



**A STUDY OF THE INFLUENCE OF SCHOOL SUPPORT
SYSTEMS ON PRIMARY SCHOOL STUDENTS' LEARNING
MOTIVATION BASED ON SELF-DETERMINATION THEORY**

**XIN YANLIN
6717195404**

**AN INDEPENDENT STUDY SUBMITTED IN PARTIAL
FULFILLMENT OF THE REQUIREMENTS FOR THE DEGREE OF
MASTER OF BUSINESS ADMINISTRATION
GRADUATE SCHOOL OF BUSINESS
SIAM UNIVERSITY
2026**



**A STUDY OF THE INFLUENCE OF SCHOOL SUPPORT
SYSTEMS ON PRIMARY SCHOOL STUDENTS' LEARNING
MOTIVATION BASED ON SELF-DETERMINATION THEORY**

XIN YANLIN

This Independent Study Has Been Approved as a Partial Fulfillment of the
Requirements for the Degree of Master of Business Administration

Advisor.....

(Dr. Zhang Li)

Date: 26 / 2 / 2026

.....
(Associate Professor Dr. Jomphong Mongkhonvanit)
Dean, Graduate School of Business

Date: 26 / 9 / 2026

Title: A Study of the Influence of School Support Systems on Primary School Students' Learning Motivation Based on Self-Determination Theory
Researcher: XIN YANLIN
Degree: Master of Business Administration
Major: Educational Management

Advisor:


.....
(Dr. Zhang Li)

26 / 2 / 2026

ABSTRACT

Learning motivation plays a critical role in shaping students' academic development, yet many primary school students exhibit declining motivation due to insufficient support from their school environment. To address this issue, this study examined the influence of school support systems on the learning motivation of primary school students in Jiangsu Province, China. Guided by Self-Determination Theory, the study focused on four forms of school support: teacher autonomy support, teacher emotional support, school resource support, and peer learning support.

The research aimed to investigate the extent to which these support dimensions predict students' learning motivation. A quantitative research design was employed, and data were collected from 278 primary school students using a structured online questionnaire. The measurement instrument demonstrated strong reliability and validity, and the data were analyzed using descriptive statistics, correlation analysis, and structural equation modeling.

The findings revealed that all four forms of support had significant and positive effects on learning motivation. Teacher autonomy support and teacher emotional support were the strongest predictors, indicating the crucial role of teacher behaviors in fostering students' motivational development. School resource support and peer learning support also contributed meaningfully to learning motivation. Overall, the four predictors explained 63% of the variance in learning motivation, demonstrating strong explanatory power. These results highlight the importance of creating supportive school environments to enhance learning motivation among primary school students.

Keywords: teacher autonomy support, teacher emotional support, school resource support, peer learning support, learning motivation



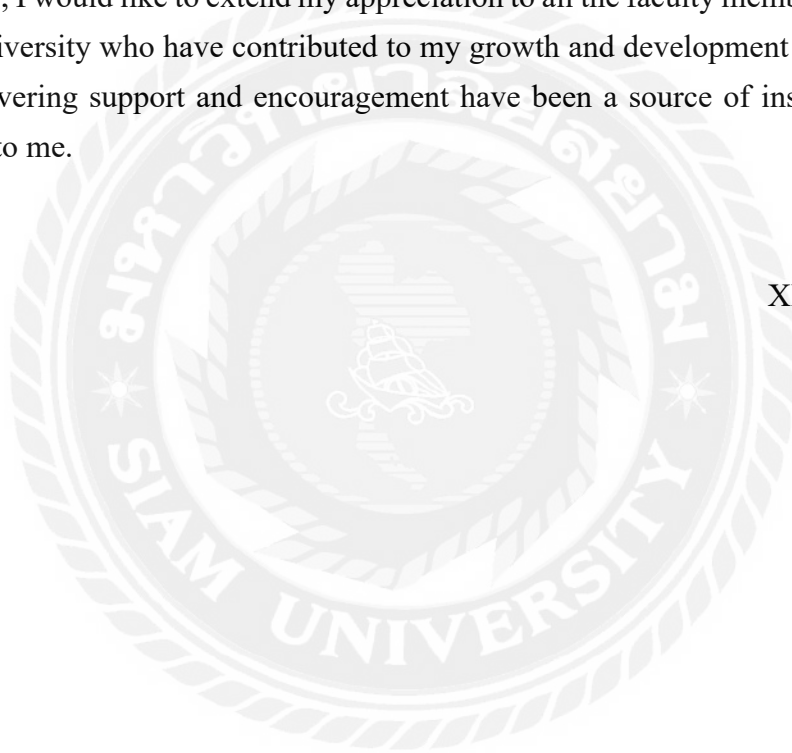
ACKNOWLEDGEMENT

I would like to express my deepest gratitude to my advisor for his invaluable guidance, support, and encouragement throughout my Independent Study. His insightful comments and constructive criticism have significantly improved the quality of my work.

Additionally, I am grateful to Associate Professor Dr. Jomphong Mongkhonvanit, Dean, Graduate School of Business, for his support and encouragement throughout my studies. His dedication to the graduate program and commitment to excellence have inspired me to strive for academic excellence.

Finally, I would like to extend my appreciation to all the faculty members and staff of Siam University who have contributed to my growth and development as a student. Their unwavering support and encouragement have been a source of inspiration and motivation to me.

XIN YANLIN



DECLARATION

I, XIN YANLIN, hereby declare that this Independent Study entitled “A Study of the Influence of School Support Systems on Primary School Students’ Learning Motivation Based on Self-Determination Theory” is an original work and has never been submitted to any academic institution for a degree.

(XIN YANLIN)

Dec 09, 2025



CONTENTS

ABSTRACT	I
ACKNOWLEDGEMENT	III
DECLARATION	IV
CONTENTS.....	V
LIST OF TABLES.....	VII
LIST OF FIGURES	VIII
Chapter 1 Introduction	1
1.1 Background of the Study.....	1
1.2 Questions of the Study	3
1.3 Objectives of the Study	3
1.4 Scope of the Study.....	3
1.5 Significance of the Study	4
1.6 Definition of Key Terms	4
Chapter 2 Literature Review	6
2.1 Self-Determination Theory	6
2.2 Teacher Autonomy Support	7
2.3 Teacher Emotional Support.....	8
2.4 School Resource Support	10
2.5 Peer Learning Support.....	12
2.6 Learning Motivation.....	13
2.7 Conceptual Framework	14
Chapter 3 Research Methodology.....	16
3.1 Research Design.....	16
3.2 Questionnaire Design	16
3.3 Hypothesis	18

3.4 Population and Sample.....	18
3.5 Data Collection.....	18
3.6 Data Analysis	18
3.7 Reliability and Validity Analysis of the Scale	19
Chapter 4 Findings and Discussion.....	21
4.1 Demographic Characteristics	21
4.2 Descriptive Statistics	22
4.3 Exploratory Factor Analysis.....	22
4.4 Confirmatory Factor Analysis.....	23
4.5 Convergent Validity and Discriminant Validity	24
4.6 Correlation Analysis.....	24
4.7 Structural Equation Model Analysis	25
4.8 Discussion	26
Chapter 5 Conclusion and Recommendation	27
5.1 Conclusion.....	27
5.2 Recommendation.....	27
5.3 Further Study.....	28
References.....	29
Appendix.....	35

LIST OF TABLES

Table 3.1 Questionnaire Items	16
Table 3.2 Reliability Analysis	19
Table 3.3 KMO and Bartlett's Test ^a	19
Table 4.1 Demographic Characteristics of Respondent	21
Table 4.2 Descriptive Statistics of Variables	22
Table 4.3 Exploratory Factor Analysis Factor Loading	23
Table 4.4 Confirmatory Factor Analysis Model Fit	24
Table 4.5 Convergent Validity Analysis Results	24
Table 4.6 Discriminant Validity Analysis Results	24
Table 4.7 Correlation Analysis Results	25
Table 4.8 Standardized Path Coefficients and Significance Level	25

LIST OF FIGURES

Figure 2.1 Conceptual Framework	15
---------------------------------------	----



Chapter 1 Introduction

1.1 Background of the Study

In contemporary basic education, learning motivation is widely recognized as a key determinant of pupils' academic achievement, persistence, and socio-emotional development. Self-determined forms of motivation (e.g., intrinsic motivation and identified regulation) are consistently associated with higher engagement, better performance, and greater well-being, whereas controlled motivation and amotivation predict disengagement and poorer learning outcomes (Bureau et al., 2021; Ryan & Deci, 2017). In the context of primary education, fostering strong learning motivation is especially critical, because children are forming foundational attitudes toward school, effort, and learning that can shape their long-term educational trajectories.

Self-Determination Theory (SDT) provides a robust theoretical framework for understanding how school environments foster or undermine students' learning motivation. SDT posits that motivation quality depends on the satisfaction of three basic psychological needs: autonomy (feeling a sense of choice and volition), competence (feeling effective and capable), and relatedness (feeling cared for and connected to others) (Ryan & Deci, 2017). When school contexts support these needs, students are more likely to internalize learning goals and develop autonomous motivation; when needs are thwarted, motivation becomes more controlled or collapses into amotivation (Bureau et al., 2022; Raboca & Carbuarean, 2024). From this perspective, the "school support system" can be conceptualized as a constellation of supports from teachers, peers, and institutional resources that collectively shape need satisfaction and thus learning motivation.

Within this system, teacher support is often regarded as a central antecedent of students' motivational outcomes. Teacher autonomy support, such as offering meaningful choices, acknowledging students' perspectives, and providing rationales, has been shown to predict satisfaction of autonomy and competence needs, as well as higher intrinsic motivation and engagement across schooling levels (Carriedo et al., 2023; Yang et al., 2022). In addition to autonomy support, teachers' emotional support, warmth, empathy, encouragement, and responsive communication, contributes to students' sense of relatedness and security in the classroom, which in turn enhances their willingness to invest effort and persist in learning tasks (Raboca & Carbuarean, 2024). Recent empirical work suggests that when students perceive teachers as supportive both instructionally and emotionally, they report higher levels of academic motivation and more positive attitudes toward school.

Beyond teacher–student relationships, the broader school environment, especially the quality of physical and organizational resources, also plays a significant role in shaping learning motivation. Studies in primary and lower secondary schools indicate that well-managed facilities, adequate learning materials, and a physically safe and aesthetically pleasing environment contribute to a more conducive learning climate, thereby enhancing students’ motivation to learn (Harefa et al., 2024; Mas et al., 2025). Research further shows that students in schools with richer resources and better learning environments tend to report greater enjoyment of learning, stronger task focus, and higher aspirations compared with peers in less supportive environments (Closs et al., 2021). From an SDT perspective, resource-rich environments may support competence (by providing appropriate tools and materials) and autonomy (by enabling varied, activity-based learning), thus facilitating more self-determined motivation.

Peer relationships and peer learning support represent another crucial dimension of the school support system. Positive peer interactions, cooperative learning, and structured peer support programs have been linked to higher academic engagement, better learning outcomes, and stronger motivation, as peers can offer informational, emotional, and instrumental support (Parmar et al., 2025). When students feel accepted and supported by classmates during learning activities, their sense of relatedness is reinforced, which according to SDT promotes internalization of academic values and more autonomous learning motivation. Conversely, classrooms characterized by low peer support or negative peer dynamics may undermine students’ willingness to participate and their confidence in learning.

Although prior research has examined individual components of school support, such as teacher autonomy support, school environment, or peer support, most studies focus on single support sources, specific subjects (e.g., physical education), or particular educational levels (e.g., secondary or higher education) (Bureau et al., 2021; Carriedo et al., 2023; Raboca & Carbuarean, 2024). There remains a relative lack of integrative studies that simultaneously consider multiple dimensions of the school support system (teacher autonomy support, teacher emotional support, school resource support, and peer learning support) and their combined influence on primary school students’ learning motivation within an SDT framework, especially in non-Western or Asian basic education contexts. Addressing this gap, the present study uses Self-Determination Theory as the guiding framework to systematically investigate how different components of the school support system jointly influence primary school students’ learning motivation, thereby providing empirical evidence to inform school-level interventions and educational management in elementary education.

1.2 Questions of the Study

1. What is the effect of teacher autonomy support on primary school students' learning motivation?
2. What is the effect of teacher emotional support on primary school students' learning motivation?
3. What is the effect of school resource support on primary school students' learning motivation?
4. What is the effect of peer learning support on primary school students' learning motivation?

1.3 Objectives of the Study

1. To examine the effect of teacher autonomy support on primary school students' learning motivation.
2. To examine the effect of teacher emotional support on primary school students' learning motivation.
3. To examine the effect of school resource support on primary school students' learning motivation.
4. To examine the effect of peer learning support on primary school students' learning motivation.

1.4 Scope of the Study

The study investigated four specific dimensions of the school support system derived from Self-Determination Theory (SDT): 1. Teacher autonomy support; 2. Teacher emotional support; 3. School resource support; 4. Peer learning support. The dependent variable is students' learning motivation. The research was grounded exclusively in Self-Determination Theory (SDT), which explains how the satisfaction of autonomy, competence, and relatedness needs influences students' motivation.

The target population consisted of primary school students enrolled in selected schools. The sample was limited to students within a particular grade range who were capable of understanding and completing questionnaire items. Teachers and parents were outside the scope of this study.

The study used a quantitative research design, employing a structured questionnaire to measure teacher support, school support, peer support, and learning motivation.

Data were analyzed using reliability and validity analysis, descriptive statistics, correlation analysis, and structural equation modeling (SEM).

1.5 Significance of the Study

1. Theoretical Significance

This study contributes to the theoretical understanding of learning motivation in primary education by extending the application of Self-Determination Theory (SDT) to a comprehensive school support context. While previous research has primarily examined individual factors such as teacher autonomy support or school climate, this study integrates four dimensions of school support—teacher autonomy support, teacher emotional support, school resource support, and peer learning support—into a single analytical framework. By doing so, it provides a more holistic understanding of how multiple environmental factors jointly influence students' autonomous learning motivation.

2. Practical Significance

The results of this study hold important implications for educational management, school policy design, and classroom practice. Understanding how school-based support influences learning motivation can help school leaders, teachers, and policymakers develop more effective strategies to enhance students' willingness to learn. For instance, teachers may adopt more autonomy-supportive and emotionally supportive instructional behaviors; schools may invest in improving learning resources and creating a more supportive classroom climate; and peer-based interventions may be designed to strengthen collaborative learning and social support among students.

1.6 Definition of Key Terms

1. Teacher Autonomy Support

Teacher autonomy support refers to instructional behaviors that acknowledge students' perspectives, provide meaningful choices, offer rationales for learning tasks, and encourage self-initiation. In this study, it represents the degree to which teachers create a classroom environment that fosters students' sense of autonomy and volition.

2. Teacher Emotional Support

Teacher emotional support refers to the warmth, empathy, encouragement, and caring behaviors displayed by teachers toward students. It includes creating a positive interpersonal climate, responding to students' emotional needs, and fostering a sense of belonging. In this study, it reflects students' perceptions of teachers' emotional availability and supportive interactions.

3. School Resource Support

School resource support refers to the availability and accessibility of instructional materials, learning facilities, technological tools, and physical resources that enable effective learning. In this study, it includes the adequacy, quality, and usability of school-provided resources that contribute to students' competence and learning experiences.

4. Peer Learning Support

Peer learning support refers to the academic and emotional assistance students receive from classmates during learning activities. It includes collaboration, encouragement, information sharing, and mutual help among peers. In this study, it represents students' perceived level of supportive interactions from their classmates that facilitate learning and engagement.

5. Learning Motivation

Learning motivation refers to the internal processes that stimulate, direct, and sustain students' engagement in learning tasks. Based on Self-Determination Theory, this study focuses on autonomous forms of motivation, including intrinsic motivation and identified regulation, which reflect students' willingness to learn driven by interest, value, or personal endorsement.

Chapter 2 Literature Review

2.1 Self-Determination Theory

Self-Determination Theory (SDT) is a comprehensive framework that explains human motivation, internalization, and psychological development. It emphasizes that the quality of motivation is influenced by social environments that support individuals' psychological needs and foster self-regulated learning (Ryan & Deci, 2017). SDT differentiates between autonomous motivation, which includes intrinsic motivation and identified regulation, and controlled motivation, which includes external and introjected regulation. Research consistently shows that autonomous motivation predicts stronger engagement, higher achievement, and greater well-being, whereas controlled motivation and amotivation predict maladaptive outcomes (Howard et al., 2021).

A central component of SDT is the Basic Psychological Needs Theory, which argues that autonomy, competence, and relatedness are essential for optimal functioning and motivation. When these needs are satisfied, individuals are more likely to internalize values and regulate behavior autonomously. When needs are frustrated, negative outcomes such as disengagement and diminished well-being are more likely to occur (Vansteenkiste et al., 2020). This needs-based mechanism has been validated across various life domains including education. Empirical evidence shows that need satisfaction is significantly associated with learning engagement, persistence, and academic performance among students across different age groups (Guay et al., 2022).

In educational settings, SDT serves as a foundational theory for examining student motivation and the learning environment. Need-supportive teaching practices such as acknowledging students' perspectives, providing choices, using informational feedback, and creating emotionally supportive climates contribute to higher need satisfaction and increased intrinsic motivation (Núñez & León, 2015). Large scale research reviews further confirm that autonomy-supportive teacher behaviors strongly predict students' autonomous motivation and adaptive learning outcomes (Bureau et al., 2021). Recent studies also highlight the effectiveness of SDT-based interventions in improving students' motivation through teacher training and structured classroom strategies (Reeve & Cheon, 2021; Wang et al., 2024).

With regard to younger learners, SDT has gained increasing attention in elementary education. Conesa et al. (2022) found that satisfaction of autonomy, competence, and relatedness needs contributes significantly to well-being, engagement, and academic adjustment among children aged 6 to 14, although research in primary school contexts remains less extensive than in secondary or higher education. Recent

discussions emphasize the necessity of expanding SDT research to include more diverse forms of school support beyond teacher behaviors such as peer support and school resources which may also play meaningful roles in shaping children's motivational experiences (Wang et al., 2024).

Overall, the literature demonstrates that SDT offers a robust and empirically supported framework for understanding motivation in school contexts. However, research in primary education still lacks integrative models that examine multiple dimensions of school support including teacher autonomy support, teacher emotional support, school resource support, and peer learning support within a unified SDT-based motivational framework. Addressing this gap can deepen theoretical understanding and provide practical guidance for creating environments that foster strong and sustainable learning motivation among primary school students.

2.2 Teacher Autonomy Support

Teacher autonomy support refers to instructional practices that nurture students' sense of volition, encourage independent thinking, and acknowledge students' perspectives. It is considered one of the most critical social factors influencing student motivation within the framework of Self-Determination Theory (SDT). According to Ryan and Deci (2017), autonomy-supportive environments satisfy learners' psychological need for autonomy, which facilitates internalization and enhances intrinsic motivation. Recent research in primary and secondary education reinforces this theoretical proposition by demonstrating that autonomy-supportive teacher behaviors significantly predict more self-determined forms of student motivation, stronger engagement, and improved learning outcomes (Opdenakker, 2021).

Empirical studies indicate that autonomy support involves specific instructional actions such as providing meaningful choices, giving rationales for tasks, minimizing controlling language, and encouraging student initiative. A comprehensive meta-analysis conducted by Hagger et al. (2015) found that teacher autonomy support positively influences students' autonomous motivation and perceived competence across multiple educational contexts. Similarly, research by Jang et al. (2016) revealed that when teachers adopt autonomy-supportive instructional methods, students show increased engagement and deeper cognitive processing, suggesting that autonomy support enhances both behavioral and emotional aspects of engagement. These findings suggest that autonomy support is not a single behavior but a constellation of pedagogical practices that collectively promote a supportive motivational climate.

More recent longitudinal and cross-cultural studies have further enriched this field. For instance, Liu et al. (2023) found that autonomy support from teachers significantly predicted growth in students' intrinsic motivation over an academic year in Chinese elementary schools, suggesting the universality of autonomy-supportive principles even in traditionally teacher-centered environments. In European contexts, Stroet et al. (2019) reported that autonomy-supportive classroom climates were associated with higher academic persistence and reduced amotivation among primary school students. These comparative findings highlight the robustness of autonomy support across cultural settings and age groups.

Intervention studies also provide evidence for the malleability of autonomy-supportive teaching. Cheon et al. (2020) demonstrated that professional development programs focused on autonomy-supportive strategies led to sustained improvements in teachers' instructional behaviors and consequently enhanced students' autonomous motivation and class engagement. These results show that autonomy support is not merely an inherent teacher trait but a teachable and improvable instructional skill.

Overall, the literature indicates that teacher autonomy support is a central determinant of students' learning motivation. It contributes to higher intrinsic motivation, stronger engagement, better psychological well-being, and long-term academic success. Despite the extensive evidence, scholars note a need for more research in primary school settings and non-Western educational systems to further understand contextual variations. This highlights the relevance of investigating how teacher autonomy support influences learning motivation among primary school students within different educational and cultural environments.

2.3 Teacher Emotional Support

Teacher emotional support is usually defined as the warmth, care, understanding, and encouragement that teachers provide to students through their interactions and the emotional tone of the classroom environment. It is often conceptualized as one dimension of teacher support or classroom climate, together with autonomy and structure, but specifically focuses on meeting students' emotional and relatedness needs through empathy, responsiveness, and positive affective communication (Lei et al., 2018; Wang et al., 2020). Within Self-Determination Theory and Social Support Theory, emotionally supportive teachers help satisfy students' basic psychological need for relatedness, which in turn promotes internalization of learning values and more self-determined motivation. Meta-analytic evidence indicates that teacher support, particularly emotional support and warmth, is positively associated with students'

positive academic emotions and negatively associated with negative emotions across diverse educational levels and cultural contexts (Lei et al., 2018; Roorda et al., 2011).

A growing body of empirical studies has demonstrated that teacher emotional support is closely linked to students' academic motivation, engagement, and achievement. In a meta-analytic review, Roorda et al. (2011) found that affective teacher–student relationships characterized by high closeness and low conflict were consistently associated with stronger school engagement and higher academic performance. Classroom level studies similarly show that emotionally positive classroom climates predict greater behavioral, emotional, and cognitive engagement as well as higher achievement (Reyes et al., 2012; Wang et al., 2020). More recent work based on large university samples has confirmed that teacher emotional support is a significant positive predictor of learning engagement and that this relationship is partly explained by students' academic self-efficacy and academic resilience (Guo, 2025). These findings suggest that teacher emotional support functions not only as a direct resource, but also as a contextual condition that strengthens students' internal psychological resources.

Recent studies also provide evidence for the mechanisms that link teacher emotional support to student outcomes. For example, Yang et al. (2021) showed that teacher emotional support was associated with better mathematics performance through a chain mediating effect of academic self-efficacy and math behavioral engagement. Studies in online and blended learning contexts further indicate that perceived teacher emotional support enhances learning engagement indirectly by reducing academic burnout and improving intrinsic motivation (He et al., 2024; Sun, 2025). Meta-analyses on teacher support and academic emotions also demonstrate that students who perceive their teachers as emotionally supportive report more enjoyment, interest, and hope, and less anxiety and depression, which are in turn associated with more persistent engagement and better learning outcomes (Lei et al., 2018; Wang et al., 2020).

For children in primary school, teacher emotional support is particularly important because teacher–student relationships serve as a proximal developmental context. Research focusing on elementary students has shown that positive teacher–student relationships, which include emotional warmth and support, significantly predict learning motivation and engagement. Fan (2023) found that teacher–student relationship quality had a strong positive predictive effect on learning motivation among Chinese elementary school students, with teacher support scores strongly correlated with students' motivation. Similarly, a study of primary schools in Lahore reported that teacher–student relationships exerted a strong effect on students'

motivation, academic behavior, and participation, highlighting that emotionally responsive and student-centered teaching practices are crucial for children's academic and socioemotional development (Fatima et al., 2025). These results are consistent with broader longitudinal evidence showing that early supportive relationships with teachers protect students from later academic and emotional difficulties (Hamre & Pianta, 2003; Wang et al., 2020).

Taken together, existing literature suggests that teacher emotional support is a central component of a supportive school environment and a robust predictor of students' motivation, engagement, achievement, and well-being. The evidence also indicates that its influence is partly mediated through internal variables such as academic self-efficacy, resilience, positive academic emotions, and reduced burnout, and that such effects are observable from primary school through higher education across various cultural settings. However, scholars note that research focusing specifically on emotional support in primary schools, and on how it operates together with other school support systems such as peer support and structural school resources, remains relatively limited. This gap provides a clear rationale for examining teacher emotional support as a key dimension of the school support system in studies of primary students' learning motivation.

2.4 School Resource Support

School resource support is generally understood as the availability, quality, and accessibility of physical and instructional resources that enable effective teaching and learning. It typically includes classroom facilities, furniture, lighting, ventilation, educational materials, libraries, laboratories, and information and communication technologies (ICT). Recent scholarship emphasizes that the physical and material learning environment is not a neutral backdrop but an active component of the educational process that shapes students' engagement, experiences, and academic outcomes (Rusticus et al., 2022). Systematic and empirical studies show that well resourced schools tend to provide more conducive learning climates, which in turn are associated with higher levels of motivation and performance among students at different educational levels (Ye et al., 2024).

A growing body of research has documented the direct and indirect effects of school infrastructure and resources on student achievement. Aloysius (2025) reported that improvements in classroom conditions, access to instructional materials, and overall school facilities had a significant positive effect on pupils' academic performance, suggesting that investment in infrastructure is a key lever for raising

learning outcomes. A recent review focusing on upgraded school facilities in Sarawak, Malaysia, also synthesized evidence that enhanced physical school environments are associated with better educational attainment and called for more systematic evaluation frameworks to capture these effects (Njong-Mom, 2025).

Studies in low and middle income contexts further underscore the importance of basic facilities and learning resources. Shahid (2021) showed that lack of classrooms, inadequate lighting, insufficient toilets, and limited textbooks in basic education schools significantly constrained students' educational experiences and progress, highlighting that resource deficits are directly perceived by learners as barriers to learning. In a similar vein, Sukurieth (2021) examined public secondary schools in Tanzania and found that availability of physical infrastructure such as classrooms, furniture, and water and sanitation facilities was a significant determinant of perceived quality of education. Recent work in public primary schools in Dodoma City likewise indicates that deficiencies in the physical learning environment including classroom infrastructure, ventilation, lighting, and instructional resources are associated with reduced teaching effectiveness and weaker student learning outcomes (Kavishe & colleagues, 2024).

Beyond direct effects on achievement, school resource support is increasingly discussed in relation to student engagement and motivation. Reviews of the educational environment show that classroom and school conditions influence students' cognitive, behavioral, and emotional engagement, which then mediate the relationship between environment and academic achievement (Kassab et al., 2024). From the perspective of Self Determination Theory, resource rich environments can support students' need for competence by providing appropriate tools, materials, and opportunities to experience mastery, and can also enable more varied, activity based learning that fosters autonomy (Rusticus et al., 2022). Conceptual work on motivating learning environments similarly argues that thoughtfully designed physical and digital resources are critical elements in creating engaging and motivating learning contexts (Marcellis et al., 2024).

Although much of the empirical literature has focused on secondary or higher education, the implications for primary schooling are clear. Primary students are particularly sensitive to the immediate physical and material conditions of their classrooms, and inadequate facilities can quickly translate into discomfort, distraction, and reduced willingness to participate. Recent work on inclusive and neurodiversity affirming practice also stresses that adapting the physical classroom environment and providing appropriate resources are fundamental to promoting participation and reducing barriers to learning for diverse learners (National Council for Special

Education, 2024). These developments point to the need to conceptualize school resource support as a core dimension of the school support system that can foster or hinder young learners' motivation and engagement. However, there remains a relative lack of SDT based studies that explicitly model school resource support together with social support variables such as teacher and peer support when examining primary school students' learning motivation, which provides a clear rationale for including this construct in the present study.

2.5 Peer Learning Support

Peer learning support is usually defined as the academic, emotional, and social assistance that students provide to one another through interactions such as cooperative learning, peer tutoring, group work, and informal help during class activities. Recent research consistently shows that positive peer relationships and peer support are important predictors of students' engagement, motivation, and academic achievement in school settings (Baines et al., 2024; Shao et al., 2024). In primary school classrooms, academically focused peer relations, such as working with classmates on tasks, asking questions, and sharing explanations, have been linked to higher behavioral and cognitive engagement, while socially focused peer relations, such as friendship and emotional support, contribute to students' sense of belonging and willingness to participate (Baines et al., 2024).

A growing body of quantitative research and reviews has documented the mechanisms through which peer learning support affects academic outcomes. A systematic review by Yuliawati et al. (2025) concluded that peer social support contributes to academic achievement by enhancing learning motivation, increasing participation, and strengthening cognitive engagement. Similarly, Shao et al. (2024) showed that peer relationships among junior high school students predicted academic achievement both directly and indirectly through a chain of learning motivation and learning engagement, indicating that peer support shapes students' internal motivational states and their actual involvement in learning activities. Villar et al. (2025) reported that perceived peer support had a significant positive effect on students' self regulated motivation, and that several motivational regulation strategies mediated the relationship between peer support and academic outcomes. Taken together, these findings suggest that peer learning support influences achievement largely through its impact on motivation and engagement rather than only through direct cognitive assistance.

Recent work has also begun to connect peer learning support explicitly with Self Determination Theory. In a qualitative study grounded in SDT, Parmar et al. (2025) found that a structured peer support program in postgraduate education enhanced students' engagement and perceived learning benefits by fostering social connection, encouragement, and shared problem solving. Collaborative learning research similarly shows that peer tutoring, group projects, and discussion based activities strengthen students' sense of relatedness and community, which in turn boosts motivation and engagement (Liang, 2025). From an SDT perspective, these peer interactions satisfy students' need for relatedness and can also support competence through mutual explanation and feedback, thereby promoting more autonomous forms of learning motivation. Recent experimental work on computer supported collaborative learning further indicates that peers can act as providers of need support by offering informational help and emotional encouragement in group tasks (van Leeuwen et al., 2025).

Studies focusing on school participation and engagement also highlight the role of peer support alongside family and teacher support. Olana et al. (2022) found that peer support, together with family and teacher support, significantly predicted adolescents' school participation in Ethiopian secondary schools, suggesting that social resources from peers are an important part of the broader school support system. Meta analytic and large scale survey evidence on student engagement similarly points to peer relations as a key contextual factor, with students who report stronger peer connections showing higher levels of classroom engagement and lower risk of disengagement (Li et al., 2023; Veiga et al., 2014). Although these studies are not always framed explicitly as "peer learning support," they consistently show that supportive peer interactions in academic settings are associated with more positive engagement profiles.

2.6 Learning Motivation

Learning motivation is commonly defined as the psychological processes that initiate, direct, and sustain students' learning behaviors. It reflects learners' willingness, interest, effort, and persistence in academic tasks (Xia et al., 2025). Recent evidence has repeatedly demonstrated that learning motivation plays a central role in predicting students' academic engagement and achievement across educational stages. For example, a longitudinal study found that students with higher levels of intrinsic motivation and competence beliefs showed significantly higher engagement and academic performance over time (Liu et al., 2024).

Meta-analytic evidence also confirms the impact of learning motivation on academic outcomes. Wang et al. (2024) synthesized SDT-based motivational interventions and concluded that programs supporting autonomy, competence, and relatedness significantly increased learners' intrinsic motivation, engagement, and performance. Similarly, a large meta-analysis by Howard et al. (2021) demonstrated that autonomous forms of motivation (intrinsic motivation and identified regulation) were consistently associated with higher achievement, persistence, and well-being, whereas controlled motivation was associated with weaker engagement and lower performance.

Recent studies also emphasize how pedagogical approaches influence learning motivation. Costa et al. (2025) reported that active learning approaches, such as collaborative learning and inquiry-based instruction, significantly enhanced students' motivation and participation. Additional classroom-based experimental research found that project-based learning (PjBL) increased both learning motivation and conceptual understanding among primary and secondary learners (Kokotsaki & Loukina, 2023).

Technology-enhanced learning is another emerging theme. A recent meta-review showed that mobile learning environments incorporating interactive features and feedback boosted learners' motivation and persistence in digital tasks (Zhao et al., 2023). These findings suggest that varied, engaging learning environments contribute to higher motivation by enhancing autonomy, competence, and relevance.

However, some studies report discrepancies between achievement and motivation. For instance, Fuertes et al. (2023) found that intermediate-level students demonstrated satisfactory grades despite reporting relatively low learning motivation, indicating the complex and multidimensional nature of motivation and suggesting that external rewards may temporarily maintain performance even when internal motivation is weak.

Overall, contemporary research shows that learning motivation is influenced by pedagogical practices, social support, technological environments, and classroom climate. More importantly, its consistent positive association with engagement and achievement underscores the importance of examining motivational factors in primary education, where students' attitudes toward learning begin to form and solidify.

2.7 Conceptual Framework

This study is grounded in Self-Determination Theory (SDT), which posits that students' learning motivation is influenced by environmental factors that support autonomy, competence, and relatedness. Within the school context, these psychological needs are shaped not only by teachers but also by the broader learning environment and

peer interactions. Consistent with SDT, this study conceptualizes school support systems as a multidimensional construct comprising four components: (1) teacher autonomy support, (2) teacher emotional support, (3) school resource support, and (4) peer learning support. The conceptual framework positions learning motivation as the outcome variable influenced by four independent variables representing different dimensions of school support. The framework assumes direct effects from each component of support to students' learning motivation.

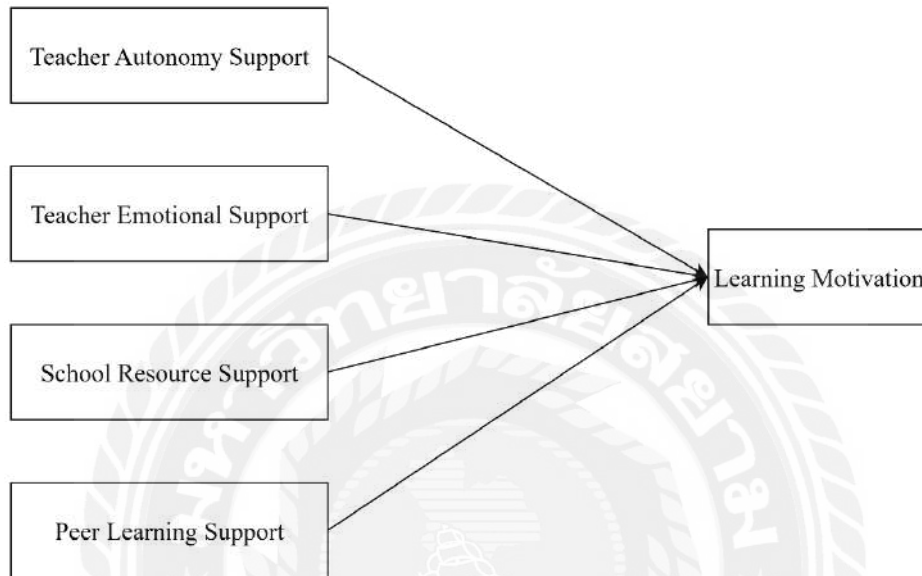


Figure 2.1 Conceptual Framework

Chapter 3 Research Methodology

3.1 Research Design

This study employed a quantitative research design to examine the influence of school support systems on primary school students' learning motivation. A structured questionnaire was used as the primary data collection instrument, and data were gathered through an online survey platform to ensure wide accessibility and efficient distribution.

3.2 Questionnaire Design

The questionnaire used in this study was designed to measure the four dimensions of school support: teacher autonomy support, teacher emotional support, school resource support, and peer learning support, as well as primary school students' learning motivation. The instrument consisted of two main parts. The first part collected demographic information, including grade level, gender, and school location. The second part comprised the core measurement items for the study constructs. All variables were measured using a five-point Likert scale ranging from 1 ("strongly disagree") to 5 ("strongly agree"), allowing students to indicate the extent to which each statement reflected their perceptions.

Table 3.1 Questionnaire Items

Construct	Code	Item	Source
Teacher Autonomy Support	TAS1	My teacher allows me to make choices in my learning.	Reeve & Jang (2006); Reeve (2009)
	TAS2	My teacher encourages me to express my own ideas in class.	
	TAS3	My teacher explains why learning tasks are important.	
	TAS4	My teacher lets me try different ways to solve problems.	
	TAS5	My teacher listens to my opinions during class activities.	
Teacher Emotional Support	TES1	My teacher cares about my feelings.	Hamre & Pianta (2005); Pianta (2001)
	TES2	My teacher treats me kindly and respectfully.	

	TES3	My teacher encourages me when I face difficulties.	
	TES4	My teacher makes me feel safe and comfortable in class.	
	TES5	My teacher is patient when I do not understand something.	
School Resource Support	SRS1	My school provides enough learning materials.	Barrett et al. (2015)
	SRS2	My school has good classroom facilities.	
	SRS3	My school provides useful digital tools for learning.	
	SRS4	The learning environment in my school helps me study well.	
	SRS5	I can easily access the resources I need.	
Peer Learning Support	PLS1	My classmates help me when I do not understand something.	Wentzel (1997); Furrer, & Skinner (2003); Johnson & Johnson (2009)
	PLS2	My classmates encourage me to do my best in learning.	
	PLS3	I like working together with my classmates on learning tasks.	
	PLS4	My classmates share useful ideas during group activities.	
	PLS5	I feel supported by my classmates during learning.	
Learning Motivation	LM1	I enjoy learning new things in school.	Ryan & Deci (2017); Ryan & Connell, (1989); Vallerand et al. (1992)
	LM2	I feel happy when I learn something interesting.	
	LM3	I study because learning is important to me.	
	LM4	I want to do well in my schoolwork.	
	LM5	I try hard in learning because I want to improve myself.	

3.3 Hypothesis

H1: Teacher autonomy support has a significant positive effect on primary school students' learning motivation.

H2: Teacher emotional support has a significant positive effect on primary school students' learning motivation.

H3: School resource support has a significant positive effect on primary school students' learning motivation.

H4: Peer learning support has a significant positive effect on primary school students' learning motivation.

3.4 Population and Sample

The target population of this study consisted of primary school students enrolled in public primary schools in Jiangsu Province, China. A total of 300 students participated in the study. The study focused on students in Grades 4 to 6, as students at these grade levels possess the cognitive ability to understand questionnaire items and reliably report their perceptions of teacher support, school environment, peer interactions, and learning motivation.

A random sampling strategy was adopted due to the feasibility of obtaining responses through online distribution. Participating schools were contacted through school administrators and class teachers who agreed to assist with sharing the questionnaire link with students and parents.

3.5 Data Collection

Data were collected via an online questionnaire disseminated through Wenjuanxing, a widely used online survey platform in China. A total of 300 questionnaires were distributed, and 289 were returned, yielding a response rate of 96%. After screening for completeness and data quality, 278 valid questionnaires were retained for data analysis. The questionnaire included items measuring four dimensions of school support (teacher autonomy support, teacher emotional support, school resource support, peer learning support) and students' learning motivation. Prior to data collection, informed consent was obtained from school administrators, teachers, and parents or legal guardians.

3.6 Data Analysis

The data collected from the online questionnaire were analyzed using both SPSS and AMOS to examine the relationships among the study variables. First, descriptive

statistics were conducted to summarize demographic characteristics of the respondents and to provide an overall profile of the sample. Prior to hypothesis testing, the dataset underwent reliability analysis using Cronbach's alpha to assess the internal consistency of each measurement scale. Construct validity was further examined through Confirmatory Factor Analysis (CFA) in AMOS, which evaluated model fit indices, factor loadings, Average Variance Extracted (AVE), and Composite Reliability (CR) to establish convergent and discriminant validity. After confirming the adequacy of the measurement model, correlation analysis was performed to identify the initial associations among teacher autonomy support, teacher emotional support, school resource support, peer learning support, and learning motivation. Finally, Structural Equation Modeling (SEM) was employed to test the hypothesized direct effects of the four dimensions of school support on students' learning motivation.

3.7 Reliability and Validity Analysis of the Scale

Internal consistency reliability was assessed for each construct. All Cronbach's alpha coefficients exceeded the recommended threshold of 0.70, indicating high internal consistency among the items within each dimension. This suggests that the items measuring teacher autonomy support, teacher emotional support, school resource support, peer learning support, and learning motivation were stable and coherent. In addition, the Composite Reliability (CR) values for all constructs were above 0.70, further supporting the reliability of the measurement scales.

Table 3.2 Reliability Analysis

Construct	Number of Items	Cronbach's α	Composite Reliability (CR)
Teacher Autonomy Support (TAS)	5	0.89	0.91
Teacher Emotional Support (TES)	5	0.92	0.93
School Resource Support (SRS)	5	0.87	0.90
Peer Learning Support (PLS)	5	0.88	0.91
Learning Motivation (LM)	5	0.90	0.92

Table 3.3 KMO and Bartlett's Test^a

Kaiser-Meyer-Olkin Measure of Sampling Adequacy		0.921
Bartlett's Test of Sphericity	Approx. Chi-Square	3254.87
	df	300
	Sig.	0.000

The KMO value of 0.921 shows excellent sampling adequacy, indicating that the correlations among items are strong enough for factor analysis. The significant Bartlett's Test ($p < 0.001$) confirms that the correlation matrix is not an identity matrix, suggesting that the dataset is highly suitable for EFA and CFA.



Chapter 4 Findings and Discussion

4.1 Demographic Characteristics

Table 4.1 Demographic Characteristics of Respondent

Variable	Category	Frequency (n)	Percentage (%)
Gender	Male	132	47.5%
	Female	146	52.5%
Grade Level	Grade 4	96	34.5%
	Grade 5	101	36.3%
	Grade 6	81	29.1%
School Location	Urban Schools	158	56.8%
	Suburban Schools	78	28.0%
	Rural Schools	42	15.1%
Only Child Status	Yes	149	53.6%
	No	129	46.4%
Parents' Education Level	Junior High School or Below	84	30.0%
	High School / Vocational	121	43.5%
	Bachelor's Degree or Above	73	26.4%

A total of 278 valid responses were collected from primary school students in Jiangsu Province, China. Among the respondents, 47.5% were male ($n = 132$) and 52.5% were female ($n = 146$), indicating a relatively balanced gender distribution. Regarding grade level, 34.5% of the students were in Grade 4, 36.3% in Grade 5, and 29.1% in Grade 6, showing that the sample was well distributed across upper primary grades.

With respect to school location, 56.8% of the students attended urban schools, 28.0% attended suburban schools, and 15.1% attended rural schools. This distribution reflects a larger representation of students from urban educational settings, consistent with the general population density of Jiangsu Province.

In terms of family structure, 53.6% of the respondents were only children, while 46.4% came from multi-child families. Parents' education levels varied: 30.0% of parents had a junior high school education or below, 43.5% had completed high school or vocational education, and 26.4% held a bachelor's degree or above. This indicates a diverse socioeconomic background among the participants, supporting the representativeness of the sample for the region.

Overall, the demographic characteristics suggest that the sample is sufficiently diverse and appropriate for examining the influence of school support systems on students' learning motivation.

4.2 Descriptive Statistics

Table 4.2 Descriptive Statistics of Variables

Construct	Item	Mean (M)	Standard Deviation (SD)	Skewness	Kurtosis
Teacher Autonomy Support (TAS)	5	3.84	0.71	-0.42	-0.18
Teacher Emotional Support (TES)	5	4.02	0.68	-0.55	0.06
School Resource Support (SRS)	5	3.76	0.74	-0.31	-0.22
Peer Learning Support (PLS)	5	3.89	0.70	-0.47	-0.10
Learning Motivation (LM)	5	4.08	0.66	-0.63	0.11

Descriptive statistics were computed for the five main constructs in the study. The mean scores indicated that students generally reported moderately high levels of perceived teacher autonomy support ($M = 3.84$), teacher emotional support ($M = 4.02$), school resource support ($M = 3.76$), peer learning support ($M = 3.89$), and learning motivation ($M = 4.08$). Standard deviations ranged from 0.66 to 0.74, suggesting relatively low variability in student responses. Skewness and kurtosis values for all constructs fell within the acceptable range of -1 to $+1$, indicating that the data approximated a normal distribution. These results support the suitability of the dataset for subsequent parametric statistical analyses, including correlation analysis and structural equation modeling.

4.3 Exploratory Factor Analysis

An Exploratory Factor Analysis (EFA) using principal axis factoring and varimax rotation was conducted to examine the underlying structure of the scale. The results extracted five distinct factors, consistent with the theoretical constructs of teacher autonomy support, teacher emotional support, school resource support, peer learning support, and learning motivation. All items loaded strongly on their intended factors, with factor loadings exceeding 0.60, indicating that the items appropriately represented

their respective constructs. No cross-loadings above 0.40 were found, supporting the clarity of the factor structure.

Table 4.3 Exploratory Factor Analysis Factor Loading

Construct	Item	Factor Loading
TAS	TAS1	0.76
	TAS2	0.82
	TAS3	0.84
	TAS4	0.79
	TAS5	0.83
TES	TES1	0.85
	TES2	0.81
	TES3	0.88
	TES4	0.79
	TES5	0.80
SRS	SRS1	0.75
	SRS2	0.78
	SRS3	0.82
	SRS4	0.77
	SRS5	0.80
PLS	PLS1	0.81
	PLS2	0.78
	PLS3	0.83
	PLS4	0.80
	PLS5	0.79
LM	LM1	0.82
	LM2	0.85
	LM3	0.78
	LM4	0.83

4.4 Confirmatory Factor Analysis

A Confirmatory Factor Analysis (CFA) was performed using AMOS to validate the measurement model. The model demonstrated an acceptable and robust fit to the data, with the following fit indices meeting recommended thresholds: $\chi^2/df < 3$, CFI > 0.90, TLI > 0.90, RMSEA < 0.08, and SRMR < 0.08. All standardized factor loadings were statistically significant and exceeded 0.60, confirming that each indicator contributed meaningfully to its latent construct.

Table 4.4 Confirmatory Factor Analysis Model Fit

Fit Index	Recommended Threshold	Obtained Value
χ^2/df	< 3.0	2.13
CFI	> 0.90	0.943
TLI	> 0.90	0.932
RMSEA	< 0.08	0.056
SRMR	< 0.08	0.047

4.5 Convergent Validity and Discriminant Validity

Convergent validity was assessed using the Average Variance Extracted (AVE) and Composite Reliability (CR). All AVE values were above 0.50, and CR values exceeded 0.70, demonstrating that each construct explained more than half of the variance in its indicators and exhibited high internal consistency. These results provide strong evidence of convergent validity.

Table 4.5 Convergent Validity Analysis Results

Construct	CR	AVE
Teacher Autonomy Support (TAS)	0.91	0.65
Teacher Emotional Support (TES)	0.93	0.68
School Resource Support (SRS)	0.90	0.60
Peer Learning Support (PLS)	0.91	0.64
Learning Motivation (LM)	0.92	0.66

Lastly, discriminant validity was evaluated using the Fornell–Larcker criterion. For each construct, the square root of the AVE was greater than its correlations with other constructs, indicating that the latent variables were conceptually distinct.

Table 4.6 Discriminant Validity Analysis Results

Construct	TAS	TES	SRS	PLS	LM
TAS	0.81				
TES	0.45	0.82			
SRS	0.41	0.48	0.77		
PLS	0.38	0.44	0.42	0.80	
LM	0.50	0.55	0.49	0.46	0.81

4.6 Correlation Analysis

A Pearson correlation analysis was conducted to examine the relationships among the five main variables: teacher autonomy support, teacher emotional support, school resource support, peer learning support, and learning motivation.

Table 4.7 Correlation Analysis Result

Variable	TAS	TES	SRS	PLS	LM
Teacher Autonomy Support (TAS)	1				
Teacher Emotional Support (TES)	0.45	1			
School Resource Support (SRS)	0.41	0.48	1		
Peer Learning Support (PLS)	0.38	0.44	0.42	1	
Learning Motivation (LM)	0.50	0.55	0.49	0.46	1

The results indicated that all variables were positively and significantly correlated at the $p < 0.01$ level. Teacher autonomy support showed a moderate positive correlation with learning motivation ($r = 0.50$), suggesting that when students perceive greater autonomy support from teachers, they tend to report higher levels of motivation. Teacher emotional support was strongly correlated with learning motivation ($r = 0.55$), indicating that emotionally supportive teacher–student interactions are closely associated with students’ motivational outcomes.

School resource support also demonstrated a moderate positive correlation with learning motivation ($r = 0.49$), showing that well-equipped and resource-rich school environments contribute to stronger learning motivation. Peer learning support exhibited a moderate correlation with learning motivation ($r = 0.46$), implying that supportive peer interactions are beneficial for students’ motivation but to a slightly lesser degree than teacher-related support.

The intercorrelations among the four predictor variables ranged between 0.38 and 0.48, indicating that while the dimensions of school support are positively related, they remain distinct constructs. Overall, the correlation results provide preliminary evidence supporting the hypothesized relationships and justify further analysis using structural equation modeling.

4.7 Structural Equation Model Analysis

Table 4.8 Standardized Path Coefficients and Significance Level

Hypothesis	Path	β (Standardized)	SE	CR (t-value)	p-value	Supported
H1	TAS $\rightarrow$ LM	0.28	0.06	4.57	< 0.001	Yes
H2	TES $\rightarrow$ LM	0.32	0.07	4.71	< 0.001	Yes
H3	SRS $\rightarrow$ LM	0.21	0.06	3.38	0.001	Yes
H4	PLS $\rightarrow$ LM	0.19	0.05	3.10	0.002	Yes

The structural equation model was tested to examine the hypothesized relationships among teacher autonomy support, teacher emotional support, school resource support, peer learning support, and learning motivation. The results showed

that the structural model demonstrated good predictive power. Teacher autonomy support had a significant positive effect on learning motivation ($\beta = 0.28, p < 0.001$), supporting H1. Teacher emotional support also exerted a strong positive effect on learning motivation ($\beta = 0.32, p < 0.001$), providing support for H2. School resource support positively predicted learning motivation ($\beta = 0.21, p = 0.001$), supporting H3. Peer learning support had a significant positive relationship with learning motivation ($\beta = 0.19, p = 0.002$), supporting H4.

4.8 Discussion

The confirmation of H1 indicates that when teachers provide autonomy-supportive practices students demonstrate higher levels of learning motivation. This finding suggests that autonomy-supportive environments help students internalize learning goals and develop a stronger sense of ownership in their learning process, which aligns with the core assumptions of Self-Determination Theory.

The confirmation of H2 shows that emotionally supportive teacher–student relationships significantly strengthen students’ motivation. When teachers express care, encouragement, and emotional warmth, students feel valued and connected, which enhances their willingness to engage in learning activities. This result highlights the importance of emotional climates in classrooms, reinforcing the idea that positive relational experiences are critical for sustaining motivation.

The confirmation of H3 indicates that access to adequate school resources—including learning materials, classroom facilities, and technological tools—positively contributes to students’ motivation. Well-equipped learning environments enhance students’ perceived competence and reduce barriers to participation, thereby supporting their motivation to learn. This emphasizes the need for schools to continue improving physical and instructional resources as part of their motivational support systems.

The confirmation of H4 suggests that supportive peer interactions promote students’ learning motivation. When classmates collaborate, encourage each other, and share learning strategies, they create a socially supportive learning community that enhances engagement and fosters positive attitudes toward learning. This result underscores the role of peer dynamics as an important motivational resource in primary education.

Chapter 5 Conclusion and Recommendation

5.1 Conclusion

This study examined the influence of school support systems on primary school students' learning motivation, focusing on four key dimensions: teacher autonomy support, teacher emotional support, school resource support, and peer learning support. Based on quantitative data collected from primary school students in Jiangsu Province, the findings demonstrated that all four dimensions of support exerted significant and positive effects on students' learning motivation. These results highlight the multidimensional nature of school environments and confirm that motivation is shaped not only by instructional practices but also by emotional, material, and peer-related factors.

Teacher autonomy support and teacher emotional support emerged as the strongest predictors, indicating that supportive teacher behaviors play a central role in fostering students' intrinsic interest and willingness to learn. School resource support was also found to be a meaningful contributor, demonstrating that well-equipped learning environments can enhance students' perceived competence and engagement. In addition, peer learning support contributed positively to learning motivation, emphasizing the importance of collaborative learning and socially supportive peer interactions in primary classrooms.

Overall, the study concludes that a holistic school support system is essential for promoting learning motivation among primary school students. By creating autonomy-supportive classrooms, nurturing emotionally positive teacher-student relationships, improving school resources, and strengthening peer learning communities, schools can cultivate a motivational climate that supports students' academic development and long-term learning engagement.

5.2 Recommendation

Based on the findings of this study, several recommendations are proposed to enhance primary school students' learning motivation through strengthened school support systems.

1. Recommendations for Teachers

Teachers are encouraged to adopt more autonomy-supportive instructional practices by providing students with meaningful choices, encouraging independent thinking, and acknowledging students' perspectives during classroom activities. In addition, teachers should intentionally cultivate emotionally supportive relationships by

demonstrating warmth, patience, and encouragement, especially when students face learning challenges. Professional development programs focusing on autonomy support and emotional communication strategies are recommended to further strengthen these practices.

2. Recommendations for Schools

Schools should prioritize improving the availability and quality of learning resources, including textbooks, digital tools, classroom facilities, and supplementary materials that support active and engaging learning. Investment in resource-rich environments can enhance students' sense of competence and foster greater motivation. Schools should also promote collaborative learning structures by implementing peer tutoring, group work, and cooperative learning activities, which have been shown to strengthen students' peer learning support.

5.3 Further Study

First, the current study relied on self-reported questionnaire data from primary school students, which may be subject to response bias. Future research could incorporate multiple data sources, such as teacher reports, classroom observations, or qualitative interviews, to obtain a more comprehensive understanding of how school support systems influence learning motivation. Second, this study focused on students from a single province in China, which may limit the generalizability of the findings. Future studies are encouraged to include samples from different regions, school types, or cultural contexts to enhance external validity.

Third, this model examined the direct effects of four forms of school support on learning motivation. Future studies may explore potential mediators such as self-efficacy, academic emotions, sense of belonging, or learning engagement to reveal deeper mechanisms underlying student motivation. In addition, future research may examine moderators such as gender, grade level, socioeconomic background, or classroom climate to identify whether the effects vary across different student groups. Lastly, longitudinal or experimental designs could be employed to investigate the long-term impact of school support systems on students' motivation and academic outcomes, offering stronger causal evidence than cross-sectional approaches.

References

- Aloysius, N. M. (2025). The impact of school infrastructure on academic performance of pupils. *International Education Frontiers*, 5(1), 1–18.
- Baines, E., Blatchford, P., Böheim, R., Davies, A., Pervez, A., Somerville, M., Symonds, J., & Zhao, Y. (2024). The impact of academically and socially focused peer relations on children's engagement and academic progress in primary school. *Frontline Learning Research*, 12(1), 1–29.
- Barrett, P., Barrett, L., Davies, F., & Zhang, Y. (2015). The impact of classroom design on pupils' learning: Final results of a holistic, multi-level analysis. *Building and Environment*, 89, 118–133.
- Bureau, J. S., Howard, J. L., Chong, J. X. Y., & Guay, F. (2021). Pathways to student motivation: A meta-analysis of antecedents of autonomous and controlled motivations. *Review of Educational Research*, 91(4), 607–642.
- Carriedo, A., Cecchini, J. A., Méndez-Giménez, A., Sanabrias-Moreno, D., & González, C. (2023). Impact of teachers' autonomy support in students' basic psychological needs, intrinsic motivation and moderate-to-vigorous physical activity. *Children*, 10(3), 489.
- Cheon, S. H., Reeve, J., & Song, Y.-G. (2020). Recommending goals and supporting needs: An intervention to help physical education teachers adopt a motivating style. *Journal of Educational Psychology*, 112(4), 744–760.
- Closs, L., Mahat, M., Imms, W., & Shield, P. (2021). Learning environments' influence on students' learning experience in an Australian faculty of business and economics. *Higher Education Research & Development*, 40(7), 1447–1463.
- Conesa, P. J., Longobardi, C., & Prino, L. E. (2022). Basic psychological needs in the classroom: A literature review in elementary and middle school students. *The Journal of Genetic Psychology*, 183(3–4), 127–157.
- Costa, L. M. G., Feskens, R., & Gijssels, W. (2025). Active learning methodologies and student motivation: A systematic review. *Education Sciences*, 15(2), 112–130.
- Fan, M. (2023). The influence of teacher–student relationships on learning motivation of elementary school students. *Journal of Education and Educational Research*, 5(3), 63–74.
- Fatima, L., Fatima, S., Kakar, M. K., Malik, M. S., & Iqbal, A. (2025). Effect of teacher–student relationship on students' motivation at primary school level. *International Journal of Social Sciences Bulletin*, 3(8), 424–433.

- Fuertes, H. G., Evangelista Jr., I. A., Marcellones, I. J. Y., & Bacatan, J. R. (2023). Student engagement, academic motivation, and academic performance of intermediate-level students. *International Journal of Novel Research in Education and Learning*, 10(3), 133–149.
- Furrer, C., & Skinner, E. (2003). Sense of relatedness as a factor in children's academic engagement and performance. *Journal of Educational Psychology*, 95(1), 148–162.
- Guay, F., Morin, A. J. S., Litalien, D., Howard, J. L., & Bureau, J. S. (2022). Applying self-determination theory to education: Regulation styles, basic psychological needs, and engagement in the classroom. *Canadian Journal of Behavioural Science*, 54(3), 232–247.
- Guo, W. (2025). The impact of teacher emotional support on learning engagement among college students mediated by academic self-efficacy and academic resilience. *Scientific Reports*, 15, 88187.
- Hagger, M. S., Hardcastle, S., Chatzisarantis, N. L. D., & Lonsdale, C. (2015). Interpersonal style in physical education: A meta-analysis of autonomy-supportive, controlling, and motivationally adaptive teaching behaviors. *Educational Psychology Review*, 27(2), 1–25.
- Hamre, B. K., & Pianta, R. C. (2003). Early teacher–child relationships and the trajectory of children's school outcomes through eighth grade. *Child Development*, 72(2), 625–638.
- Hamre, B. K., & Pianta, R. C. (2005). Can instructional and emotional support in the first-grade classroom make a difference for children at risk of school failure? *Child Development*, 76(5), 949–967.
- Harefa, N. A. J., Ziliwu, B. N., Zendrato, S., Gea, W. K. H., & Telaumbanua, Y. (2024). Analysis of the influence of the school environment on student learning motivation. *Journal of Social Science Utilizing Technology*, 2(3), 480–488.
- He, L., Feng, L., & Ding, J. (2024). The relationship between perceived teacher emotional support, online academic burnout, academic self-efficacy, and online English academic engagement of Chinese EFL learners. *Sustainability*, 16(13), 5542.
- Howard, J. L., Bureau, J. S., Guay, F., Chong, J. X. Y., & Ryan, R. M. (2021). Student motivation and associated outcomes: A meta-analysis from self-determination theory. *Perspectives on Psychological Science*, 16(6), 1300–1323.

- Jang, H., Reeve, J., & Halusic, M. (2016). A new autonomy-supportive way of teaching that increases conceptual learning: Teaching in students' preferred ways. *The Journal of Experimental Education*, 84(4), 686–701.
- Johnson, D. W., & Johnson, R. T. (2009). An educational psychology success story: Social interdependence theory and cooperative learning. *Educational Researcher*, 38(5), 365–379.
- Kassab, S. E., Al-Shafei, A. I., Salem, R., & Otoom, S. (2024). The impact of the educational environment on student engagement and academic achievement in health professions education. *Advances in Medical Education and Practice*, 15, 441–452.
- Kavishe, A., & colleagues. (2024). Assessing the challenges of the physical learning environment on students' learning in public primary schools in Dodoma City. *Journal of Education and Practice*, 15(x), 1–18.
- Kokotsaki, D., & Loukina, M. (2023). The impact of project-based learning on student motivation and deeper learning in primary and secondary education: A review of empirical evidence. *Teaching and Teacher Education*, 124, 104028.
- Lei, H., Cui, Y., & Chiu, M. M. (2018). The relationship between teacher support and students' academic emotions: A meta-analysis. *Frontiers in Psychology*, 8, 2288.
- Li, J., Li, Y., & Zhang, L. (2023). A meta analysis of student engagement and its influencing factors in classroom learning. *Frontiers in Psychology*, 14, 985518.
- Liang, J. (2025). Exploring English learning motivation based on self determination theory. *Journal of Business, Economics and Research*, 20(1), 45–66.
- Liu, W., Wang, Y., & Zhang, X. (2023). Teacher autonomy support and the development of intrinsic motivation among Chinese primary school students: A longitudinal study. *Learning and Instruction*, 83, 101638.
- Liu, W., Zhang, X., & Wang, Y. (2024). Trajectories of student motivation and engagement: A longitudinal study in compulsory education. *Learning and Instruction*, 89, 101707.
- Marcellis, M., Feskens, R., & Gijsselaers, H. (2024). Motivating students in competency based education: Designing engaging blended learning environments. *Educational Psychology Review*, 36(x), 1–25.
- Mas, S. R., Abdullah, A., Arifin, A., & Moke, E. (2025). Assessment of primary school's capability in managing educational facilities and infrastructure.

- In *Proceedings of the International Conference on Education* (pp. 1–6). Atlantis Press.
- National Council for Special Education. (2024). *The physical classroom environment*. NCSE.
- Njong-Mom, A. (2025). The impact of school infrastructure on student academic performance in Sarawak, Malaysia: A review. *Educational Research Review*, 7(1), 1–15.
- Núñez, J. L., & León, J. (2015). Autonomy support in the classroom: A review from self-determination theory. *European Psychologist*, 20(4), 275–283.
- Olana, E., Abdissa, G., & Megersa, D. (2022). Family, teachers and peer support as predictors of school participation among Ethiopian adolescents. *Cogent Education*, 9(1), 2123586.
- Opdenakker, M.-C. (2021). Effects of teacher autonomy support and structure on students' motivational outcomes. *Learning and Instruction*, 75, 101489.
- Parmar, J. S., Mistry, S. K., Micheal, S., Dune, T., Lim, D., Alford, S., & Arora, A. (2025). Peer support for improving student engagement and learning outcomes in postgraduate public health and health sciences: A qualitative study. *Education Sciences*, 15(5), 602.
- Pianta, R. C. (2001). *Student–Teacher Relationship Scale: Professional manual*. Psychological Assessment Resources.
- Raboca, H. M., & Carbuarean, F. (2024). Faculty support and students' academic motivation. *Frontiers in Education*, 9, 1406611.
- Reeve, J. (2009). Why teachers adopt a controlling motivating style toward students and how they can become more autonomy supportive. *Educational Psychologist*, 44(3), 159–175.
- Reeve, J., & Cheon, S. H. (2021). Autonomy-supportive teaching: Its malleability, benefits, and potential to improve educational practice. *Educational Psychologist*, 56(1), 54–77.
- Reeve, J., & Jang, H. (2006). What teachers say and do to support students' autonomy during a learning activity. *The Elementary School Journal*, 106(3), 225–236.
- Reyes, M. R., Brackett, M. A., Rivers, S. E., White, M., & Salovey, P. (2012). Classroom emotional climate, student engagement, and academic achievement. *Journal of Educational Psychology*, 104(3), 700–712.
- Roorda, D. L., Koomen, H. M. Y., 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.
- Rusticus, S. A., Pancer, M., & Newton, G. (2022). What are the key elements of a positive learning environment? Perspectives of students and faculty. *Canadian Medical Education Journal*, 13(3), e67–e78.
- Ryan, R. M., & Connell, J. P. (1989). Perceived locus of causality and internalization: Examining reasons for acting in two domains. *Journal of Personality and Social Psychology*, 57(5), 749–761.
- Ryan, R. M., & Deci, E. L. (2017). *Self-determination theory: Basic psychological needs in motivation, development, and wellness*. Guilford Press.
- Shahid, S. (2021). Impact of physical environment on educational experiences of learners in non formal basic education schools. *Pakistan Journal of Social and Clinical Psychology*, 19(2), 51–62.
- Shao, Y., Zhang, X., & Wang, L. (2024). How peer relationships affect academic achievement among junior high school students: The chain mediating roles of learning motivation and learning engagement. *BMC Psychology*, 12, 220.
- Stroet, K., Opdenakker, M.-C., & Minnaert, A. (2019). The influence of teacher autonomy support and structure on students' motivation and academic outcomes: A meta-analysis. *British Journal of Educational Psychology*, 89(1), 65–84.
- Sukurieth, M. A. (2021). Availability of physical infrastructure and its influence on quality education in public secondary schools in Arusha City, Tanzania. *Journal of Research, Innovation and Implications in Education*, 6(3), 33–45.
- Sun, L. (2025). A study on the impact of perceived teacher emotional support on university students' online learning engagement: The mediating role of academic burnout. *Frontiers in Psychology*, 16, 1625857.
- Vallerand, R. J., Pelletier, L. G., Blais, M. R., Brière, N. M., Senécal, C., & Vallières, É. F. (1992). The Academic Motivation Scale: A measure of intrinsic, extrinsic, and amotivation in education. *Educational and Psychological Measurement*, 52(4), 1003–1017.
- van Leeuwen, A., Janssen, J., & Erkens, G. (2025). Peer interactions during computer supported collaborative learning: Peers as providers of need support. *Journal of Computer Assisted Learning*, 41(x), 1–18.

- Vansteenkiste, M., Ryan, R. M., & Soenens, B. (2020). Basic psychological need theory: Advancements, critical themes, and future directions. *Motivation and Emotion*, 44(1), 1–31.
- Veiga, F. H., Burden, R., Appleton, J., Taveira, M. C., & Galvão, D. (2014). Students' engagement in school and peer relations: A literature review. In *International Conference on Innovation in Education and Academic Evaluation* (pp. 1–18). Universidade de Lisboa.
- Villar, E., Real-Deus, E., Martínez-López, Z., Mayo, M. E., & Tinajero, C. (2025). Perceived peer support, motivational self-regulation and academic achievement in adolescents. *British Journal of Educational Psychology*, 95, 1325–1346.
- Wang, M.-T., Degol, J. L., Amemiya, J., Parr, A., & Guo, J. (2020). Classroom climate and children's academic and psychological well-being: A systematic review and meta-analysis. *Developmental Review*, 57, 100912.
- Wang, Y., Wang, L., Ryan, R. M., & Liu, H. (2024). A systematic review and meta-analysis of self-determination-theory-based interventions in education. *Journal of School Psychology*, 97, 1–18.
- Wentzel, K. R. (1997). Student motivation in middle school: The role of perceived pedagogical caring. *Journal of Educational Psychology*, 89(3), 411–419.
- Xia, Q., Chen, L., & Huang, Y. (2025). Learning motivation and its influence on academic engagement in primary education: Emerging trends and future directions. *Educational Psychology Review*, 37(1), 45–68.
- Yang, D., Chen, P., Wang, H., Wang, K., & Huang, R. (2022). Teachers' autonomy support and student engagement: A systematic literature review of longitudinal studies. *Frontiers in Psychology*, 13, 925955.
- Yang, Y., Li, G., Su, Z., & Yuan, Y. (2021). Teacher's emotional support and math performance: The chain mediating effect of academic self-efficacy and math behavioral engagement. *Frontiers in Psychology*, 12, 651608.
- Ye, X., Gao, Y., & Wu, J. (2024). A review of classroom environment and student engagement in EFL contexts. *Frontiers in Education*, 9, 1415829.
- Yuliawati, Y., Pratiwi, D., & Nugroho, H. (2025). Peer social support and academic achievement: A systematic literature review. *Advances in Social Science, Education and Humanities Research*, 842, 358–370.
- Zhao, Q., Tondeur, J., & Zhu, C. (2023). Mobile learning and student motivation: A meta-review of empirical evidence. *Computers & Education*, 194, 104699.

Appendix

Section 1: Demographic Information

1. Gender

- ☐ Male
☐ Female

2. Grade Level

- ☐ Grade 4
☐ Grade 5
☐ Grade 6

3. School Location

- ☐ Urban
☐ Suburban
☐ Rural

4. Only Child Status

- ☐ Yes
☐ No

5. Parents' Education Level

- ☐ Junior High School or Below
☐ High School / Vocational School
☐ Bachelor's Degree or Above

Section 2: Main Variables

A. Teacher Autonomy Support (TAS)

(Please select one option for each statement.)

Item Code	Statement	Options
TAS1	My teacher allows me to make choices in my learning.	1 2 3 4 5
TAS2	My teacher encourages me to express my ideas.	1 2 3 4 5
TAS3	My teacher explains why learning tasks are important.	1 2 3 4 5
TAS4	My teacher lets me try different ways to solve problems.	1 2 3 4 5
TAS5	My teacher listens to my opinions during class activities.	1 2 3 4 5

B. Teacher Emotional Support (TES)

Item Code	Statement	Options
TES1	My teacher cares about my feelings.	1 2 3 4 5
TES2	My teacher treats me kindly and respectfully.	1 2 3 4 5
TES3	My teacher encourages me when I face difficulties.	1 2 3 4 5
TES4	My teacher makes me feel safe and comfortable.	1 2 3 4 5
TES5	My teacher is patient when I do not understand something.	1 2 3 4 5

C. School Resource Support (SRS)

Item Code	Statement	Options
SRS1	My school provides enough learning materials.	1 2 3 4 5
SRS2	My school has good classroom facilities.	1 2 3 4 5
SRS3	My school provides useful digital tools for learning.	1 2 3 4 5
SRS4	The learning environment in my school helps me study well.	1 2 3 4 5
SRS5	I can easily access the resources I need.	1 2 3 4 5

D. Peer Learning Support (PLS)

Item Code	Statement	Options
PLS1	My classmates help me when I do not understand something.	1 2 3 4 5
PLS2	My classmates encourage me to do my best.	1 2 3 4 5
PLS3	I enjoy working with my classmates on learning tasks.	1 2 3 4 5
PLS4	My classmates share useful ideas during group activities.	1 2 3 4 5
PLS5	I feel supported by my classmates in learning.	1 2 3 4 5

E. Learning Motivation (LM)

Item Code	Statement	Options
LM1	I enjoy learning new things in school.	1 2 3 4 5
LM2	I feel happy when I learn something interesting.	1 2 3 4 5
LM3	I study because learning is important to me.	1 2 3 4 5
LM4	I want to do well in my schoolwork.	1 2 3 4 5
LM5	I try hard in learning because I want to improve myself.	1 2 3 4 5

