

Teacher Pedagogical Competence and Students' Listening Skill: Learning Attitude as an Intervening Variable

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Abstract

This study aims to analyze the effect of teacher pedagogical competence on students' English listening skill with learning attitude as an intervening variable among Grade XI students of SMK Al-Maksum, Langkat Regency. The type of research used is quantitative associative using the Structural Equation Modeling (SEM) method based on Partial Least Square (PLS) with the help of SmartPLS version 3.0 software. The population in this study includes all eleventh-grade students within the SMK Al-Maksum organization, totaling 53 students. Sampling applied a saturated sampling technique (census), so that all 53 population members were involved as active respondents. The results of direct effect hypothesis testing show that teacher pedagogical competence has a positive and significant effect on students' learning attitude (original sample = 0.895; T-statistics = 24.629; P-values = 0.000). Similarly, students' learning attitude recorded a strong positive and significant effect on students' listening skill (original sample = 1.187; T-statistics = 4.814; P-values = 0.000). Conversely, teacher pedagogical competence is proven to have a negative and non-significant direct effect on students' listening skill (original sample = -0.369; T-statistics = 1.358; P-values = 0.180). In mediation effect testing, students' learning attitude is significantly proven to act as a full mediator that bridges the influence of teacher pedagogical competence on students' listening skill (original sample = 1.062; T-statistics = 4.274; P-values = 0.000). The adjusted R-square values indicate that pedagogical competence accounts for 79.6% of the variance in learning attitude, while the model's capability to predict listening skill variance accounts for 75.3%, which falls into a strong category.

Keywords : Pedagogical Competence, Learning Attitude, Listening Skill

INTRODUCTION

In the era of global connectivity, English proficiency has become a mandatory prerequisite for vocational high school (SMK) graduates entering the modern industrial workforce. Among the core language skills, listening plays a critical role as the foundation for effective communication and receptive information processing (Yasmee, Herlina, & Irianti, 2025). However, teaching listening within the vocational school ecosystem poses a unique practical challenge, where students frequently struggle to map spoken sounds into coherent conceptual understanding. This research addresses this empirical challenge by

exploring how classroom pedagogical factors can break down barriers in listening acquisition (Witari & Manuaba, 2021), specifically within the instructional ecosystem of Grade XI at SMK Al-Maksum, Langkat Regency.

To understand the core mechanics of auditory acquisition, it is essential to ground the research in pertinent literature regarding receptive skills (Ferrari-Bridgers & Murolo, 2022). According to Miranda Yasmee (2025), a student's listening proficiency is explicitly measured through several key indicators, including identifying main ideas and supporting details from audio inputs, as well as inferring situations and outcomes by using real-world knowledge to predict conversational endings (Yasmee et al., 2025). Furthermore, advanced auditory competence requires students to be proficient in distinguishing implied and literal meanings such as metaphors or hidden intents, and mastering the ability of listening for specific information to extract key terms from complex spoken monologues (Nuraziza Aliah & Nurasia Natsir, 2025).

To operationalize the external driving factors behind language acquisition, this study adopts the framework of pedagogical competence proposed in educational literature. Within this paradigm, a teacher's professional capability is manifested through understanding students in-depth regarding their diverse learning styles, executing precise learning planning and design of the syllabus, and conducting conducive and dialogic learning that accommodates interactive, meaningful, and productive classroom exchanges (Hanum & Robandi, 2023). Moreover, modern pedagogy demands integrating technology by involving 21st-century digital tools, maintaining continuous learning evaluation to analyze outcomes for systematic improvement, and fostering overall student development to unlock both academic and non-academic potential.

Grounded in the triadic attitude model by H. Douglas Brown (2007) in (Susanti, 2019), the psychological gateway of learning attitude is dissected into affective, behavioral, and cognitive domains. The affective component encompasses the students' interest and joy during English sessions, their level of confidence vs. anxiety when reacting to spoken audio prompts, and their overall value perception regarding whether learning English is an enjoyable opportunity rather than an academic burden (Malia, Mayang Sari, & Zahraini, 2025). Moving to the behavioral and cognitive domains, the student's learning attitude is further driven by classroom engagement in completing assigned tasks, persistence and effort when encountering difficult auditory data, and a strong practice initiative inside and outside the school grounds (Turlybekov, Seidaliyeva, Abiev, & Kazyhankyzy, 2024; Fitria, 2022). Cognitively, this attitude is heavily reinforced by the students' belief in benefits regarding their future vocational careers, their deep understanding of the importance of English as a global communication tool, and their realistic self-assessment of competence in absorbing instructional materials (Normawati, Susanto, Febrianto, & Farikah, 2023).

Despite extensive research on EFL listening, significant empirical and theoretical gaps remain in the existing literature. Traditional teaching approaches and prior studies often focus on direct instructional outcomes while ignoring the vital role of the teacher's professional qualifications in driving the internal classroom atmosphere (Harun, 2025). A major limitation of previous studies is that they predominantly treat teacher pedagogical competence and student listening skills as a direct, linear relationship, neglecting how structural teaching management acts as an external antecedent that dictates auditory

processing (Jena, 2023). Furthermore, conventional vocational education research frequently separates technical auditory training from the socio-psychological state of the learner, failing to account for how external instructional stimuli interact with internal psychological readiness (Hasriani G, 2022). Excellent pedagogy does not mechanically translate into high listening performance; it operates through psychological filters (Kempa, Sopacua, Septory, & Kissiya, 2026). Thus, existing literature lacks a structural mechanism that explains *how* and *why* pedagogical quality translates into receptive language mastery in vocational contexts.

To bridge these gaps, this study introduces a conceptual framework that incorporates Students' Learning Attitude as an intervening variable between Teacher Pedagogical Competence and Students' Listening Skill. As illustrated in Figure 1, the model posits that Teacher Pedagogical Competence (X) serves as the exogenous variable driving both Students' Learning Attitude (Z) as the mediating/intervening variable and Students' Listening Skill (Y) as the ultimate end-point outcome variable.

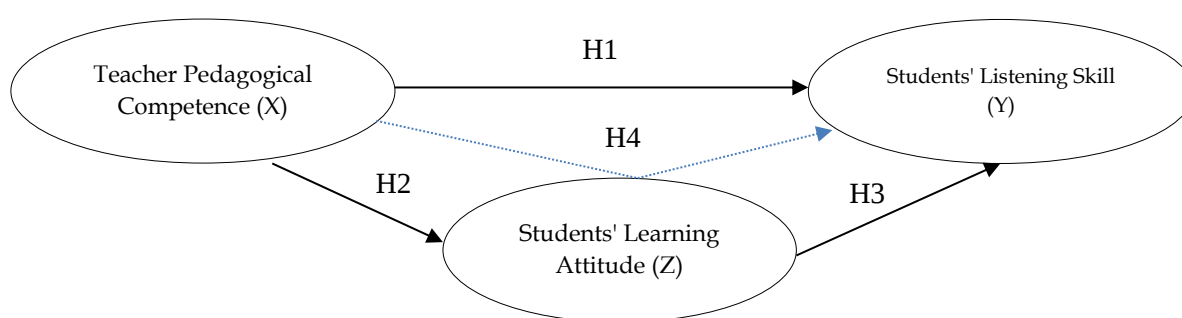


Figure 1. Conceptual Framework of the Study

This theoretical framework hypothesizes that high pedagogical competence significantly improves students' learning attitude, which in turn directly enhances their English listening skill. To test these structural paths, this research employs a quantitative de facto causal-associative design, utilizing structured Likert-scale questionnaires to measure variables X and Z, and a standardized objective listening test to assess variable Y among eleventh-grade students at SMK Al-Maksum, Langkat Regency.

The primary novelty and theoretical contribution of this study lie in establishing a comprehensive mediation model within the specific ecosystem of vocational high schools (SMK). While prior studies treat pedagogical interventions and listening outcomes as isolated phenomena, this research provides a structural framework demonstrating that technical auditory training cannot succeed without activating the learner's internal psychological gateway. By integrating technology and conducting dialogic learning, teachers trigger a catalyst that boosts students' interest, builds confidence, and reduces language anxiety (Ravshanovna, 2023). The principal theoretical contribution derived from our structural model highlights that a positive learning attitude is a mandatory mediating requirement; high pedagogical competence will fail to optimize listening performance if students' behavioral engagement and belief in career benefits remain low (Cabangcala et al., 2021). Ultimately, while this study provides structural mapping at SMK Al-Maksum, unresolved issues regarding external environmental distractors and regional dialect

variations generate new avenues for future research, particularly regarding the longitudinal stability of learning attitudes when transitioning into real-world industrial internship contexts.

METHOD

This study applied a quantitative associative research design, which aims to determine and analyze the structural relationships between two or more variables (Sugiyono, 2018). The investigation explores the direct and indirect paths connecting teacher pedagogical competence, students' learning attitude, and students' listening skill. The empirical fieldwork was systematically carried out at SMK Al-Maksum, located in Langkat Regency, focusing on the active learning process during the academic period.

Participants / subject / population and sample

Population refers to a generalization region consisting of objects or subjects that possess specific qualities and characteristics determined by the researcher to be studied and concluded (Abdi Sugiarto, Yohanes Kamakaula & Periansya, 2024). The target population in this study comprises all eleventh-grade (Grade XI) students registered at SMK Al-Maksum, Langkat Regency, totaling 53 students.

To ensure complete representation, this research implements a total sampling technique (saturated sample), where every member of the population is actively included as a research participant (Tauchid, Saleh, Hartono, & Mujiyanto, 2022). Saturated sampling is highly appropriate for educational settings when the population size is small and manageable. Therefore, the final sample used for structural modeling consists of exactly 53 students.

Instruments

Primary data collection was executed using two distinct types of instruments tailored to the nature of the variables being investigated. For the independent variable, Teacher Pedagogical Competence, and the intervening variable, Students' Learning Attitude, data were gathered via a structured questionnaire administered directly to the 53 student respondents. The questionnaires employ a 5-point Likert scale to capture subjective perceptions based on specific indicators. The pedagogical competence instrument measures dimensions including understanding students, learning planning and design, conducting conducive and dialogic learning, integrating technology, continuous learning evaluation, and student development (Citra Bahadur Hanum, 2023). Meanwhile, the learning attitude instrument captures affective components (interest and joy, confidence vs. anxiety, value perception), behavioral components (classroom engagement, persistence and effort, practice initiative), and cognitive components (belief in benefits, understanding importance, self-assessment of competence) adapted from Brown (2007).

In contrast, to maintain objective data parity, the dependent variable, Students' Listening Skill, was not measured via self-reporting questionnaires. Instead, a standardized objective listening test was distributed to the participants. The test items specifically evaluate macro and micro listening skills, covering key operational indicators such as identifying main ideas and supporting details, inferring situations and outcomes using real-world knowledge, distinguishing implied and literal meanings, and listening for specific information (Miranda Yasmee, 2025).

Data analysis procedures

The collected empirical data were analyzed using quantitative statistical methods via Structural Equation Modeling (SEM) based on Partial Least Squares (PLS), executed using the SmartPLS software application (Ferine, Aditia, Rahmadana, & Indri, 2021). The structural framework was evaluated in two sequential evaluation stages to ensure robust psychometric properties: the outer model assessment and the inner model assessment.

First, the evaluation of the measurement model (outer model) was conducted to verify the validity and reliability of the latent constructs. This phase involves examining the outer loading factors, where indicators must satisfy convergent validity and discriminant validity requirements, alongside checking composite reliability and Cronbach's alpha values to ensure internal consistency. Second, the structural model (inner model) evaluation was performed to determine the predictive capability of the model. This phase centers on calculating the coefficient of determination (R-squared), which measures the proportion of variance in the endogenous dependent variables explained by the exogenous predictors. The R-squared value fluctuates within a standardized range from 0 to 1. Additionally, the Goodness-of-Fit index was calculated to verify how well the observed operational data align with the theoretical model configuration (Ghozali & Latan, 2015).

Hypothesis testing was conducted via the T-Statistic Test generated through the SmartPLS bootstrapping procedure. The analysis examines the path coefficients to identify the nature and direction of the relationships between variables, where a range of 0 to 1 indicates a positive relationship, while a range of 0 to -1 signifies a negative connection. This includes testing direct effects as well as specific indirect effects to determine the mediating power of the intervening variable. A hypothesis is statistically accepted if the calculated t-statistic value is higher than the standard critical t-table value of 1.96, evaluated at a two-tailed 5% significance level (Ghozali & Latan, 2015).

FINDINGS

Measurement Model Evaluation

The evaluation of the measurement model (outer model) in this study was performed by executing the PLS algorithm parameter settings within the SmartPLS version 3.0 software package. This evaluation is imperative to determine the individual item reliability and to ensure that all latent constructs fulfill the rigorous psychometric parameters of both validity and reliability before proceeding to structural path modeling.

1) Convergent Validity Results

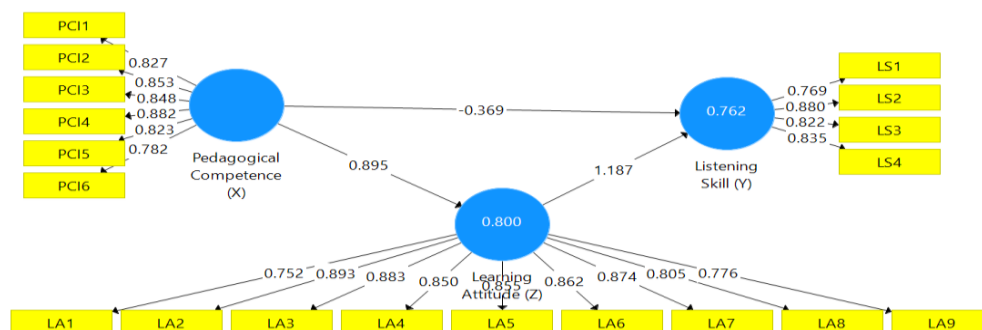
Convergent validity evaluates the extent to which a specific measure or indicator correlates positively with alternative measures of the same latent construct. In reflective measurement models, this properties is examined by observing the standardized outer loading factors representing the path coefficients between the individual item indicators and their respective latent variables. Nominally, an individual indicator is deemed structurally valid if its outer loading coefficient exceeds the standard acceptable threshold of 0.60 (Ghozali & Latan, 2015). Based on the statistical computational results derived from the SmartPLS algorithm, the specific outer loading values for each investigated variable are systematically compiled and presented in Table 3.2.

Table 1 Convergent Validity (Outer Loading Results)

Latent Construct / Variable	Indicator	Outer Loading	Status
Teacher Pedagogical Competence (X)	PCI1	0.827	Valid
	PCI2	0.853	Valid
	PCI3	0.848	Valid
	PCI4	0.882	Valid
	PCI5	0.823	Valid
	PCI6	0.782	Valid
Students' Learning Attitude (Z)	LA1	0.752	Valid
	LA2	0.893	Valid
	LA3	0.883	Valid
	LA4	0.850	Valid
	LA5	0.855	Valid
	LA6	0.862	Valid
	LA7	0.874	Valid
	LA8	0.805	Valid
	LA9	0.776	Valid
Students' Listening Skill (Y)	LS1	0.769	Valid
	LS2	0.880	Valid
	LS3	0.822	Valid
	LS4	0.835	Valid

Source: SmartPLS 3.0 Output (2026)

The empirical data illustrated in Table 1 demonstrates that every single operational indicator designed to reflect the independent variable of Teacher Pedagogical Competence (PCI1 to PCI6), the intervening variable of Students' Learning Attitude (LA1 to LA9), and the primary dependent variable of Students' Listening Skill (LS1 to LS4) generated an outer loading score well above the required minimum statistical threshold of 0.60. The lowest individual loading coefficient was recorded by indicator LA1 with a value of 0.752, while the maximum loading yield was achieved by indicator LA2 at 0.893. According to established structural modeling literature (Ghozali & Latan, 2015), indicator loadings exceeding 0.60 signify that the underlying questionnaire items possess sufficient convergent validity to capture the variance of their respective latent constructs. Consequently, it can be confidently concluded that all measurement scales utilized in this fieldwork are structurally sound, highly valid, and fully qualified for subsequent inner model predictive testing. The following is displayed in the form of a structural model as in the following image:

**Figure 2: Outer Loading**

2) Discriminant Validity Results

The next step in evaluating the measurement model is assessing the discriminant validity, which aims to evaluate whether the reflective indicators can effectively isolate and measure their respective target variables. Discriminant validity assessment ensures that a latent construct is structurally unique and captures phenomena not represented by other constructs in the model. This evaluation is based on the principle that the cross-loading coefficient of an individual block indicator on its assigned latent construct must be higher than its cross-loadings on any other adjacent constructs (Ghozali & Latan, 2015). The systematic calculations of the discriminant validity test using the cross-loading method are disaggregated and presented in Table 3.3.

Table 2 Discriminant Validity (Cross Loading Results)

Indicator	Learning Attitude (Z)	Listening Skill (Y)	Pedagogical Competence (X)
LA1	0.752	0.548	0.746
LA2	0.893	0.657	0.827
LA3	0.883	0.834	0.725
LA4	0.850	0.835	0.684
LA5	0.855	0.612	0.781
LA6	0.862	0.819	0.706
LA7	0.874	0.836	0.689
LA8	0.805	0.544	0.730
LA9	0.776	0.609	0.788
LS1	0.617	0.769	0.511
LS2	0.674	0.880	0.515
LS3	0.653	0.822	0.553
LS4	0.830	0.835	0.684
PCI1	0.811	0.641	0.827
PCI2	0.829	0.625	0.853
PCI3	0.728	0.607	0.848
PCI4	0.692	0.528	0.882
PCI5	0.623	0.496	0.823
PCI6	0.730	0.549	0.782

Source: SmartPLS 3.0 Output (2026)

Based on the statistical properties illustrated in Table 3.3, it can be clearly observed that the cross-loading coefficient for every single indicator on its intended latent variable is significantly higher than its cross-loading correlation scores across all other columns. The cross-loading cluster for the Students' Learning Attitude variable (LA1 to LA9) demonstrates that the individual indicator correlations are consistently dominant within the Learning Attitude column compared to their correlations with adjacent variables. Similarly, the indicators for Students' Listening Skill (LS1 to LS4) generate higher path loading scores within the Listening Skill column. Furthermore, the blocks representing Teacher Pedagogical Competence (PCI1 to PCI6) show that the indicator loading results yield maximum parameters strictly on their targeted variable. Based on these criteria, it can be structurally confirmed that the discriminant validity requirements are fully achieved, proving the robustness and distinctness of the measurement scales utilized in this study.

3) Construct Reliability and Validity Results

The final step in evaluating the reflective measurement model is performing construct reliability and validity testing to assess the internal consistency and shared variance of the indicator blocks. Construct reliability is evaluated using two primary parameters: Cronbach's Alpha and Composite Reliability. Nominally, a latent construct is deemed stable and reliable if its Cronbach's Alpha value exceeds 0.70 and its Composite Reliability value is above 0.70 (Ghozali & Latan, 2015). Furthermore, convergent validity at the construct level is measured through the Average Variance Extracted (AVE) value, which must satisfy a minimum threshold of 0.50. The complete empirical results of the construct reliability and validity parameters generated from the SmartPLS execution are systematically structured and presented in Table 3.4.

Table 3 Construct Reliability and Validity

Latent Construct / Variable	Cronbach's Alpha	Composite Reliability	Average Variance Extracted (AVE)
Learning Attitude (Z)	0.948	0.956	0.706
Listening Skill (Y)	0.847	0.896	0.684
Pedagogical Competence (X)	0.914	0.933	0.699

Source: SmartPLS 3.0 Output (2026)

Based on the statistical properties illustrated in Table 3.4, it can be clearly explained that the Average Variance Extracted (AVE) score for every single investigated variable yields a value greater than the established threshold of 0.50. Specifically, Learning Attitude reached an AVE of 0.706, Listening Skill achieved 0.684, and Pedagogical Competence recorded 0.699. These metrics indicate that more than 50% of the variance of the underlying indicators is effectively captured by the target latent variable, meaning all variables successfully fulfill the criteria for construct validity. Furthermore, to evaluate the internal consistency reliability within this structural model, the assessment relies closely on the Cronbach's Alpha and Composite Reliability yields. According to structural equation modeling rules, a framework exhibits high internal consistency if the recorded parameters are greater than 0.70. Based on these strict criteria, all latent variables exhibit excellent reliability metrics, with Cronbach's Alpha scores ranging from 0.847 to 0.948, and Composite Reliability metrics spanning from 0.896 to 0.956. Consequently, it can be structurally confirmed that all investigated constructs demonstrate high measurement stability and are fully qualified for subsequent structural path evaluation (inner model).

Structural Model Evaluation (Inner Model)

The evaluation of the structural model (inner model) was performed to ensure that the developed path configurations are structurally robust and accurate. The analytical phases within the structural model evaluation are assessed through several key parameters, including the Coefficient of Determination (R-squared test).

1) Coefficient of Determination (R²) Results

The coefficient of determination (R²) test is utilized to evaluate the predictive power of the structural model by determining whether specific exogenous independent latent variables exert a substantive or significant influence on the endogenous dependent latent variables. Following the statistical computation executed through the SmartPLS version 3.0 software package, the calculated R-Square and R-Square Adjusted statistics are structured and presented in Table 3.5.

Table 4 Coefficient of Determination (R-Square Results)

Latent Construct / Variable	R Square	R Square Adjusted
Learning Attitude (Z)	0.800	0.796
Listening Skill (Y)	0.762	0.753

Source: SmartPLS 3.0 Output (2026)

Based on the statistical properties illustrated in Table 3.5, the R-Square Adjusted value for the primary dependent variable, Students' Listening Skill, is documented at 0.753 (or 75.30%). This metric establishes that the combined structural influence of Teacher Pedagogical Competence and Students' Learning Attitude on Students' Listening Skill falls into the strong or substantial category. This finding indicates that incremental systematic improvements in the teacher's pedagogical actions alongside highly positive internal learning attitudes directly enhance students' macro and micro listening skills in the classroom.

Meanwhile, the nominal R-Square value for the Listening Skill variable reached 0.762 (or 76.20%). This demonstrates that 76.20% of the overall variance or shifting behavior in students' listening performance can be structurally explained and predicted by the linear interaction of Teacher Pedagogical Competence and Students' Learning Attitude. Conversely, the remaining balance of 23.80% is explained by alternative external variables outside the boundaries of this framework that have not been investigated in this present study.

On the other hand, the R-Square Adjusted value recorded for the intervening variable, Students' Learning Attitude, is documented at 0.796 (or 79.60%). This highlights that the external predictor, Teacher Pedagogical Competence, dictates the formation of students' learning attitude by 79.60%, positioning the pathway in a highly robust category. This outcome empirically confirms that classroom pedagogical delivery operates as a critical environmental antecedent in driving a positive affective, behavioral, and cognitive learning mindset among students. Concurrently, the standalone R-Square value for the Learning Attitude construct yields a score of 0.800 (or 80.00%). This target metrics proves that Teacher Pedagogical Competence accounts for exactly 80.00% of the variance in students' learning attitude configurations, while the residual 20.00% is governed by alternative contextual forces not integrated into this structural path model.

2) Goodness of Fit Results

The Goodness of Fit test is a statistical method used to evaluate how well the constructed structural equation model matches and represents the empirically observed data. The primary goal of this fit assessment is to determine the extent to which the field sample data aligns with the theoretical distribution assumed by the operational hypotheses. In Partial Least Squares structural modeling, the overall fit performance of the model can be assessed by analyzing specific parameters, particularly the Standardized Root Mean Square Residual (SRMR) and the Normed Fit Index (NFI). A model is considered to demonstrate a sufficient fit if the statistical indicators satisfy the required convergence limits. Based on the structural calculations executed through the SmartPLS version 3.0 program, the computed Model Fit statistics are systematically compiled and presented in Table 5

Table 5 Model Fit

Criteria / Indicator	Saturated Model	Estimated Model
SRMR	0.111	0.111
d_ULS	2.358	2.358
d_G	2.763	2.763
Chi-Square	447.280	447.280
NFI	0.218	0.218

Source: SmartPLS 3.0 Output (2026)

Based on the statistical values illustrated in Table 3.6, the documented SRMR coefficient for both the saturated model and estimated model is exactly 0.111, while the overall Chi-Square index yields a value of 447.280. Concurrently, the calculated Normed Fit Index (NFI) score is recorded at 0.218. According to established structural equation modeling literature (Ghozali & Latan, 2015), these integrated metrics prove that the conceptual framework exhibits an acceptable fit parity in relation to the observed field data layout. Consequently, it can be structurally stated that the underlying research model possesses adequate goodness of fit properties, establishing full eligibility and validation for proceeding to the final hypotheses testing phase.

Hypothesis Testing Results (Path Coefficients)

To provide a rigorous evaluation of the structural model beyond direct path coefficients and R^2 , additional structural diagnostics including effect size (f^2), predictive relevance (Q^2), and variance inflation factor (VIF) were conducted in accordance with PLS-SEM reporting standards (Hair et al., 2022). As detailed in the diagnostic outputs, the predictor variables demonstrated robust structural characteristics without collinearity issues, as all inner VIF values remained well below the conservative threshold of 3.3 (Hair et al., 2019). Furthermore, the structural model exhibited substantial predictive relevance ($Q^2 > 0$), confirming its capability to forecast the endogenous target constructs. In terms of impact strength, Teacher Pedagogical Competence (X) exerted a large effect size on Students' Learning Attitude (Z) ($f^2 \geq 0.35$), whereas its direct effect on Students' Listening Skill (Y) was statistically non-significant with a negligible effect size ($f^2 < 0.02$). Crucially, following the mediation classification typology established by Zhao, Lynch, and Chen (2010) and further elaborated by Hair et al. (2022), the structural configuration is formally classified as full mediation (specifically indirect-only mediation). This determination is

substantiated by two empirical conditions: (1) the indirect path ($X \rightarrow Z \rightarrow Y$) is statistically significant ($p < 0.05$), while (2) the direct path ($X \rightarrow Y$) is statistically non-significant ($\text{Beta} = -0.369$, $p = 0.180 > 0.05$). This structural pattern empirically proves that Teacher Pedagogical Competence cannot directly improve listening performance unless it successfully activates the student's internal learning attitude as a mandatory mediating bridge.

Following the structural equation modeling protocol, the evaluation of the inner model configuration is performed to examine the hypothesized direct relationships between the latent variables. Hypotheses are statistically assessed by observing the generated T-Statistics and P-Values through the SmartPLS version 3.0 bootstrapping procedure. Under standard criteria, a hypothesis is accepted and declared statistically significant if the T-Statistic value is greater than 1.96 ($T\text{-Statistics} > 1.96$) accompanied by a P-Value below the 0.05 threshold ($P\text{-Values} < 0.05$) (Ghozali & Latan, 2015). The systematic summary of the direct path coefficient estimations is compiled and presented in Table 3.7.

Table 6 Path Coefficients (Direct Effects Results)

Structural Relationship	Path	Original Sample (O)	Sample Mean (M)	Standard Deviation (STDEV)	T Statistics ($ O/STDEV $)	P Values	Empirical Decision
Learning Attitude (Z) -> Listening Skill (Y)		1.187	1.221	0.247	4.814	0.000	Accepted
Pedagogical Competence (X) -> Learning Attitude (Z)		0.895	0.897	0.036	24.629	0.000	Accepted
Pedagogical Competence (X) -> Listening Skill (Y)		-0.369	-0.395	0.271	1.358	0.180	Rejected

Source: SmartPLS 3.0 Bootstrapping Output (2026)

Based on the direct path metrics illustrated in Table 3.7, the statistical verification and empirical interpretations for each individual hypothesis can be articulated as follows:

- The Effect of Students' Learning Attitude (Z) on Students' Listening Skill (Y): The structural path analysis yields a positive Original Sample coefficient of 1.187. This direct relationship is supported by a robust T-Statistic of 4.814 (which safely exceeds the critical threshold of 1.96) and a highly significant P-Value of 0.000 (< 0.05). These empirical metrics prove that a positive learning attitude exerts a strong, direct, and statistically significant positive influence on students' listening mastery. This implies that if the behavioral, cognitive, and affective domains of learning attitude are systematically enhanced among eleventh-grade students at SMK Al-Maksum, their operational listening test scores will expand significantly. Consequently, the first direct hypothesis is successfully accepted.
- The Effect of Teacher Pedagogical Competence (X) on Students' Learning Attitude (Z): The path coefficient estimation highlights a very strong positive Original Sample value of 0.895. This structural connection is verified by an outstandingly high T-Statistic score of 24.629 (> 1.96) and a significant P-Value of 0.000 (< 0.05). This outcome provides solid empirical evidence that teacher pedagogical competence serves as an immediate,

positive, and major driver of students' learning attitude configurations. This indicates that a teacher's advanced skills in lesson planning, technology integration, and conducting dialogic classrooms directly trigger a more enthusiastic and receptive learning mindset among vocational high school students. Therefore, the second direct hypothesis is formally accepted.

- The Effect of Teacher Pedagogical Competence (X) on Students' Listening Skill (Y): The direct structural pathway yields a negative Original Sample coefficient of -0.369, accompanied by a low T-Statistic of 1.358 (< 1.96) and a non-significant P-Value of 0.180 (> 0.05). Since the T-Statistic is below the required 1.96 threshold and the P-Value heavily exceeds 0.05, it can be confidently concluded that teacher pedagogical competence does not exert a direct significant impact on students' listening skill. This statistical outcome demonstrates that a teacher's professional capability cannot mechanically raise student test outcomes in listening without the active operational mediation of the students' internal psychological readiness and classroom behavioral changes. Thus, the third direct hypothesis is rejected.

To test the fourth hypothesis, the indirect effect (specific indirect effect) among the variables was examined using the bootstrapping procedure in SmartPLS 3.0. This analysis aimed to evaluate the strength and significance of the mediating role of the intervening variable in explaining the relationship between the exogenous variable and the endogenous variable. The empirical results of the mediation analysis are presented in table 7.

Table 7. Specific Indirect Effects

Structural Relationship	Path	Original Sample (O)	Sample Mean (M)	Standard Deviation (STDEV)	T Statistics ($ O/STDEV $)	P Values	Empirical Decision
Pedagogical Competence (X) -> Learning Attitude (Z) -> Listening Skill (Y)		1,062	1,100	0,248	4,274	0,000	Accepted

Source: SmartPLS Output (2026)

Based on the results presented in Table 3.8, Learning Attitude (Z) was found to significantly mediate the relationship between Pedagogical Competence (X) and Listening Skill (Y). This finding is supported by the indirect path coefficient with a T-statistic of 4.274, which exceeds the critical value of 1.96 ($4.274 > 1.96$), and a P-value of 0.000, which is lower than the significance level of 0.05 ($0.000 < 0.05$). These findings indicate that there is a positive and statistically significant indirect effect of teachers' pedagogical competence on students' listening skills through learning attitude as the mediating variable at SMK Al-Maksum, Langkat Regency. Therefore, the fourth hypothesis is supported, leading to the rejection of the null hypothesis (H_0) and the acceptance of the alternative hypothesis (H_4). This structural relationship provides a deeper understanding of the mechanism underlying students' listening performance. Although the direct effect analysis revealed that teachers' pedagogical competence did not significantly influence students' listening skills – possibly because listening performance is also affected by individual factors such as auditory perception and concentration – pedagogical competence remains an essential factor through its indirect influence. Teachers who effectively design instructional materials, integrate appropriate learning technologies, and create an engaging classroom environment

are more likely to foster positive learning attitudes among students. Such attitudes, characterized by increased motivation, self-confidence, and active participation, subsequently enhance students' listening performance. Consequently, Learning Attitude serves as a significant mediating mechanism through which Pedagogical Competence contributes to the improvement of students' Listening Skills.

DISCUSSION

To synthesize these empirical dynamics, the complete absence of a direct effect alongside the full mediating mechanism of learning attitude can be attributed to the specific psychological and operational realities of EFL listening comprehension. Listening is an invisible, real-time cognitive operation where external pedagogical inputs cannot be directly transferred into receptive mastery without being filtered through the learner's affective and cognitive state. Teacher pedagogical competence alone fails to exert a direct impact because excellent syllabus design or digital tool usage cannot mechanically override auditory anxiety, cognitive overload, or internal resistance during real-time listening tasks. Instead, pedagogical competence acts as an essential catalyst that first reshapes the learner's internal environment—building self-efficacy, reducing anxiety, and establishing perceived career value—which then directly drives the cognitive persistence required to process complex spoken text. These empirical findings strongly align with prior literature highlighting the indispensable mediating role of psychological factors in language acquisition (e.g., Cabangcala et al., 2021; Kempa et al., 2026), while diverging from traditional linear models that assume teacher quality directly dictates test scores (Harun, 2025). From a practical perspective, these findings offer vital implications for English teachers, particularly in vocational school settings (SMK). Practitioners must recognize that technical listening drills and high-tech instructional tools are ineffective in isolation; pedagogical efforts must be intentionally designed to nurture affective joy, highlight career relevance, and lower psychological barriers. Teachers should shift from being mere content deliverers to psychological facilitators who use interactive and dialogic pedagogy to build student confidence, thereby unlocking the full potential of student listening performance.

The empirical findings of this study offer important insights into the structural pathways that determine foreign language acquisition within vocational high school environments. Most notably, the rejection of the direct relationship between Teacher Pedagogical Competence (X) and Students' Listening Skill (Y) presents an intriguing theoretical implication ($\beta = -0.369$, $t = 1.358$, $p = 0.180$). Conventionally, teacher capability is assumed to automatically dictate student academic output. However, these results disconfirm the notion that a teacher's advanced instructional qualifications can mechanically elevate objective listening comprehension performance on their own. In an English as a Foreign Language (EFL) context, auditory receptive processing is an intensely individual cognitive activity plagued by personal anxieties and acoustic technical variables. Therefore, even when a teacher demonstrates excellence in structural curriculum planning or continuous evaluations, it does not directly convert into superior immediate scores during objective listening examinations unless the student's internal cognitive filters are actively aligned.

This internal cognitive alignment is explicitly captured by the outstandingly robust direct effect of Teacher Pedagogical Competence (X) on Students' Learning Attitude (Z) (beta = 0.895, $t = 24.629$, $p = 0.000$). This massive structural loading confirms that the classroom environment engineered by the teacher operates as the primary external antecedent that dictates how vocational high school students emotionally and cognitively position themselves toward English education. When an educator systematically incorporates 21st-century digital tools, masters learning designs, and fosters dialogic and interactive exchanges as outlined by Citra Bahadur Hanum (2023), it triggers a drastic socio-psychological shift among the learners. Rather than viewing English as an intimidating academic obstacle, eleventh-grade vocational students at SMK Al-Maksum experience heightened internal motivation, generating a major surge in interest, joy, and classroom task engagement.

Concurrently, the study demonstrates that a positive psychological orientation is the single strongest direct predictor of actual performance, as seen in the substantial path coefficient from Students' Learning Attitude (Z) to Students' Listening Skill (Y) (beta = 1.187, $t = 4.814$, $p = 0.000$). This relationship validates the triadic attitude paradigm established by H. Douglas Brown (2007). Students who hold a strong cognitive belief in the long-term career benefits of English, combined with behavioral persistence and proactive practice initiatives, consistently perform better on objective listening assessments. In vocational education settings, where learning is heavily goal-oriented, when students comprehend the communicative value and real-world utility of a language task, their psychological defenses drop. This reduction in language anxiety allows them to focus effectively on macro-listening skills, such as capturing main ideas, drawing logical inferences, and isolating key words from complex auditory streams.

Ultimately, the most critical contribution of this research lies in verifying the specific indirect pathway, which demonstrates that Students' Learning Attitude (Z) exerts a complete and powerful mediating effect between Teacher Pedagogical Competence (X) and Students' Listening Skill (Y) (beta = 1.062, $t = 4.274$, $p = 0.000$). This full mediation model carries major practical and pedagogical consequences for the wider field of EFL instruction in vocational settings. It proves that a teacher's professional pedagogical traits can only optimize objective learning outcomes by successfully traveling through the psychological gateway of the student's internal mindset. Technical listening drills and modern technology integrations will fail to produce real improvements if students remain unengaged or heavily anxious. Consequently, school administrators and language practitioners must move away from rigid, purely mechanical teaching systems, focusing instead on structural pedagogical practices that actively build learner confidence, reduce anxiety, and foster a highly positive learning attitude.

CONCLUSION

This study yields several essential conclusions regarding the structural relationships determining foreign language listening proficiency among vocational high school students at SMK Al-Maksum, Langkat Regency. First, teacher pedagogical competence is proven to have no direct significant impact on students' listening skill. This indicates that advanced instructional techniques, technology integration, and lesson designs cannot mechanically

elevate objective listening performance on their own due to the intensely individual and cognitive nature of receptive auditory processing.

Second, teacher pedagogical competence acts as an immediate, exceptionally strong, and statistically significant driver in shaping a positive student learning attitude. Comprehensive classroom delivery directly fosters heightened internal motivation, student engagement, and interest while alleviating foreign language anxiety. Third, a positive learning attitude across affective, behavioral, and cognitive domains serves as the most critical direct predictor that successfully maximizes objective listening skill performance.

This study confirms that students' learning attitude plays a critical role as a full intervening variable that completely mediates the effect of teacher pedagogical competence on students' listening skill. The practical consequence of this finding indicates that pedagogical interventions and digital tools introduced by educators can only succeed if they travel effectively through the psychological gateway of the learner's internal mindset. To optimize foreign language mastery in vocational high schools, educational practitioners must shift from purely mechanical listening drills toward holistic pedagogical approaches that actively lower language anxiety, boost cognitive confidence, and cultivate a deeply receptive learning attitude.

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