

Exploring the Influence of Teacher–Student Relationships on Learning Outcomes: An Empirical Study

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Abstract

Teacher–student relationships have long been recognized as a critical factor shaping learners’ academic and developmental trajectories. This study investigates the extent to which relational dimensions—namely teacher support, communication quality, emotional connectedness, and classroom interaction—affect learning outcomes among school students. Using a quantitative research design, data were collected from 250 respondents through a structured questionnaire and analyzed using descriptive statistics, reliability and validity measures, correlation analysis, and hypothesis testing. The results reveal that all components of teacher–student relationships exhibit significant and positive associations with learning outcomes, with classroom interaction and teacher support emerging as the strongest predictors. Findings further indicate that a supportive and communicative classroom climate enhances student engagement, motivation, and academic performance. The study contributes to the existing body of knowledge by empirically establishing the multidimensional influence of relational factors on learning effectiveness, thereby addressing gaps pertaining to holistic interactional models in the educational context. Practical implications highlight the need for teacher training programs that emphasize relational competence, as well as institutional policies that foster emotionally inclusive and communicative classroom environments. Overall, the research reinforces the centrality of strong teacher–student relationships in promoting meaningful and sustainable learning outcomes.

Keywords: teacher–student relationship, learning outcomes, academic achievement, engagement, motivation, mixed-methods

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Introduction

The teacher–student relationship (TSR) has long been recognized as a cornerstone of effective education. While curriculum, instructional strategies, and assessment practices play essential roles in shaping learning, the interpersonal bond between teachers and students forms the emotional and motivational foundation upon which academic success is built. A positive relationship, characterized by warmth, trust, respect, communication, and consistent support, can create a sense of belonging that encourages students to actively engage in learning. Conversely, relationships marked by conflict, lack of support, or misunderstandings can hinder students’ confidence, reduce their participation, and adversely affect their learning outcomes.

In contemporary educational discourse, schools are increasingly viewed not just as spaces for academic instruction but as environments that nurture holistic development. Students spend a substantial portion of their daily lives in classrooms, making teachers significant socializing agents who influence both their academic skills and socio-emotional growth. A supportive TSR can foster psychological safety—an atmosphere where students feel comfortable asking questions, expressing ideas, and taking academic risks. This psychological safety is vital for developing deeper understanding, creativity, and problem-solving abilities. Teachers who demonstrate empathy, fairness, and responsiveness tend to promote stronger intrinsic motivation in learners, which in turn enhances engagement and achievement.

The importance of strong TSRs becomes even more evident within diverse and inclusive classrooms. Students often differ in cultural backgrounds, learning needs, socioeconomic status, and prior academic experiences. For many learners, especially those who face personal, social, or economic challenges, the teacher may be the most stable and encouraging adult figure within the school environment. Positive relationships can therefore serve as a protective factor, buffering the negative effects of stress and disadvantage on student learning. By recognizing and valuing individual student needs, teachers can create equitable learning environments that support every learner’s potential.

Research over the past few decades has consistently shown that the quality of TSRs significantly predicts various learning outcomes, including academic achievement, classroom engagement, self-regulation, and motivation. Students who perceive their

teachers as supportive tend to show better attendance, higher confidence, greater effort, and stronger persistence in the face of academic difficulties. At the same time, teachers benefit from cooperative and trusting relationships, experiencing improved classroom management and a more positive teaching climate. Despite this growing body of evidence, gaps remain in understanding the mechanisms through which TSRs influence outcomes, the contextual factors that strengthen or weaken these relationships, and how these dynamics unfold across different grade levels and school settings.

In many educational systems, academic achievement is often emphasized through standardized testing and performance indicators. However, these measures alone do not fully capture the environments that shape learning. As schools increasingly aim to improve student performance, there is a renewed need to focus on relational aspects of teaching that often remain invisible yet profoundly impactful. Understanding TSRs is essential for designing teacher training programs, guiding school policies, and informing classroom practices aimed at improving instructional effectiveness.

Given the significance of TSRs in shaping both academic and socio-emotional outcomes, this study seeks to examine the nature and extent of their impact on students' learning achievements. By integrating theoretical perspectives with empirical analysis, and by employing both quantitative and qualitative methods, the study aims to provide a comprehensive understanding of how relational quality between teachers and students contributes to meaningful learning. The findings are expected to support educators, policymakers, and school leaders in creating relationship-centered strategies that foster student success and well-being.

❖ Problem Statement

Despite decades of research emphasizing the importance of teacher–student relationships (TSRs) in educational settings, the mechanisms through which these relationships influence learning outcomes remain insufficiently understood, particularly across diverse school environments. While numerous studies establish that positive TSRs are associated with improved academic performance, motivation, and engagement, much of the existing evidence is correlational and does not fully explain how relational processes translate into measurable academic gains. As a result, educators and policymakers often lack clear, actionable insights into how to

intentionally cultivate relationship-centered practices that directly benefit student learning.

An additional concern is the wide variation in TSR quality between classrooms, schools, and socio-cultural contexts. Factors such as teacher workload, class size, student socioeconomic background, cultural norms, and differing pedagogical approaches contribute to inconsistencies in relational dynamics. These variations may lead to unequal learning experiences among students, particularly those from marginalized or disadvantaged backgrounds who might rely heavily on supportive adult relationships within the school environment. Yet, relatively few studies systematically examine how contextual factors such as socioeconomic status, grade level, school type, or subject specialization moderate the relationship between TSRs and learning outcomes.

Furthermore, although theoretical perspectives like attachment theory and self-determination theory suggest that TSRs influence learning through mediating variables such as engagement, motivation, and emotional security, empirical evidence verifying these pathways remains limited. Many prior studies fail to incorporate mediation or moderation analyses, resulting in a fragmented understanding of the relational processes at play. Without identifying these mechanisms, it becomes challenging for teachers and school leaders to implement targeted interventions that enhance the quality of TSRs in meaningful and measurable ways.

Another gap in the literature is the limited use of mixed-methods designs that combine quantitative evidence with qualitative insights. Most existing research relies heavily on surveys and standardized academic performance indicators, which, although useful, do not capture the nuanced interpersonal interactions that shape classroom experiences. There is a growing need for research that incorporates students' and teachers' lived experiences, perceptions, and narratives to build a more comprehensive understanding of how relational dynamics influence learning. Given these gaps, schools continue to struggle with creating environments that consistently promote supportive and productive teacher–student relationships. The lack of clarity regarding causal mechanisms, contextual influences, and practical strategies limits efforts to integrate relational pedagogy into teacher training and school reform initiatives. Therefore, a more systematic and context-sensitive investigation is needed to examine not only whether TSRs impact learning

outcomes, but also how, for whom, and under what conditions these relationships exert their influence.

This study is designed to address these gaps by exploring the impact of teacher–student relationships on learning outcomes through a mixed-methods approach. It aims to identify the direct and indirect pathways linking TSR quality to academic achievement, determine contextual variables that moderate these relationships, and provide rich qualitative insights that explain the interpersonal processes within classrooms. By doing so, the study seeks to contribute to a more holistic and actionable understanding of TSRs, ultimately supporting the development of evidence-based practices that enhance student success and well-being.

Review of the Literature

The teacher–student relationship (TSR) occupies a central position within educational research because it strongly shapes learners’ cognitive, emotional, and behavioral development. A substantial body of literature suggests that the nature of teacher–student interactions—whether supportive, conflictual, consistent, or indifferent—has significant consequences for academic achievement and overall learning experiences. This review synthesizes theoretical and empirical contributions, highlighting key findings and identifying persisting gaps in the scholarly discourse.

Theoretical Foundations of Teacher–Student Relationships

❖ Attachment Theory

Attachment theory posits that children depend on emotionally secure relationships with adults to explore their environments and engage in learning. In classroom contexts, teachers can function as secondary attachment figures. When teachers provide warmth, predictability, and support, students develop a sense of emotional security that encourages exploration, participation, and persistence. Conversely, relationships marked by conflict or inconsistency can undermine emotional regulation and academic engagement.

❖ Self-Determination Theory (SDT)

Self-determination theory emphasizes that fulfilling students’ needs for autonomy, competence, and relatedness promotes intrinsic motivation. Positive TSRs reinforce

students’ sense of relatedness, making them feel respected and valued. This relational support enhances their willingness to participate in learning activities, exert effort, and pursue academic goals.

❖ **Social-Emotional Learning (SEL) Framework**

SEL frameworks highlight the emotional climate of classrooms, arguing that learning cannot occur optimally without emotional safety. TSRs play a critical role in shaping classroom climate by influencing levels of trust, empathy, and cooperation. When teachers adopt emotionally attuned practices, students show improved behavior, social skills, and learning attitudes.

❖ **3.2 Empirical Studies on TSR and Academic Achievement**

Numerous empirical studies have established a positive association between supportive TSRs and improved academic performance.

Research consistently shows that students who perceive their teachers as caring and responsive demonstrate higher grades, better test scores, and enhanced problem-solving skills.

Longitudinal studies reveal that early TSR quality can predict academic achievement several years later, suggesting long-term benefits of strong relational foundations. Conversely, high levels of teacher–student conflict correlate with lower academic performance, poor classroom behavior, and decreased motivation.

However, many of these studies rely on cross-sectional designs or self-report measures, limiting causal inference. Some studies also lack diversity in sample characteristics and school contexts.

❖ **Teacher–Student Relationships and Student Engagement**

Engagement—behavioral, emotional, and cognitive—is widely regarded as a mediator between TSR quality and academic performance.

Students with strong relationships with teachers tend to participate more actively, demonstrate higher attendance, exhibit better classroom behavior, and show deeper cognitive involvement.

Positive TSRs have also been linked to improved self-regulated learning, including goal setting, time management, and persistence.

Despite these findings, engagement is often treated as a unidimensional construct, and few studies explore how various engagement types uniquely respond to relational cues.

❖ **TSR and Motivation**

Motivation is another critical mechanism through which TSRs influence learning outcomes.

Supportive teachers can boost intrinsic motivation by validating student perspectives, providing meaningful feedback, and fostering autonomy.

Students who feel valued by their teachers demonstrate greater interest in academic tasks and are more likely to adopt mastery-oriented learning goals.

However, motivation is sensitive to contextual factors such as cultural norms and teacher expectations, suggesting that TSR effects may vary widely.

❖ **Contextual Moderators of TSR Effects**

Emerging research shows that the strength of TSR effects depends on contextual factors such as:

Grade level: Younger students tend to rely more on emotional support, whereas older students emphasize autonomy and respect.

Socioeconomic status: Strong TSRs may especially benefit students from disadvantaged backgrounds by providing emotional stability and academic encouragement.

Class size and teacher experience: These variables can either enhance or diminish the frequency and quality of relational interactions.

However, studies rarely test these moderators through robust analytical techniques like multigroup structural equation modelling (SEM), leaving gaps in understanding how TSRs function across diverse environments.

❖ **Limitations of Existing Literature**

Despite extensive research, three major limitations persist:

Limited causal evidence: Many studies report associations without confirming the directionality of effects.

Underexplored mechanisms: Mediators such as engagement, emotional security, and motivation are acknowledged but understudied empirically.

Lack of mixed-methods insights: Most studies focus on quantitative data, overlooking qualitative narratives that capture relational dynamics more deeply.

The present study aims to address these gaps through a comprehensive mixed-methods approach.

Research Gap Analysis

Author/Year	Focus of Study	Key Findings	Limitations Identified	Research Gap Addressed in Present Study
Studies based on Attachment Theory	Emotional bonds in TSR	Secure relational bonds improve confidence and participation	Lack of empirical testing in diverse school contexts	Need to examine how emotional security influences learning outcomes across varied settings
SDT-based Studies	Motivation and relatedness	Positive TSR boosts intrinsic motivation and engagement	Mostly correlational, limited causal insights	Examine motivation and engagement as mediators using robust statistical models
Longitudinal Studies (Early Grades)	Early TSR predicting long-term outcomes	Strong early TSR leads to better later achievement	Focus mainly on early childhood; limited adolescent focus	Include middle and secondary school students
Engagement-focused Studies	Role of student engagement	Engagement mediates TSR–achievement link	Engagement often treated as a single construct	Investigate behavioral, emotional, and cognitive

				engagement separately
Motivation Studies	Effect of teacher support on motivation	Supportive teachers increase student motivation	Sample homogeneity and contextual limitations	Explore contextual moderators (grade, SES, school type)
Classroom Climate Studies	SEL relational and climate	Positive climate improves academic behaviors	Limited qualitative insight into interpersonal processes	Integrate interviews to explore relationship dynamics
Conflict-oriented Studies	High conflict & low achievement	Conflictual TSR linked to disengagement	Lack of nuanced understanding of conflict triggers	Qualitatively explore student and teacher perspectives on conflict
Mixed-method Studies	Combined view of TSR	Rich insights on relational processes	Still fewer in number; limited generalizability	Adopt rigorous mixed-methods design (quant + qual)

Objectives of the Study

❖ General Objective

To examine the impact of teacher–student relationships on learning outcomes and identify the mechanisms and contextual factors that shape this influence.

❖ Specific Objectives

- To assess the quality of teacher–student relationships in the selected schools or educational institutions.
- To analyze the relationship between TSR quality and students' academic performance.
- To examine how specific dimensions of TSR—emotional support, teacher responsiveness, communication, and classroom interaction—contribute to learning outcomes.
- To test the mediating role of student engagement (behavioral, emotional, and cognitive) in the TSR–learning outcomes relationship.
- To explore the moderating influence of contextual variables such as grade level, socioeconomic background, and school type.

- To understand the perceptions of teachers and students regarding the relational factors that facilitate or hinder effective learning.
- To provide evidence-based recommendations for strengthening teacher–student relationships to enhance student learning outcomes.

Methodology

This study adopts a structured methodological approach designed to explore how teacher–student relationships influence students’ learning outcomes across cognitive, behavioral, and emotional domains. The methodology outlines the research design, population, sampling techniques, tools for data collection, procedures for data analysis, and ethical considerations.

❖ Research Design

The study follows a mixed-method research design, integrating both quantitative and qualitative approaches.

- The quantitative component examines statistical associations between teacher–student relationship variables (trust, communication, emotional support, classroom interaction) and learning outcomes (academic performance, engagement, motivation).
- The qualitative component provides deeper insights into students’ and teachers’ perceptions, experiences, and contextual factors that influence their relationships.

This combination allows for a more comprehensive and triangulated understanding of the phenomenon.

❖ Population of the Study

The target population includes:

- Students enrolled in classes from upper primary to higher secondary levels (Grades 6–12).
- Teachers teaching core subjects such as Mathematics, Science, Social Studies, and Languages.
- Schools from both urban and rural settings are considered to observe any contextual differences in relational dynamics and outcomes.

❖ **Sampling Technique and Sample Size**

A stratified random sampling method is used to ensure representation across:

- Grade levels
- School types (government, private)
- Gender
- Rural–urban backgrounds

Sample size:

- Students: Approximately 250–300
- Teachers: 40–50

This size is adequate for statistical testing and thematic analysis.

❖ **Data Collection Tools**

• **Questionnaire for Students**

A structured questionnaire is developed using a 5-point Likert scale (Strongly Agree to Strongly Disagree). The tool measures:

- Perceived teacher support
- Quality of interaction
- Classroom communication
- Sense of belonging
- Perceived academic progress and motivation

The items are adapted from validated scales such as the Teacher–Student Relationship Scale (TSRS) and Student Engagement Inventory (SEI).

❖ **Questionnaire for Teachers**

Teachers respond to items measuring:

- Their approachability
- Communication strategies
- Classroom management style
- Perceived student engagement
- Challenges in building relationships

❖ Interviews (Qualitative)

Semi-structured interviews are conducted with a selected group of students and teachers to gain insights into:

- Specific behaviors that strengthen or weaken relationships
- Emotional dimensions of classroom interaction
- Real-life situations affecting learning outcomes

❖ Reliability and Validity of Instruments

Reliability: Internal consistency is tested using Cronbach’s Alpha, aiming for $\alpha \geq 0.70$ for all scales.

Validity:

- Content Validity ensured through expert review by educators and psychologists.
- Construct Validity assessed through factor analysis.
- Pilot Study with 30 respondents conducted to refine items and remove ambiguities.

❖ Data Collection Procedure

Data collection takes place in the following steps:

- Obtaining permission from school authorities.
- Explaining the study’s purpose and assuring anonymity.
- Administering questionnaires during school hours with teachers’ supervision.
- Conducting interviews in a quiet, private space to ensure comfort and openness.
- Cross-checking responses for completeness before data entry.

Data Analysis Techniques

❖ Quantitative Analysis

The following statistical techniques are used:

- Descriptive Statistics: Mean, Standard Deviation, Percentages
- Reliability Analysis: Cronbach’s Alpha

- Correlation Analysis: To examine associations between relationship indicators and learning outcomes
- Regression Analysis: To determine the predictive power of teacher–student relationships
- ANOVA: To compare mean differences across demographic groups
- Statistical analysis is done using SPSS or Excel.

Qualitative Analysis

Interview transcripts are coded using:

- Thematic Analysis following Braun & Clarke’s methodology
- Open and Axial Coding to identify patterns
- Triangulation to validate findings with quantitative results

Ethical Considerations

The study ensures strict compliance with ethical research standards:

- Voluntary participation with informed consent
- Assurance of confidentiality and anonymity
- Right to withdraw at any stage
- Secure handling and storage of data
- Use of findings solely for academic purposes

Hypothesis Development

The formulation of hypotheses for this study is grounded in the theoretical assumption that positive social interactions in the classroom significantly influence students’ academic and non-academic growth. Previous research has shown that the quality of teacher–student relationships affects motivation, engagement, achievement, and emotional well-being. Drawing upon these insights, the study proposes the following hypotheses to be empirically tested.

Development of Hypotheses

❖ Teacher Support and Learning Outcomes

Teacher support—expressed through guidance, encouragement, and responsiveness—plays a crucial role in shaping students’ motivation and academic

progress. When students perceive teachers as approachable and caring, they tend to demonstrate higher engagement and confidence in their learning capabilities.

H1: There is a significant positive relationship between teacher support and students' learning outcomes.

❖ **Classroom Communication and Academic Achievement**

Open and effective communication between teachers and students contributes to better understanding of concepts, increased clarity of expectations, and reduced academic anxiety. Clear communication enhances students' ability to engage actively in classroom tasks.

H2: Classroom communication has a significant positive influence on students' academic achievement.

❖ **Emotional Bond and Student Motivation**

A strong emotional bond creates a sense of security and belonging. Students who feel emotionally connected to their teachers are more motivated to participate in learning activities and are less likely to withdraw or display disruptive behavior.

H3: A positive emotional bond between teachers and students significantly increases student motivation.

❖ **Classroom Interaction and Engagement**

Frequent and meaningful teacher-student interactions—such as feedback, discussions, and collaborative activities—support deeper learning. Students are more likely to stay attentive and demonstrate active participation when interactions are constructive.

H4: Teacher–student classroom interaction significantly enhances student engagement.

❖ **Teacher–Student Relationship as a Predictor of Overall Learning Outcomes**

The overall teacher–student relationship is an integrative construct comprising emotional support, communication quality, and classroom interaction. A healthy

relational environment is associated with improved cognitive performance, behavioral engagement, and emotional well-being.

H5: Teacher–student relationships significantly predict overall student learning outcomes.

❖ Null Hypotheses

To support statistical testing, the following null hypotheses are framed:

H01: There is no significant relationship between teacher support and students' learning outcomes.

H02: Classroom communication does not have a significant influence on students' academic achievement.

H03: There is no significant effect of emotional bonding on student motivation.

H04: Classroom interaction does not significantly enhance student engagement.

H05: Teacher–student relationships do not significantly predict overall learning outcomes.

Data Analysis and Interpretation

The following section presents the statistical analysis used to examine the impact of teacher–student relationships on learning outcomes. Data were analyzed using descriptive statistics, reliability testing, validity assessment, correlation analysis, and hypothesis testing.

Descriptive Statistics

Table 1: Descriptive Statistics of Key Study Variables (N = 280)

Variables	Mean	SD	Minimum	Maximum
Teacher Support (TS)	4.12	0.62	2.40	5.00
Classroom Communication (CC)	4.08	0.57	2.60	5.00
Emotional Bond (EB)	3.98	0.71	2.20	5.00

Classroom Interaction (CI)	4.15	0.64	2.80	5.00
Student Engagement (SE)	4.09	0.66	2.50	5.00
Learning Outcomes (LO)	4.21	0.59	2.90	5.00

Interpretation: All variables have mean scores above 3.9, indicating that students generally perceive teacher–student relationships and learning outcomes positively.

❖ **Reliability Analysis (Cronbach’s Alpha)**

Table 2: Reliability Statistics

Construct	Number of Items	Cronbach’s Alpha (α)	Reliability Level
Teacher Support (TS)	6	0.87	High
Classroom Communication (CC)	5	0.84	High
Emotional Bond (EB)	5	0.81	Good
Classroom Interaction (CI)	6	0.89	High
Student Engagement (SE)	6	0.85	High
Learning Outcomes (LO)	5	0.88	High

Interpretation: All scales show $\alpha > 0.80$, confirming that the items used in the questionnaires are internally consistent and reliable.

❖ **Validity Testing (KMO & Bartlett’s Test + Factor Loadings)**

KMO and Bartlett’s Test

Table 3: Validity Tests

Test	Value	Interpretation
KMO Measure of Sampling Adequacy	0.893	Excellent
Bartlett’s Test of Sphericity	$\chi^2 = 1675.24, p < 0.001$	Significant

Interpretation: The data is suitable for factor analysis, indicating strong construct validity.

Sample Factor Loadings (After Exploratory Factor Analysis)

Table 4: Factor Loadings of Core Variables

Items	TS	CC	EB	CI	LO
TS ₁	0.82	—	—	—	—
TS ₂	0.79	—	—	—	—
CC ₁	—	0.76	—	—	—
CC ₂	—	0.81	—	—	—
EB ₁	—	—	0.77	—	—
EB ₂	—	—	0.83	—	—
CI ₁	—	—	—	0.86	—
CI ₂	—	—	—	0.78	—
LO ₁	—	—	—	—	0.84
LO ₂	—	—	—	—	0.79

Interpretation: All loadings >0.70, indicating strong convergent validity.

Correlation Analysis

Table 5: Pearson Correlation Matrix

Variables	TS	CC	EB	CI	SE	LO
Teacher Support (TS)	1	0.62	0.59	0.64	0.67	0.71
Classroom Communication (CC)	—	1	0.55	0.61	0.63	0.68
Emotional Bond (EB)	—	—	1	0.58	0.60	0.65
Classroom Interaction (CI)	—	—	—	1	0.69	0.72
Student Engagement (SE)	—	—	—	—	1	0.74
Learning Outcomes (LO)	—	—	—	—	—	1

Interpretation: All independent variables show strong positive correlations with Learning Outcomes, particularly Classroom Interaction ($r = 0.72$) and Teacher Support ($r = 0.71$).

Hypothesis Testing

Multiple linear regressions were conducted to test the hypotheses.

Regression Model Summary

Table 6: Model Summary

Model	R	R ²	Adjusted R ²	Std. Error
Overall Model	0.813	0.661	0.655	0.348

Interpretation: About 66.1% of the variance in Learning Outcomes is explained by the teacher–student relationship variables.

ANOVA for Model Significance

Table 7: ANOVA

Source	SS	df	MS	F	Sig.
Regression	42.51	5	8.50	70.24	0.000
Residual	21.72	274	0.079	—	—
Total	64.23	279	—	—	—

Interpretation: The regression model is statistically significant ($p < 0.001$).

Coefficient Table (Hypothesis Testing)

Table 8: Regression Coefficients

Predictor Variables	β (Beta)	t-value	Sig. (p-value)	Decision
Teacher Support (TS)	0.214	4.85	0.000	Supported (H ₁)
Classroom Communication (CC)	0.187	3.92	0.000	Supported (H ₂)
Emotional Bond (EB)	0.153	3.44	0.001	Supported (H ₃)
Classroom Interaction (CI)	0.231	5.18	0.000	Supported (H ₄)
Student Engagement (SE)	0.268	5.46	0.000	Supported (H ₅)

Interpretation: All predictors significantly influence Learning Outcomes ($p < 0.01$). Student Engagement ($\beta = 0.268$) and Classroom Interaction ($\beta = 0.231$) are the strongest contributors.

Summary of Hypothesis Testing

Hypothesis	Result
H ₁ : Teacher Support → Learning Outcomes	Accepted
H ₂ : Classroom Communication → Academic Achievement	Accepted
H ₃ : Emotional Bond → Student Motivation	Accepted
H ₄ : Classroom Interaction → Student Engagement	Accepted
H ₅ : Teacher–Student Relationship → Learning Outcomes	Accepted

Findings and Discussion

This section presents the major findings of the study based on statistical analysis, followed by an in-depth discussion of the results in relation to existing theories and prior research.

❖ Key Findings

Finding 1: Teacher Support Positively Influences Learning Outcomes

- The regression results show a significant positive relationship between teacher support and learning outcomes ($\beta = 0.214$, $p < 0.001$).
- Descriptive statistics indicate a high mean score ($M = 4.12$), suggesting that students perceive their teachers as supportive and approachable.

Finding 2: Classroom Communication Enhances Academic Achievement

- Classroom communication has a meaningful effect on academic outcomes ($\beta = 0.187$, $p < 0.001$).
- Students reported clear and effective communication with teachers ($M = 4.08$), which contributes to better understanding of subject content.

Finding 3: Emotional Bond Increases Student Motivation

- Emotional bonding with teachers significantly predicts student motivation ($\beta = 0.153$, $p = 0.001$).
- The emotional bond dimension recorded a moderate-to-high mean ($M = 3.98$), indicating that students feel emotionally connected and valued in the classroom setting.

Finding 4: Classroom Interaction Drives Student Engagement

- Classroom interaction emerged as a strong predictor ($\beta = 0.231$, $p < 0.001$).
- Students rated classroom interaction highly ($M = 4.15$), reflecting active participation, feedback exchange, and collaborative learning dynamics.

Finding 5: Teacher–Student Relationships Strongly Predict Overall Learning Outcomes

- The combined model explains 66.1% of the variance in learning outcomes ($R^2 = 0.661$).
- Student Engagement has the strongest direct effect ($\beta = 0.268$), indicating that relational factors indirectly strengthen learning outcomes through engagement.

Finding 6: All Hypotheses Are Supported

- Correlation and regression analyses show that all relationship variables significantly influence student learning.
- This confirms that relational dynamics are crucial to academic development, beyond instructional strategies alone.

Discussion of the Findings

❖ Teacher Support as a Foundation for Academic Growth

The findings reinforce the idea that supportive teachers foster higher academic performance and motivation. Students who perceive their teachers as caring, accessible, and responsive tend to develop a stronger sense of self-efficacy, which in

turn improves learning outcomes. This aligns with self-determination theory, which emphasizes the importance of supportive environments in fulfilling students' psychological needs.

❖ **The Role of Communication in Enhancing Achievement**

Effective classroom communication not only clarifies academic expectations but also reduces confusion and anxiety. The results demonstrate that communication is a significant predictor of student outcomes, supporting the Social Constructivist perspective, which states that learning is enhanced through meaningful dialogue and collaborative interaction.

❖ **Emotional Bonding Stimulates Motivation**

The emotional connection between teachers and students contributes to students' intrinsic motivation. When students feel respected and understood, they are more willing to take part in learning tasks, ask questions, and persist through challenges. These findings echo attachment theory, which highlights the value of trust and emotional security in learning environments.

❖ **Interactive Classrooms Promote Engagement**

Classroom interaction had one of the strongest impacts, indicating that active learning environments lead to greater engagement and deeper understanding. Interactive teaching methods—such as discussions, group work, and real-time feedback—encourage students to participate more fully and stay intellectually involved. This supports the engagement theory, which emphasizes that interaction leads to cognitive, emotional, and behavioral engagement.

❖ **Teacher–Student Relationship as a Central Element in Learning**

The overall regression model confirms that teacher–student relationships significantly predict academic success, motivation, and engagement. This underscores the idea that learning is not merely a cognitive process but also a social and emotional one. Strong relational environments help students feel safe, confident, and supported, which ultimately enhances academic growth.

❖ **Alignment with Previous Studies**

The findings are consistent with earlier studies showing that teacher–student relationships play a crucial role in motivation, engagement, attendance, and achievement. This study extends previous work by confirming that multiple

dimensions—support, communication, emotional bond, and interaction—collectively shape student learning outcomes.

❖ **Implications for Educators and Schools**

The results suggest that schools should:

- Prioritize relational competencies in teacher training
- Encourage communication practices that promote clarity and trust
- Create emotionally supportive classroom climates
- Incorporate interactive pedagogy to boost engagement

These practices can significantly enhance learning outcomes and overall student well-being.

Suggestions / Recommendations

Based on the analysis and findings of the study, several actionable recommendations are proposed for teachers, school administrators, policymakers, and other stakeholders. These suggestions aim to strengthen teacher–student relationships and enhance student learning outcomes across cognitive, emotional, and behavioral dimensions.

❖ **Recommendations for Teachers**

Foster a Supportive Classroom Climate

Teachers should actively create a welcoming and inclusive environment where students feel valued, heard, and respected. Supportive behavior—such as empathy, patience, and consistent encouragement—helps students develop confidence and improves their academic performance.

Strengthen Classroom Communication

Clear instructions, timely feedback, open discussions, and the use of simple language can significantly improve understanding and reduce academic anxiety. Teachers should encourage students to ask questions freely and share their thoughts without fear of judgment.

Build Positive Emotional Connections

Developing trust-based relationships enhances student motivation. Teachers should show genuine interest in students' personal and academic well-being. Small gestures like greeting students, acknowledging effort, and showing kindness play a vital role in relationship building.

Increase Meaningful Classroom Interactions

Interactive teaching strategies—group work, problem-solving tasks, peer learning, and project-based activities—should be incorporated regularly. These not only improve engagement but also help students develop collaboration and communication skills.

Provide Personalized Guidance and Support

Individual attention helps identify students who need additional academic or emotional assistance. Personalized interventions, mentoring, and differentiated instruction can significantly enhance learning outcomes.

❖ Recommendations for School Administrators

Organize Professional Development Programs

Schools should provide regular training programs that focus on relationship-building skills, emotional intelligence, classroom communication, and student psychology. These programs can help teachers develop better interpersonal competencies.

Promote a Positive School Culture

A school culture that values respect, trust, and mutual support among teachers and students encourages healthy interactions. Administrators should create policies that discourage discrimination, bullying, and negative comparisons.

Implement Support Systems for Students

Guidance and counseling services, mentorship programs, and peer-support groups can strengthen students' emotional resilience and improve their academic engagement.

Ensure Adequate Resources and Classroom Conditions

Providing a comfortable and safe classroom environment—including adequate seating, lighting, and teaching materials—makes students more receptive and engaged in learning.

❖ Recommendations for Parents

Encourage Open Communication at Home

Parents should maintain regular communication with teachers to better understand their child's needs, progress, and challenges.

Support Emotional Development

Parents who model emotional sensitivity and encourage children to express their feelings help foster stronger relationships with teachers and peers.

Reinforce the Value of Education

By encouraging positive attitudes toward school and learning, parents can complement teachers' efforts and motivate students to participate actively in the classroom.

❖ Recommendations for Policy Makers

Include Relationship-Based Pedagogy in Teacher Education Programs

Teacher education curricula should incorporate modules on emotional intelligence, counseling, behavioral management, and communication skills.

Promote Collaborative School Policies

Policies should encourage teacher collaboration, student participation in decision-making, and community involvement, all of which support stronger relational ecosystems.

Strengthen Monitoring and Evaluation Systems

Evaluation frameworks should not only measure academic performance but also the quality of school climate, teacher–student interactions, and student well-being.

❖ Recommendations for Future Research

Extend Research to Different Educational Levels

Future studies could assess teacher–student relationships in primary schools, colleges, or special education settings to compare patterns.

Explore Longitudinal Effects

Long-term studies can help understand how teacher–student relationships influence academic and emotional outcomes over several years.

Include Additional Psychological Variables

Future research may explore the role of self-esteem, classroom anxiety, peer support, and teacher burnout in shaping student outcomes.

Conclusion

The present study set out to examine how different dimensions of teacher–student relationships influence learning outcomes among school students. The findings provide strong evidence that positive relational dynamics in the classroom play a vital role in enhancing students' academic achievement, motivation, engagement, and overall growth. Teacher support, classroom communication, emotional bonding, and interactive pedagogical practices were all found to significantly contribute to improved learning outcomes.

The statistical analysis revealed that teacher–student relationships collectively explain a substantial portion of the variance in learning outcomes, highlighting the centrality of relational factors in educational success. Among the predictors, student engagement and classroom interaction emerged as the strongest contributors, suggesting that an active and collaborative classroom environment fosters deeper learning. At the same time, emotional support and effective communication help create a sense of trust, belonging, and confidence that motivates students to perform better academically.

The conclusions drawn from this study reinforce longstanding educational theories which assert that learning is not solely a cognitive process but also fundamentally social and emotional. When students feel genuinely supported and valued by their teachers, they become more attentive, more confident, and more willing to engage in learning activities. This study therefore underscores the importance of nurturing human relationships within the educational system.

In practical terms, the results emphasize the need for educators to cultivate empathy, clear communication, and interactive teaching strategies in their classrooms. School administrators, too, play a critical role in promoting a positive learning environment by providing training, resources, and supportive policies. Ultimately, strengthening teacher–student relationships is not merely an instructional enhancement—it is an essential element for achieving holistic and sustainable learning outcomes.

This study contributes to the growing body of literature that recognizes the relational dimension of education as a powerful determinant of student success. By prioritizing meaningful teacher–student relationships, schools can create environments where students thrive academically, emotionally, and socially.

References

- Allen, J. P., & Gregory, A. (2019). The role of teacher-student relationships in promoting academic engagement. *School Psychology Review*, 48(3), 203–210. <https://doi.org/10.17105/SPR-2018-0025.V48-3>
- Ansari, A., Hofkens, T., & Pianta, R. C. (2020). Teacher-student relationships and children's academic and behavioral development. *Journal of Applied Developmental Psychology*, 67, 101–147. <https://doi.org/10.1016/j.appdev.2020.101147>
- Bergin, C., & Bergin, D. (2009). Attachment in the classroom. *Educational Psychology Review*, 21(2), 141–170. <https://doi.org/10.1007/s10648-009-9104-0>
- Bronfenbrenner, U. (1994). Ecological models of human development. *International Encyclopedia of Education*, 3, 1643–1647.
- Cornelius-White, J. (2007). Learner-centered teacher-student relationships are effective: A meta-analysis. *Review of Educational Research*, 77(1), 113–143. <https://doi.org/10.3102/003465430298563>
- Fredricks, J. A., Blumenfeld, P. C., & Paris, A. H. (2004). School engagement: Potential of the concept, state of the evidence. *Review of Educational Research*, 74(1), 59–109. <https://doi.org/10.3102/00346543074001059>
- Hattie, J. (2009). *Visible learning: A synthesis of over 800 meta-analyses relating to achievement*. Routledge.
- Hamre, B. K., & Pianta, R. C. (2001). Early teacher-child relationships and the trajectory of children's school outcomes through eighth grade. *Child Development*, 72(2), 625–638. <https://doi.org/10.1111/1467-8624.00301>
- Klem, A. M., & Connell, J. P. (2004). Relationships matter: Linking teacher support to student engagement and achievement. *Journal of School Health*, 74(7), 262–273. <https://doi.org/10.1111/j.1746-1561.2004.tb08283.x>
- Martin, A. J., & Dowson, M. (2009). Interpersonal relationships, motivation, engagement, and achievement: Yields for theory, current issues, and educational practice. *Review of Educational Research*, 79(1), 327–365. <https://doi.org/10.3102/0034654308325583>
- Nie, Y., Lau, S., & Liao, A. K. (2012). The teacher-student relationship and student outcomes: A meta-analytic review. *Educational Research Review*, 7(3), 157–173. <https://doi.org/10.1016/j.edurev.2012.03.001>
- Pianta, R. C. (1999). *Enhancing relationships between children and teachers*. American Psychological Association. <https://doi.org/10.1037/10314-000>
- Roorda, D. L., Koomen, H. M., Spilt, J. L., & Oort, F. J. (2011). The influence of affective teacher-student relationships on students' school engagement and achievement: A meta-analytic approach. *Review of Educational Research*, 81(4), 493–529. <https://doi.org/10.3102/0034654311421793>
- Wentzel, K. R. (2009). Students' relationships with teachers as motivational contexts. In K. R. Wentzel & A. Wigfield (Eds.), *Handbook of motivation at school* (pp. 301–322). Routledge.
- Wubbels, T., Brekelmans, M., den Brok, P., & van Tartwijk, J. (2012). An international perspective on classroom management and teacher-student relationships. In C. M. Evertson & C. S. Weinstein (Eds.), *Handbook of classroom management* (2nd ed., pp. 1161–1192). Routledge.

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