0.736				
21		SC3	0.808				
22		SC4	0.761				
23		SC5	0.732				
24		SC6	0.731				
25		SC7	0.764				
26		SC8	0.735				
27	Teacher	TPC1	0.809	0.606	0.919	0.92	0.933
28	Professional	TPC2	0.753				
29	Competency (Y)	TPC3	0.771				
30		TPC4	0.807				
31		TPC5	0.766				
32		TPC6	0.807				
33		TPC7	0.774				
34		TPC8	0.76				
35		TPC9	0.76				

The SmartPLS output in the table below shows that all variables have CA values (0.890 to 0.932) rho_A (0.893 to 0.939) and CR (0.912 to 0.943). Thus, it can be concluded that the internal consistency of the instrument's reliability in 3 aspects has a value of >0.70. The Fornell-Larcker test is one of the methods used in Partial Least Squares Structural Equation Modelling (PLS-SEM) to evaluate the discriminant validity of the constructs in a model. This test aims to ensure that the different constructs in the model can be distinguished from each other. This is done by comparing the variance explained by the construct with the variance explained by other constructs in the model. If the variance explained by a construct is greater than the variance explained by another construct, then the construct has good discriminant validity. Based on **Table 3**, the correlation value of Professional Competence (Y) → Professional Competency has a value of 0.779, which is greater than the correlation value of Academic Supervision (X_1) with other variables (Professional Learning Community → 0.714; Self-Confidence → 0.775; and Academic Supervision → 0.549. Thus, so on for an assessment of correlation with other variables.

Tabel 3. Discriminant Validity: The Fornell Larcker

Variable	Y	X_2	Z	X_1
Teacher Professional Competency (Y)	**0.779**			
Professional Learning Community (X_2)	0.714	**0.806**		
Self-Confidence (Z)	0.775	0.611	**0.751**	
Academic Supervision (X_1)	0.549	0.584	0.420	**0.788**

One of the main purposes of HTMT testing is to measure discriminant validity in the model. HTMT is used to examine the extent to which the constructs measured by different indicators represent the same or different constructs in the model. HTMT is also useful for assessing multicollinearity between constructs in the model. Multicollinearity can occur when constructs are strongly related to each other, which can cause problems in the estimation and interpretation of results in SEM analysis. The PLS-Algorithm test results in **Table 4** reveal that the HTMT value in all dimensions has a value of <0.90 (0.436 to 0.841).

Tabel 4. Discriminant Validity: The HTMT

Variable	Y	X_2	Z	X_1
Teacher Professional Competency (Y)				
Professional Learning Community (X_2)	0.756			
Self-Confidence (Z)	0.841	0.632		
Academic Supervision (X_1)	0.589	0.634	0.436	

Evaluation of Structural Models

Structural evaluation in testing on PLS-SEM has the main objective, namely to assess the prediction accuracy of the proposed model. This is done by evaluating the extent to which the model can explain variations in empirical data and predict endogenous variables well. Overall, structural evaluation aims to improve understanding of the phenomenon studied in the research context. By analysing the relationships between variables, researchers can identify the factors that contribute to the phenomenon and develop deeper insight into the dynamics involved.

R^2 (Coefficient of Determination) provides an overview of how well the PLS-SEM model explains variation in the observed endogenous variables (constructs). The higher the R^2 value, the greater the proportion of variation in the construct that the model can explain. R2 allows comparison between different PLS-SEM models. Researchers can use R^2 values to compare the effectiveness of different models in explaining variation in observed constructs. Based on the **Tabel 5**, the R^2 coefficient on the professional competency variable obtained a value of 0.708. This can be interpreted as Academic Supervision, Professional Learning Community, and Self-Confidence influencing the teacher professional competency variable by 70.80% and the remaining 29.20% is influenced by other variables outside the research model.

f^2 (effect size) is one of the measures in PLS-SEM to evaluate the strength of the effect of latent variables on the observed construct. Specifically, f^2 measures the predictive power of a latent variable against a particular construct in the model. More specifically, f^2 is calculated by dividing the square of the latent variable regression loading on a particular construct by the amount of residual error (error variance) from that construct. The results provide an idea of how much the latent variable contributes to explaining variation in the observed construct. f^2 helps in determining how significant the contribution of latent variables is to the observed construct. f^2 allows comparison between the contributions of several latent variables to the same construct. so that it can be known and determine which latent variables have the strongest influence on the observed construct. So, the output effect size shows that the most dominant variable in influencing teacher professional competence is self-confidence (f^2 = 0.586 in the strong category and the weakest variable is academic supervision (f^2 = 0.050) in the small category.

Tabel 5. Measurement of Structural Model: R^2, f^2, Q^2

Variable	R^2		f^2		Construct Cross-Validated (Q^2)				
					Redundancy		Communality		Predictive
	Value	Decision	Value	Decision	SSE	Q^2	SSE	Q^2	Power
TPC (Y)	0.708	Substantial	-	-	327	0.394	275.606	0.490	Strong

Variable	R^2		f^2		Construct Cross-Validated (Q^2)				
	Value	Decision	Value	Decision	Redundancy		Communality		Predictive
					SSE	Q^2	SSE	Q^2	Power
PLC (X_2)	-	-	0.159	Medium	540	-	241.415	0.553	Strong
AS (X_1)	-	-	0.050	Small	540	-	257.633	0.523	Strong
SC (Z)	0.379	Moderate	0.586	Large	394	0.177	279.269	0.418	Strong

The next test by looking at the predictive relevance value (Q^2) aims to validate the model's predictive ability according to the reality in the field. The results of calculating the predictive relevance of Q^2 obtained values of 0.177 to 0.394 and 0.418 to 0.553 on the communality construct cross-validated. So, the model in measuring teacher professional competency as a whole can explain the model analysis by 17.70% to 55.30% of the phenomenon studied. The results of both procedures indicate that teacher professional competence has strong predictive power.

Measurement of Direct Effects

One of the main goals of hypothesis testing is to examine the relationships between variables in a proposed model. This is done by analysing the strength and significance of the relationships between the variables identified in the model. Direct effect evaluation allows researchers to test the consistency between empirical findings and the theory that supports the model. Furthermore, this test analyses the significance of the mediation effect in the research model. This is important for understanding the mechanisms underlying relationships between variables and how certain variables can mediate or change relationships between other variables.

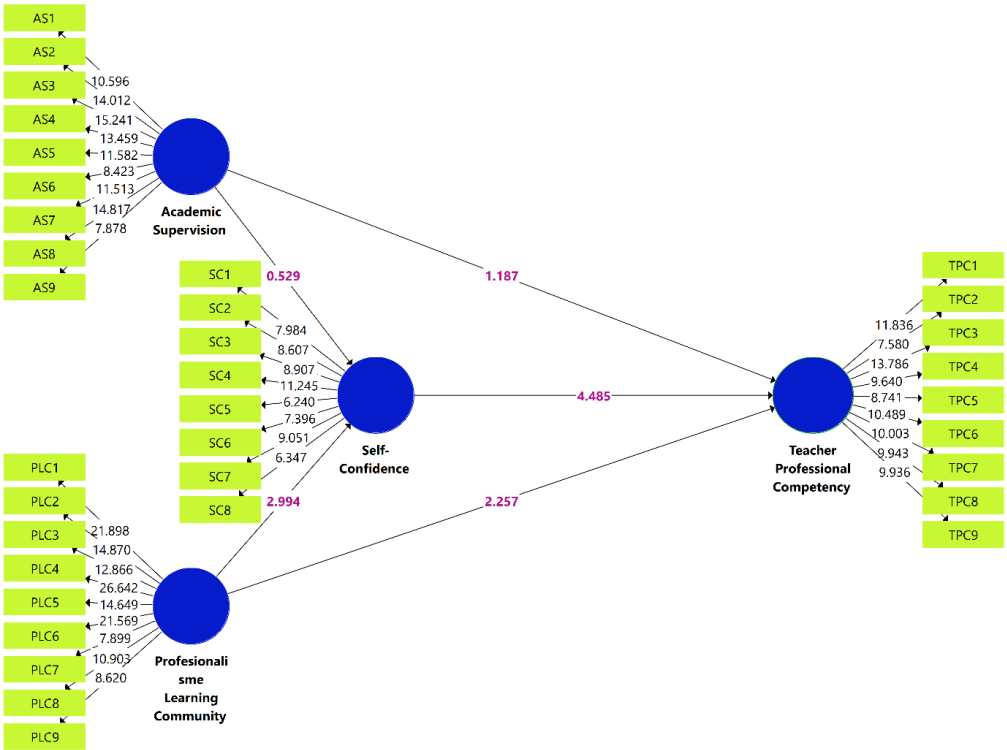

Figure 2. Evaluation of Path Analysis

A hypothesis can be accepted with significant criteria if it has a $T_{statistic}$ value above 1.96. Meanwhile, the hypothesis can be accepted with positive or negative influence if the β_{values} coefficient value shows the direction of positive or negative influence. Based on the table below, hypothesis H-DIR_1 (academic supervision (X_1) → professional competence (Y) obtains β_{values} =

0.150 and P-$_{values}$ = 0.288 (0.05). This shows that the academic supervision variable (X_1) has a positive effect, but it is not significant for teacher professional competence (Y). This can be interpreted as meaning that when the academic supervision variable (X_1) increases, the professional competence variable will also increase, but not significantly. In hypothesis H_5 (self-confidence (Z) → professional competence (Y) the β-$_{values}$ = 0.525 and P-$_{values}$ = 0.000 (0.05). This shows that self-confidence has a positive and significant effect on teacher professional competence (Y). This can be interpreted as meaning that when the self-confidence variable increases, the professional competence variable will also increase and vice versa.

Tabel 6. Results of Path Coefficients: Direct Effects

Hyp.	Path Analysis	β-$_{Values}$ (+/-)	Sample Mean	SDV	T-$_{Statistics}$ (>1,96)	ρ-$_{values}$ (<0,05)	Decision
H-DIR$_1$	AS → TPC	0,150	0.165	0,141	1,064	0,288	Rejected
H-DIR$_2$	PLC → TPC	0,305	0.305	0,145	2,102	0,036	Accepted
H-DIR$_3$	AS → SC	0,096	0.142	0,193	0,500	0,617	Rejected
H-DIR$_4$	PLC → SC	0,555	0.536	0,182	3,049	0,002	Accepted
H-DIR$_5$	SC → TPC	0,525	0.505	0,128	4,105	0,000	Accepted

The Mediating Role of Self-Confidence on the Influence of Academic Supervision and Professional Learning Community (PLC) on Teacher Professional Competency

Based on the table below, in the H-IND$_1$ hypothesis, the results of testing the mediating effect of the Self Confidence (Z) variable can be concluded that there is a positive influence (β-$_{values}$ = 0.055) and it is not significant (T-$_{statistic}$ 0.568 > 1.96 and P $_{values}$ 0.570 <0 .05) between the academic supervision factor (X_1) and professional competence (Y). So, H-IND$_1$ states there is no positive and significant influence on the role of self-confidence in mediating academic supervision on teacher professional competence. In the H-IND$_2$ hypothesis, the results of testing the mediating effect of the self-confidence (Z) variable can be concluded that there is a positive (β-$_{values}$ = 0.308) and significant (T-$_{statistic}$ 2.376 > 1.96 and P-$_{values}$ 0.018 <0.05) influence between professional learning community factor (X_2) on professional competence (Y). So, H-IND$_2$ states there is a positive and significant influence on the role of self-confidence in mediating the PLC on teacher professional competence.

Tabel 7. Results of Path Coefficients: Indirect Effects

Hyp.	Path Analysis	β-$_{Values}$ (+/-)	SDV	T-$_{Statistics}$ (>1,96)	ρ-$_{values}$	Decision	Mediating Role
H-IND$_1$	AS → SC → TPC	0,051	0.086	0,568	0,570	Rejected	Partial mediation
H-IND$_2$	PLC → SC →TPC	0,291	0.125	2,405	0,017	Accepted	Partial mediation

The results of PLS-SEM analysis show that the indirect effect of academic supervision on teachers' professional competence through self-confidence as a mediator is not significant. This is indicated by β-value of 0.051, T-Statistic of 0.568 (smaller than 1.96), and P-values of 0.570 (greater than 0.05). Thus, hypothesis H-INDIRECT1 which states that academic supervision affects teachers' professional competence through self-confidence is not supported by the data. This finding indicates that although academic supervision is important, without an increase in self-confidence, its impact on teachers' professional competence is not significant. Therefore, efforts to improve teachers' professional competence through academic supervision

need to be accompanied by strategies to improve teachers' self-confidence so that the expected results can be achieved.

The results of PLS-SEM analysis show that the indirect effect of academic supervision on teachers' professional competence through self-confidence as a mediator is significant. This is indicated by β-value of 0.291, T-Statistic of 2.405 (greater than 1.96), and P-values of 0.017 (smaller than 0.05). Thus, hypothesis H-INDIRECT2 which states that academic supervision affects teachers' professional competence through self-confidence is supported by the data. This finding indicates that effective academic supervision can significantly improve teachers' professional competence when teachers' self-confidence is also improved. Therefore, academic supervision programs need to consider strategies to develop teachers' self-confidence as an integral part of efforts to improve their professional competence.

Discussion

Academic supervision has a positive influence in improving teacher professional competence. However, it is not significant because the implementation of academic supervision is more about teacher assessment than fostering teacher competency development. This research is in line with research Noor *et al.* (2020) which states that academic supervision cannot significantly improve teacher professional competence because supervision is only used to assess teachers and without any follow-up from the school principal. However, this is inconsistent with research conducted by X. Li *et al.* (2023), which states that academic supervision can improve teachers' professional competence because school principals carry out classroom observations so they can find teacher deficiencies. In this way, during the implementation of supervision, teacher deficiencies can be found and an evaluation carried out by the school principal. This is also by Suyatno *et al.* (2023) which states that accuracy in selecting approaches and techniques in implementing supervision can guide teachers so they can carry out their duties effectively and efficiently.

Academic supervision encourages teachers to self-reflect on their teaching practices and continue to learn from their experiences (X. Li et al., 2023; Mbato, 2023). This helps them to continually improve their performance and become more effective educators over time (Kulophas & Hallinger, 2020; Pietarinen et al., 2016). In many cases, academic supervision is used to ensure that teachers comply with educational standards set by the government or educational institutions. This is important to maintain the quality of education and ensure that students receive instruction that meets their needs (Voelkel Jr., 2022; Yuan et al., 2023). Through academic supervision, teacher performance problems can be identified and resolved quickly. Supervisors can help teachers overcome obstacles in their teaching, such as classroom management problems or difficulties in delivering lesson material effectively.

Joining a professional learning community for teachers can be an important factor in increasing their professional competence. This statement is supported by Voelkel Jr. (2022) which reveals that in the PLC, teachers receive more intense guidance towards developing their professional competencies. This explanation is also consistent with To *et al.* (2023) which states that in the PLC, you always receive support and collaborate with colleagues. Cui *et al.* (2022) and Singh & Loh (2024) also states that the PLC focuses on improving learning, thus the existence of a PLC can help teachers in developing their professionalism. In a PLC environment, teachers have the opportunity to develop new skills and improve existing skills. Through collaboration and shared learning, teachers can access additional resources and training that can help them improve their abilities in teaching and learning (Tao & Yu, 2024). PLCs provide support for innovation in teaching and learning. By sharing ideas and experiences, teachers can

identify best practices and develop new strategies to continuously improve the effectiveness of their teaching.

Through active participation in PLC, teachers can feel recognized and appreciated for their contributions to improving teaching practices and student learning outcomes (Cui et al., 2022; Q. Li, 2022). Recognition of their success in implementing effective learning strategies can increase their self-confidence as educators. In PLC, teachers have the opportunity to develop new skills and improve existing skills through collaboration and joint learning (Voelkel Jr. & Chrispeels, 2017; Yang et al., 2022). By improving their skills in teaching, classroom management, and interactions with students, teachers can feel more confident in facing challenges in teaching.

Teachers who have high self-confidence tend to be more confident in their abilities and decisions in facing challenges in teaching (Kulophas & Hallinger, 2020; Pietarinen et al., 2016). They can make decisions independently and courageously in complex situations, which can improve the quality of their teaching. High self-confidence helps teachers build positive relationships with students, parents, and colleagues (Q. Li, 2022; Yang et al., 2022). Confident teachers can communicate clearly and effectively, forge strong emotional connections with students, and work collaboratively on teams with colleagues. Teachers who have high self-confidence are better able to overcome the challenges and obstacles they may face in teaching (Wang et al., 2023). They do not give up easily when faced with difficulties, but instead see it as an opportunity to learn and grow as professionals.

Research by Ramanan & Mohamad (2020) and Szabó *et al.* (2021) reveals that self-confidence also influences interactions with students. A confident teacher tends to find it easier to build positive relationships with students so that the teaching and learning process becomes more effective. This research is also consistent with research by Wang *et al.* (2023) which states that confident teachers are also better able to provide motivation and inspiration to students to achieve better achievements. Research by Hashim *et al.* (2023) revealed that high teacher self-confidence will help them develop professional competence and make a positive contribution to the world of education. Professional teachers must have a high level of self-confidence in the process of delivering learning in the classroom. In line with research by Thohir *et al.* (2021) which states that a confident teacher will be better prepared to face challenges and obstacles in the learning process. With confidence in their abilities, teachers will be more willing to try new things and develop their skills (Ramanan & Mohamad, 2020; Yang et al., 2022).

Based on the research results above, it can be concluded that the implementation of academic supervision will not have a significant impact if there is no follow-up from the school principal and systematic coaching of teachers. On the other hand, the PLC has a significant impact in increasing teachers' professional competence. This is because in PLC teachers have the opportunity to collaborate, share knowledge, and support each other in developing their skills and knowledge. Apart from that, high self-confidence will also encourage teachers to continue to look for new opportunities to improve their professional competence (J.-C. Huang, 2023; Hyndman, 2017; Ken et al., 2023; Tao & Yu, 2024).

Mediators help manage the relationship between teachers and supervisors, ensuring that their interactions run smoothly and productively (De Smul et al., 2019; Navaridas-Nalda et al., 2020; Pietarinen et al., 2016). They help defuse any tensions or conflicts that may arise and promote a mutually beneficial and respectful relationship between both parties. Mediators help in encouraging self-reflection and continuous learning among teachers. They stimulate reflective discussions about teaching practices, identify areas for improvement, and plan corrective actions to improve teacher performance. Mediators help ensure that academic supervision remains focused on teacher professional development (Ken et al., 2023; Voelkel Jr. &

Chrispeels, 2017). They help design professional development plans that are relevant and useful for teachers, and monitor their progress in achieving their development goals. Mediators play a role in promoting collaborative leadership among teachers and supervisors. They encourage teachers to take an active role in the supervision process and participate in decision-making related to their professional development.

Conflicts may arise in the collaboration process between PLC members. The role of mediation is critical in constructively managing such conflicts and promoting a resolution that benefits all parties (Hoekstra & Newton, 2017; Ken et al., 2023). By managing conflict tactfully, mediators can ensure that PLC remain focused on larger learning goals. Mediators help facilitate effective communication between PLC members. They ensure that important information and ideas can be exchanged openly and honestly so that PLC members can gain new insights and expand their understanding of effective teaching practices. Teacher self-confidence has a very important role in its influence on improving academic supervision and the PLC on teacher professional competence.

The findings of this study suggest that academic supervision programs in schools need to include elements of developing teachers' self-confidence to achieve significant improvements in professional competence. In addition, the integration of Professional Learning Community (PLC) that supports the strengthening of self-confidence can be more effective in improving teachers' teaching quality. Therefore, school policies should focus on holistic training and support, which not only emphasizes technical aspects but also pays attention to the psychological aspects of teachers. For future research, it is recommended to further investigate how self-confidence specifically mediates the relationship between academic supervision and participation in PLCs on improving teachers' professional competence. It is important to expand the scope of the study to include a representative sample from different levels of education and disciplines, so as to generalize the findings to various educational contexts. In addition, identifying external factors that may moderate the influence of self-confidence in the process of developing teachers' professional competence will provide additional valuable insights.

Conclusion

This research recommends that schools improve training and coaching programs so that they can help teachers develop their confidence in teaching. This may include training on stress management, effective communication, and conflict management. In addition, schools providing greater support and recognition of teachers' efforts to improve their competency can help strengthen their self-confidence. This can be done through awards, public recognition, or special awards for achievements in teaching.

Furthermore, teachers should regularly conduct self-assessments to evaluate their level of confidence in teaching. This can help them identify areas where they feel confident and areas where they may need additional support. Participating in PLCs and collaborating with colleagues can also help teachers develop their self-confidence. This collaboration allows them to support and learn from each other, which can strengthen their confidence in their abilities as educators. Confident teachers tend to be more open to feedback, more active in independent learning, and better able to manage challenges in their teaching. This contributes to improving the quality of teaching and learning, as well as to better learning outcomes for students.

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