



Teacher Competence and Attitudes as Determinants of National Plus Curriculum Implementation Effectiveness

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ABSTRACT

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This study aims to analyze the influence of pedagogical competence, professional competence, and teacher attitudes on the effectiveness of National Plus Curriculum implementation. A quantitative explanatory approach was employed, with data collected through a census survey involving teachers. The data were analyzed using Partial Least Squares–Structural Equation Modeling (PLS-SEM) to examine both partial and simultaneous relationships among variables. The results show that pedagogical competence, professional competence, and teacher attitudes each have a positive and statistically significant effect on the effectiveness of curriculum implementation. Simultaneously, these variables demonstrate a strong combined influence on implementation effectiveness. Among the three factors, teacher attitude exhibits the largest effect size, indicating that motivation, commitment, and openness to curriculum change play a dominant role in supporting effective implementation. These findings imply that successful implementation of the National Plus Curriculum depends not only on teachers' instructional skills and professional expertise but also on the development of positive attitudes toward curriculum change. Therefore, professional development programs should integrate competence enhancement with strategies aimed at strengthening teachers' motivation and readiness for curricular innovation.

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INTRODUCTION

Curriculum reform has become a central issue in contemporary education as societies increasingly demand graduates who are globally competitive, adaptable, and grounded in strong values. Hybrid curricula that combine national standards with global perspectives are widely viewed as strategic responses to these demands, particularly in private and internationally oriented schools. However, research consistently demonstrates that the success of curriculum reform depends less on curriculum design and more on how it is

implemented in everyday classroom practice. Teachers serve as the primary agents who translate policy intentions into learning experiences, making their role decisive in determining curriculum outcomes (Mulyadi & Sutiah, 2025). Empirical studies across diverse contexts indicate that curriculum changes often fail to achieve their intended goals when teachers are unprepared or disengaged from the reform process (Aytaç, 2023; Tumuheise et al., 2023). Therefore, investigating teacher-related factors that influence curriculum implementation is essential for ensuring that curriculum reform contributes meaningfully to educational quality and broader societal development.

Despite continuous curriculum reforms, many education systems continue to face persistent gaps between curriculum policy and classroom practice (Mulyadi & Sutiah, 2025). One major challenge lies in teachers' varying levels of competence, commitment, and readiness to implement curriculum change. Studies show that teachers frequently encounter difficulties in adapting instructional practices to new curriculum demands, particularly when reforms require shifts in pedagogy, assessment, or learning orientation (Kumayas et al., 2025; Tumuheise et al., 2023). Professional development initiatives often emphasize technical aspects of teaching while paying limited attention to teachers' attitudes and commitment, resulting in partial or inconsistent implementation. Research has also identified weak teacher empowerment and limited academic supervision as factors that reduce teachers' engagement with reform initiatives (Muttaqin et al., 2023). Consequently, curriculum implementation remains a complex and unresolved problem in education, highlighting the need for research that examines both technical and psychological dimensions of teacher readiness.

In actual school settings, curriculum implementation frequently varies across classrooms, even within the same institution and curriculum framework (Khoiroh et al., 2025). Teachers with similar access to curriculum guidelines and resources often demonstrate different levels of instructional quality, innovation, and alignment with curriculum objectives (Jasri, 2025). Some teachers actively adapt instructional strategies and embrace reform, while others continue to rely on traditional practices or display resistance to change (Muharromah & Manshur, 2025). This phenomenon suggests that curriculum effectiveness is shaped not only by formal competence but also by teachers' attitudes, motivation, and commitment. Empirical evidence indicates that teacher commitment mediates the relationship between institutional support and instructional performance, reinforcing the importance of psychological factors in curriculum enactment (Muttaqin et al., 2023; Aytaç, 2023). In value-driven or faith-based educational environments, alignment between personal beliefs, institutional culture, and curriculum goals may further influence how teachers interpret and implement curriculum reforms.

Previous studies have extensively documented the importance of teacher competence in supporting effective curriculum implementation. Pedagogical competence, which includes lesson planning, classroom management, and instructional strategy selection, has been shown to significantly enhance teachers' ability to deliver curriculum objectives effectively (Mahfiana & Ahsani, 2023; Zulkarnain et al., 2025). Professional competence, encompassing subject matter mastery and continuous professional development, further strengthens teachers' instructional confidence and adaptability (Handini, 2024; Mak et al., 2023). Research also highlights that structured professional education programs contribute to the development of sustainable teacher competence aligned with long-term educational goals (Rokhman et al., 2024; Kusumawati et al., 2025). However, much of this literature implicitly assumes that competence alone is sufficient to ensure successful curriculum implementation, an assumption that overlooks the role of teachers' perceptions and motivation.

More recent research emphasizes that teacher attitudes toward curriculum change play a critical role in determining implementation effectiveness. Teachers' openness, motivation, and perceptions of reform significantly influence how they interpret curriculum mandates and sustain new practices over time (Aytaç, 2023; Dos Santos, 2025). Studies in diverse curriculum contexts show that positive attitudes and preparedness are essential when teachers are expected to adopt innovative or student-centered approaches (Moshou & Drinia, 2023; Kumayas et al., 2025). Despite these insights, empirical studies that simultaneously examine pedagogical competence, professional competence, and teacher attitudes within a single analytical framework remain limited. Moreover, research integrating these variables in hybrid curriculum settings is scarce, creating a gap in understanding how technical competence and psychological readiness interact to shape curriculum implementation outcomes.

This study offers novelty by integrating pedagogical competence, professional competence, and teacher attitudes into a unified explanatory model of curriculum implementation effectiveness. By employing a quantitative approach with Partial Least Squares–Structural Equation Modeling (PLS-SEM), the study examines both the relative and combined effects of these teacher-related factors. The focus on a National Plus Curriculum context adds further originality, as this curriculum represents a complex hybrid model that combines national standards, global orientation, and institutional values. Additionally, examining curriculum implementation within a faith-based educational setting provides new insights into how organizational culture and value alignment may amplify or moderate the influence of teacher attitudes. This integrated perspective moves beyond fragmented analyses and contributes to the state of the art by highlighting the multidimensional nature of curriculum

implementation. Addressing this issue is crucial, as ineffective implementation can undermine the intended benefits of curriculum reform and weaken public trust in educational innovation.

Based on the identified gaps, this study addresses the central question of how pedagogical competence, professional competence, and teacher attitudes influence the effectiveness of National Plus Curriculum implementation. It is argued that while pedagogical and professional competencies are necessary conditions for effective implementation, they are not sufficient without positive teacher attitudes toward curriculum change. The study hypothesizes that all three factors have significant effects on curriculum effectiveness, with teacher attitude playing a particularly influential role. By empirically testing these relationships, the study seeks to clarify the relative importance of technical competence and psychological readiness in curriculum reform. The findings are expected to contribute theoretically by enriching the literature on curriculum implementation and educational change, and practically by informing school leaders and policymakers about the need for balanced teacher development strategies that integrate competence enhancement with attitude cultivation to support sustainable and effective curriculum reform.

RESEARCH METHODS

The unit of analysis in this study was individual teachers as the primary subjects of research. The study was conducted at Kalam Kudus Christian School (SKKK) Medan, a faith-based private educational institution implementing the National Plus Curriculum. The research context focused on teachers' involvement in curriculum planning, instructional delivery, and classroom implementation of the National Plus Curriculum. All teachers actively engaged in curriculum implementation during the academic year of data collection were included, resulting in 62 respondents. Given the limited population size, a census approach was employed to ensure full representation and to reduce sampling bias.

This study adopted a quantitative approach with an explanatory survey design, aligned with the objective of examining the influence and relationships among pedagogical competence, professional competence, teacher attitudes, and curriculum implementation effectiveness. Primary data were obtained directly from teachers as research respondents, while secondary data were sourced from relevant institutional documents, school reports, and curriculum-related records to support contextual understanding. Data collection was carried out through a desk review of relevant literature and the administration of a structured questionnaire developed from established theoretical frameworks and prior empirical studies.

The collected data were analyzed using both descriptive and inferential statistical techniques. Descriptive statistics were applied to summarize respondents' profiles and variable characteristics, while inferential analysis was conducted using Partial Least Squares–Structural Equation Modeling (PLS-SEM) with SmartPLS 4.0. The analysis involved evaluation of the measurement model to assess reliability and validity, followed by structural model analysis to examine path coefficients, coefficients of determination (R^2), effect sizes (f^2), and hypothesis testing through bootstrapping procedures. This analytical approach enabled a comprehensive assessment of the direct effects of teacher-related factors on the effectiveness of National Plus Curriculum implementation.

RESULTS AND DISCUSSION

Results

A total of 62 teachers participated in this study, representing the entire population of teachers involved in the implementation of the National Plus Curriculum. The use of a census approach ensured that the data reflected comprehensive perspectives from teachers directly engaged in curriculum implementation.

Measurement Model (Outer Model)

The measurement model was evaluated to assess the reliability and validity of the research constructs. The results indicate that all constructs meet the recommended thresholds for internal consistency reliability and convergent validity. Composite reliability values for all variables exceeded the minimum threshold of 0.70, indicating satisfactory reliability. Convergent validity was also confirmed, as the Average Variance Extracted (AVE) values for all constructs were above 0.50.

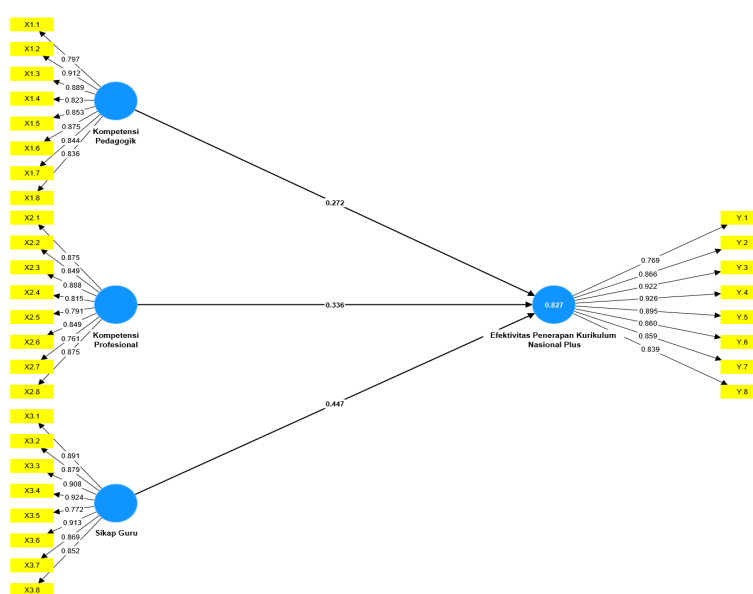


Figure 1. Outer Model (Measurement Model)

Table 2. Construct Reliability and Convergent Validity

Variable	Average Extracted (AVE)	Variance	Composite Reliability
Pedagogical Competence	0.730		0.956
Professional Competence	0.704		0.950
Teacher Attitude	0.769		0.964
Effectiveness of National Plus Curriculum Implementation	0.754		0.961

Source: SmartPLS v.4.0.6 Output

Discriminant validity was assessed using the Heterotrait–Monotrait (HTMT) ratio. All HTMT values were below the recommended threshold of 0.90, indicating that each construct was empirically distinct from the others. These results confirm that the measurement model is reliable and valid for subsequent structural model analysis.

Structural Model (Inner Model)

The structural model was evaluated to examine the hypothesized relationships between pedagogical competence, professional competence, teacher attitude, and the effectiveness of National Plus Curriculum implementation.

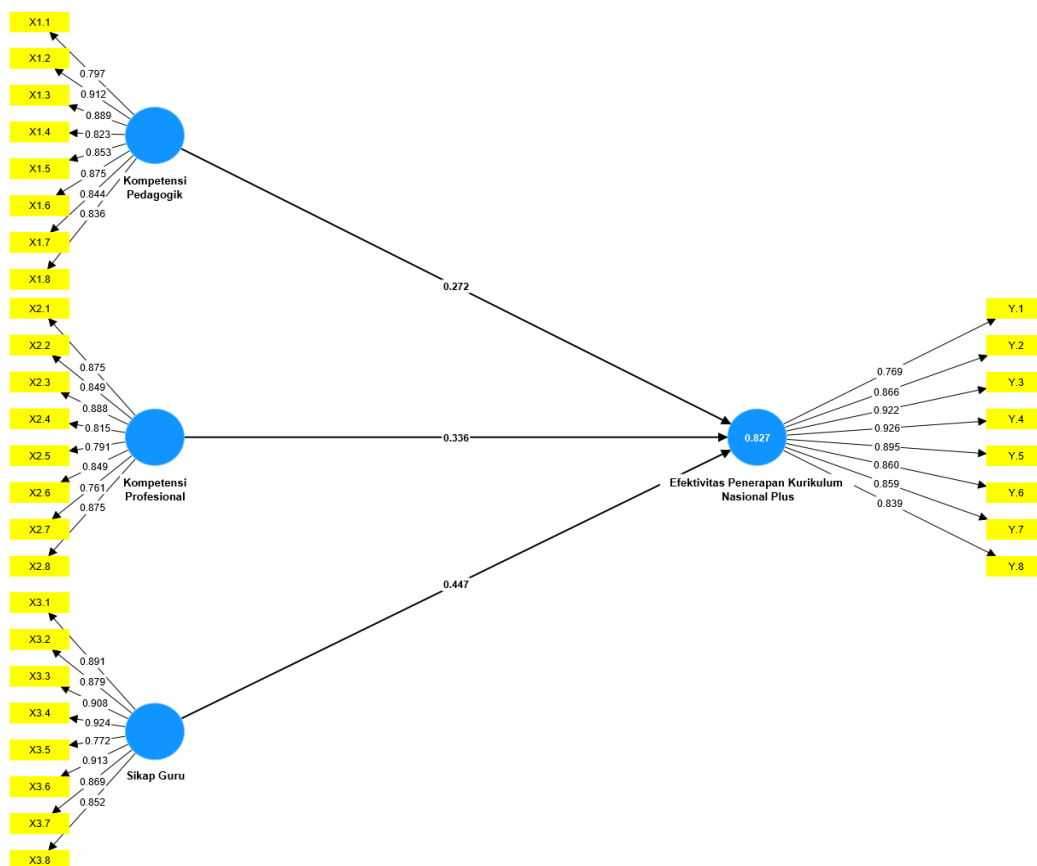


Figure 3. Inner Model (Structural Model)

Table 4. Path Coefficients and Hypothesis Testing

Relationship	β	t-value	p-value	Decision
Pedagogical Competence → National Plus Curriculum Effectiveness	0.272	2.534	0.011	Accepted
Professional Competence → National Plus Curriculum Effectiveness	0.336	2.562	0.010	Accepted
Teacher Attitude → National Plus Curriculum Effectiveness	0.447	2.996	0.003	Accepted

Source: SmartPLS v.4.0.6 Output

The results indicate that pedagogical competence has a positive and statistically significant effect on curriculum effectiveness ($\beta = 0.272$; $t = 2.534$; $p = 0.011$). Professional competence also shows a positive and significant influence ($\beta = 0.336$; $t = 2.562$; $p = 0.010$). Among the three predictors, teacher attitude demonstrates the strongest positive effect on curriculum implementation effectiveness ($\beta = 0.447$; $t = 2.996$; $p = 0.003$).

The coefficient of determination (R^2) indicates that pedagogical competence, professional competence, and teacher attitude collectively explain a substantial proportion of variance in curriculum implementation effectiveness, suggesting strong predictive power of the structural model.

Effect Size Analysis

Effect size (f^2) analysis was conducted to evaluate the relative contribution of each independent variable to curriculum implementation effectiveness.

Table 5. Effect Size (f^2) and Practical Importance

Variable	f^2	Effect Category	Practical Interpretation
Pedagogical Competence	0.157	Medium	Moderately contributes to curriculum effectiveness
Professional Competence	0.238	Medium	Meaningful contribution to curriculum effectiveness
Teacher's Attitude	0.770	High	Strongest and most influential determinant of curriculum effectiveness

Source: SmartPLS v.4.0.6 Output

Pedagogical competence and professional competence demonstrate moderate effect sizes, while teacher attitude exhibits a high effect size, indicating its dominant role in determining curriculum implementation effectiveness.

Discussion

The findings of this study confirm that pedagogical competence, professional competence, and teacher attitude significantly influence the effectiveness of National Plus Curriculum implementation. This result supports prior research indicating that curriculum reform outcomes are shaped not only by curriculum design but also by teachers' readiness and capacity to implement change in classroom practice (Ali et al., 2023; Sijabat et al., 2023; Tumuheise et al., 2023).

The positive effect of pedagogical competence highlights the importance of teachers' instructional planning, classroom management, and alignment of teaching strategies with curriculum objectives. Teachers with strong pedagogical competence are better positioned to translate curriculum goals into effective learning experiences, thereby strengthening implementation quality (Mahfiana & Ahsani, 2023; Zulkarnain et al., 2025). This finding is consistent with studies emphasizing that pedagogical competence serves as a key mechanism through which curriculum intentions are operationalized in practice (Firmansyah et al., 2025; Kusumawati et al., 2025).

Professional competence also demonstrates a significant contribution to curriculum implementation effectiveness, underscoring the role of subject matter mastery and continuous professional development. Teachers with strong professional competence are more capable of adapting instructional content to complex curricular demands and integrating global and interdisciplinary perspectives (Firmansyah et al., 2025; Skrbinjek et al., 2024). Previous research suggests that sustained professional development enhances instructional confidence and supports consistent curriculum enactment (Kusumawati et al., 2025; Wahidmurni et al., 2024).

The most prominent finding of this study is that teacher attitude emerges as the strongest determinant of curriculum implementation effectiveness. This result aligns with studies showing that teachers' beliefs, motivation, and openness to change significantly shape their engagement with curriculum reform initiatives (Ali et al., 2023; Lin et al., 2025; Tumuheise et al., 2023). Positive teacher attitudes foster adaptability, commitment, and sustained implementation, even in demanding and evolving instructional contexts (Clipa et al., 2023; ElSayary, 2024).

These findings resonate with educational change theory, particularly Fullan's view that successful reform depends on teachers' emotional and cognitive engagement with change. Teacher attitude functions as a critical catalyst that determines how pedagogical and professional competencies are activated in practice (Ali et al., 2023; Lin et al., 2025). Within value-driven educational environments, alignment between institutional culture, professional

development, and curriculum goals further strengthens teachers' commitment to reform, reinforcing the need for leadership strategies that balance competence enhancement with the cultivation of positive teacher attitudes (Firmansyah et al., 2025; Skrbinjek et al., 2024).

CONCLUSION

The most important finding of this study is that effective implementation of the National Plus Curriculum depends not only on teachers' pedagogical and professional competencies but, more critically, on their attitudes toward curriculum change. The results reveal a key lesson from this research: teacher attitude—reflected in motivation, openness, and commitment—acts as the decisive catalyst that determines whether technical competencies are fully translated into effective classroom practice. This underscores the insight that curriculum reform is fundamentally a human-centered process, in which teachers' beliefs and emotional engagement shape the depth, consistency, and sustainability of implementation.

From a scholarly perspective, this study contributes to the literature on curriculum implementation and educational change by empirically integrating pedagogical competence, professional competence, and teacher attitude within a single explanatory model. By demonstrating the dominant role of teacher attitude, the findings extend educational change theory, particularly Fullan's framework, by reinforcing the argument that attitudes function as an enabling mechanism for competence enactment. However, this study is limited by its focus on a single school context and a relatively small sample size, which may restrict generalizability. Future research is encouraged to test this model across diverse school types and curriculum settings, and to employ mixed or qualitative approaches to explore more deeply how teacher attitudes interact with organizational culture and leadership in shaping curriculum implementation outcomes.

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