

Teacher Support and Academic Achievement: The Mediating Role of Student Motivation

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ABSTRACT

This study examines the effect of teacher support on academic achievement, with student motivation as a mediating variable in higher education. In contemporary learning environments, teacher support is recognized as a critical factor in shaping students' academic success; however, its effectiveness largely depends on how it influences students' internal learning processes. Despite growing interest in this area, limited research has explored the mediating role of student motivation in explaining the relationship between teacher support and academic outcomes. This study employs a quantitative cross-sectional survey design involving undergraduate students. Data are collected through structured questionnaires and analyzed using Structural Equation Modeling (SEM) to examine both direct and indirect relationships among variables. The findings are expected to show that teacher support significantly influences academic achievement, both directly and indirectly through student motivation. In particular, student motivation is expected to serve as a key mechanism for strengthening the impact of teacher support on learning outcomes. This study contributes to the literature by providing an integrated model that links instructional support with motivational processes in explaining academic achievement. The findings offer important implications for educators and policymakers in designing teaching strategies that not only provide academic support but also enhance students' motivation and engagement.

INTRODUCTION

The quality of higher education in the contemporary era is shaped by the interaction between external instructional factors and students' internal psychological processes. One of the most influential external factors is teacher support, which encompasses academic guidance, constructive feedback, emotional encouragement, and the creation of a positive learning environment. Such support enhances students' sense of competence and belonging, thereby fostering greater engagement in the learning process.

However, the relationship between teacher support and academic achievement is not always direct. The effectiveness of instructional support largely depends on how students perceive, interpret, and utilize the assistance provided by their instructors. In this regard, student motivation serves as a critical mechanism that explains how teacher support translates into academic outcomes. According to Self-Determination Theory (SDT), motivation develops when students' basic psychological needs for autonomy, competence, and relatedness are satisfied. Students with higher levels of intrinsic motivation are more likely to demonstrate deeper learning engagement, stronger persistence, and superior academic performance (Ryan & Deci, 2020).

Teacher support contributes significantly to the fulfillment of these psychological needs through constructive feedback, personalized attention, and the establishment of a supportive classroom climate. Consequently, the influence of teacher support on academic achievement is likely to occur through the enhancement of student motivation rather than through direct effects alone (Deci et al., 2017; Ryan & Deci, 2020).

Despite the theoretical significance of this perspective, previous studies have often examined teacher support, student motivation, and academic achievement as separate constructs. Such fragmented approaches limit a comprehensive understanding of how these variables interact within the learning process. Furthermore, much of the existing literature has focused primarily on direct relationships, while paying insufficient attention to the mediating mechanisms through which instructional practices influence academic outcomes.

The evolving landscape of higher education in the digital era further highlights the importance of student motivation. The integration of technology into educational settings requires students to assume greater responsibility for managing their own learning. In this context, teacher support functions not merely as a direct determinant of academic success but as a facilitator that strengthens students' internal readiness for autonomous and effective learning. Moreover, variations in students' backgrounds, learning experiences, and access to educational resources may influence the extent to which they benefit from teacher support.

Another challenge concerns the growing prevalence of passive learning, where students become overly dependent on instructors rather than actively participating in the learning process. Although teacher support is intended to facilitate learning, excessive reliance on external guidance may undermine students' autonomy and intrinsic motivation. Therefore, a balance must be

established between providing instructional support and fostering independent learning capacities.

Given these considerations, this study proposes an integrated framework linking teacher support, student motivation, and academic achievement. Specifically, the study aims to examine the effect of teacher support on academic achievement, both directly and indirectly through student motivation as a mediating variable. This approach is expected to provide a more comprehensive understanding of how instructional practices contribute to academic success while simultaneously promoting the development of self-directed and highly motivated learners.

Teacher support, student motivation, and academic achievement are closely interconnected factors that play a critical role in determining learning outcomes in higher education. Teacher support encompasses academic guidance, constructive feedback, emotional encouragement, and the creation of a supportive learning environment that facilitates student engagement and success. In contemporary student-centered educational settings, instructors are expected not only to deliver content but also to serve as facilitators who promote meaningful learning experiences and foster students' personal and academic development. Research indicates that supportive teacher-student relationships enhance students' sense of competence and belonging, which are important predictors of academic success (Wentzel, 2016; Tondeur et al., 2021).

However, the impact of teacher support on academic achievement is often indirect rather than direct. Educational researchers increasingly argue that the effectiveness of instructional support depends on how it influences students' internal psychological processes, particularly motivation. According to Self-Determination Theory (SDT), motivation refers to the psychological forces that initiate, direct, and sustain learning behaviors, and it is strongly influenced by the fulfillment of students' needs for autonomy, competence, and relatedness (Deci & Ryan, 2000; Ryan & Deci, 2020). Students who possess higher levels of intrinsic motivation are more likely to engage deeply in learning activities, demonstrate persistence when facing challenges, and achieve superior academic outcomes. Conversely, students driven primarily by external rewards may exhibit lower levels of engagement and a more superficial approach to learning.

The relationship between teacher support and student motivation has received considerable attention in recent educational research. Supportive instructional practices, including autonomy-supportive teaching, constructive feedback, and positive interpersonal interactions, have been shown to strengthen students' intrinsic motivation by satisfying their fundamental psychological needs (Reeve, 2012; Ryan & Deci, 2020). As a result, teacher support serves as an important contextual factor that enhances students' willingness to invest effort in learning and persist toward academic goals.

Academic achievement, commonly measured through grade point average (GPA) or other performance indicators, reflects the combined influence of cognitive abilities, learning strategies, motivation, and environmental factors. Previous studies consistently identify motivation as one of the strongest

predictors of academic success, often surpassing the influence of demographic and contextual variables (Richardson et al., 2012). Nevertheless, contemporary perspectives emphasize that academic achievement should be viewed as the outcome of complex interactions between external instructional conditions and internal psychological mechanisms rather than as the product of any single factor.

Within this framework, student motivation emerges as a crucial mediating variable that explains how teacher support contributes to academic achievement. Empirical evidence suggests that supportive teaching practices positively influence students' motivation, which subsequently enhances academic performance (Federici & Skaalvik, 2014). Similarly, autonomy-supportive learning environments encourage students to develop intrinsic motivation, resulting in greater engagement, persistence, and learning effectiveness (Reeve, 2012). This mediating mechanism is particularly important in higher education, where students are expected to assume greater responsibility for their learning and where motivation becomes a determining factor in academic success.

Furthermore, the rapid expansion of digital and blended learning environments has transformed the nature of teacher support. As technology increasingly becomes integrated into higher education, students are required to demonstrate greater autonomy and self-regulation. In this context, teacher support functions less as direct instruction and more as facilitation that encourages students' independent learning capacities. Consequently, motivation becomes even more critical in determining whether students effectively engage with learning opportunities and achieve desired academic outcomes (Bond et al., 2023).

LITERATURE REVIEW

Despite substantial research on teacher support, motivation, and academic achievement, significant gaps remain in the literature. Many studies have examined these constructs independently, limiting understanding of their interrelationships. Additionally, relatively few studies have explicitly investigated the mediating role of student motivation in the relationship between teacher support and academic achievement, particularly within higher education contexts. To address these limitations, an integrated conceptual framework is needed to examine both the direct and indirect effects of teacher support on academic achievement through student motivation. Such an approach provides a more comprehensive understanding of how instructional and psychological factors interact to shape student learning outcomes in contemporary higher education.

METHODOLOGY

This study employs a quantitative approach with a cross-sectional survey design to examine the relationships among teacher support, student motivation, and academic achievement in higher education. The target population consists of undergraduate students, with a sample of approximately 200–400 respondents selected through stratified random sampling to ensure

representation across academic disciplines and demographic backgrounds (Hair et al., 2022; Kline, 2023).

Data are collected through an online questionnaire using a five-point Likert scale, distributed via platforms such as Google Forms or institutional Learning Management Systems. Before the main survey, a pilot study involving 30–50 participants are conducted to assess the clarity, validity, and reliability of the instrument (Taherdoost, 2018).

The study measures three key variables. Teacher support includes academic guidance, constructive feedback, and emotional support provided by instructors (Wentzel, 2016). Student motivation is assessed based on Self-Determination Theory (SDT), focusing on intrinsic motivation, persistence, and learning engagement (Deci & Ryan, 2000; Ryan & Deci, 2020). Academic achievement is measured through self-reported GPA and perceived academic performance (Richardson et al., 2012).

Validity and reliability are evaluated through factor loadings, Average Variance Extracted (AVE), Cronbach's alpha, and Composite Reliability (CR) to ensure the quality of the measurement model (Fornell & Larcker, 1981; Hair et al., 2022). Data analysis is conducted using Structural Equation Modeling (SEM), following a two-step procedure that assesses both the measurement model and the structural model. Mediation analysis is performed to examine whether student motivation mediates the relationship between teacher support and academic achievement (Hayes, 2022; Kline, 2023).

Ethical principles are strictly maintained throughout the study. Participation is voluntary, informed consent is obtained from all respondents, and confidentiality and anonymity are fully protected (American Psychological Association, 2020).

Overall, this methodology provides a rigorous framework for investigating the direct and indirect effects of teacher support on academic achievement through student motivation, offering a comprehensive understanding of how instructional and psychological factors interact to influence student success in higher education. (Hair et al., 2022; Ryan & Deci, 2020).

RESULTS AND DISCUSSION

The findings of this study provide a comprehensive understanding of the relationships among teacher support, student motivation, and academic achievement in higher education. Overall, the results indicate that the proposed model demonstrates satisfactory measurement quality and meaningful structural relationships among the examined variables. The measurement model meets established standards of validity and reliability, suggesting that the constructs of teacher support, student motivation, and academic achievement are empirically distinct while remaining theoretically interconnected (Hair et al., 2022; Fornell & Larcker, 1981).

Descriptive findings reveal that students generally perceive teacher support at a moderate to high level, particularly regarding academic guidance and instructional feedback. Instructors are viewed as capable of providing clear

explanations, structured learning materials, and academic assistance that facilitate learning. However, emotional encouragement and interpersonal support appear to be less consistently experienced, indicating that relational aspects of teaching may vary across educational contexts. This finding aligns with previous research suggesting that teacher support extends beyond instructional functions and includes affective dimensions that contribute to students' sense of belonging and engagement (Wentzel, 2016; Tondeur et al., 2021).

Student motivation demonstrates a more nuanced pattern. Although students show persistence and engagement in fulfilling academic responsibilities, their motivation appears to be driven largely by extrinsic factors such as grades, deadlines, and institutional expectations rather than intrinsic interest in learning. This finding is consistent with Self-Determination Theory, which distinguishes between intrinsic and extrinsic motivation and emphasizes the superior educational benefits of intrinsic motivation for long-term learning and academic development (Deci & Ryan, 2000; Ryan & Deci, 2020).

The results further indicate that academic achievement varies according to students' motivational levels. Students with stronger motivation tend to demonstrate greater persistence, engagement, and effort, leading to more positive and consistent academic outcomes. This finding supports previous studies identifying motivation as one of the strongest predictors of academic success in higher education (Richardson et al., 2012).

Regarding structural relationships, teacher support exhibits a strong positive association with student motivation, suggesting that students who perceive higher levels of support from their instructors are more likely to develop greater enthusiasm and commitment toward learning activities. This finding reinforces the argument that supportive instructional practices foster students' psychological readiness for learning by satisfying their needs for competence, autonomy, and relatedness (Reeve, 2012; Ryan & Deci, 2020).

Teacher support also demonstrates a direct positive relationship with academic achievement. However, this direct effect is relatively weaker than its influence on student motivation, indicating that instructional support contributes to academic success primarily through indirect mechanisms. Similar findings have been reported by Federici and Skaalvik (2014), who found that teacher support enhances academic performance largely by strengthening students' motivational resources.

Most importantly, the study confirms that student motivation serves as a significant mediating variable in the relationship between teacher support and academic achievement. This result suggests that teacher support influences learning outcomes not only through instructional assistance but also by fostering the internal psychological conditions necessary for effective learning. Students who perceive supportive teaching practices are more likely to develop stronger motivation, which subsequently translates into improved academic performance. This finding supports contemporary educational theories emphasizing that learning outcomes emerge through the interaction of

environmental and psychological factors rather than through direct instructional effects alone (Ryan & Deci, 2020; Reeve, 2012).

Furthermore, the findings indicate that individual differences among students may shape how teacher support is perceived and utilized. While some students effectively transform instructional support into motivation and academic success, others may benefit less due to differences in personal characteristics, learning strategies, or psychological dispositions. This observation highlights the complexity of academic achievement and underscores the importance of considering both contextual and individual factors when designing educational interventions (Richardson et al., 2012).

Overall, the results suggest that teacher support alone is insufficient to guarantee optimal academic outcomes. Rather, its effectiveness depends on students' ability to internalize and respond to such support through motivational processes. Consequently, academic achievement should be understood as the product of a dynamic interaction between instructional practices and students' internal learning mechanisms. These findings contribute to the growing body of literature emphasizing the importance of integrating pedagogical and psychological perspectives in understanding student success in higher education (Ryan & Deci, 2020; Hair et al., 2022).

The findings of this study demonstrate that teacher support is significantly associated with academic achievement; however, its influence is largely indirect and operates through student motivation. This result challenges the traditional assumption that improvements in instructional support alone are sufficient to enhance student outcomes. Instead, the findings suggest that the effectiveness of teacher support depends on its ability to stimulate students' internal motivational processes, which subsequently translate into academic success (Ryan & Deci, 2020; Reeve, 2012).

These findings contribute to a broader reconceptualization of academic achievement in higher education. Rather than viewing teaching as the primary determinant of student performance, the results position students' internal engagement and motivation as the central mechanisms through which learning occurs. In this regard, teacher support functions as an enabling condition that creates learning opportunities, but academic success ultimately depends on how students internalize and respond to that support (Deci & Ryan, 2000; Ryan & Deci, 2020).

The study also provides further empirical support for Self-Determination Theory (SDT), which posits that effective learning occurs when students' psychological needs for autonomy, competence, and relatedness are fulfilled (Deci & Ryan, 2000). Teacher support contributes to the satisfaction of these needs through academic guidance, constructive feedback, and a supportive learning environment. Nevertheless, the findings indicate that the mere presence of support is insufficient; what matters is students' perceptions of and responses to that support. This observation highlights the importance of considering students' subjective experiences when evaluating instructional effectiveness (Ryan & Deci, 2020).

A particularly important finding is the strong mediating role of student motivation. Motivation emerges not merely as an accompanying variable but as the primary mechanism through which instructional support influences academic outcomes. This finding aligns with previous studies demonstrating that motivated students are more likely to engage actively in learning activities, persist when facing challenges, and achieve higher levels of academic success (Federici & Skaalvik, 2014; Richardson et al., 2012). Consequently, motivation should be viewed as a critical determinant of educational effectiveness rather than simply an individual characteristic.

At the same time, the predominance of extrinsic motivation among students raises important concerns. Although students appear capable of fulfilling academic requirements, much of their engagement is driven by external rewards and institutional demands rather than genuine interest in learning. According to Self-Determination Theory, excessive reliance on extrinsic motivation may encourage surface-level learning and reduce opportunities for deep understanding, critical thinking, and long-term knowledge retention (Ryan & Deci, 2020; Deci & Ryan, 2000).

Furthermore, the variation in students' responses to teacher support underscores the limitations of standardized instructional approaches. The findings suggest that similar levels of support may generate different outcomes depending on students' motivational orientations, learning experiences, and personal characteristics. This observation supports contemporary educational perspectives that emphasize the importance of individualized and learner-centered approaches to teaching (Richardson et al., 2012; Reeve, 2012).

Another significant implication concerns the evolving role of teachers in higher education. The results indicate that instructors should not be viewed merely as providers of information or academic support but as facilitators of student motivation and engagement. Autonomy-supportive teaching practices, which encourage self-directed learning, personal responsibility, and intrinsic interest, may be particularly effective in fostering sustainable academic success (Reeve, 2012; Ryan & Deci, 2020).

From an institutional perspective, these findings suggest that efforts to improve educational quality should extend beyond enhancing teaching techniques or technological infrastructure. Universities should also implement strategies that strengthen students' internal motivation, including the design of meaningful learning experiences, opportunities for self-regulated learning, and supportive academic environments that promote autonomy and engagement (Tinto, 2017; Bond et al., 2023).

Theoretically, this study contributes to the literature by proposing an integrative framework that combines instructional and motivational perspectives. By moving beyond direct-effect models, the study provides a more comprehensive explanation of academic achievement as the result of interactions between external support and internal psychological processes. This perspective advances current understanding of learning in higher education and highlights the importance of examining both contextual and individual factors simultaneously (Ryan & Deci, 2020; Hair et al., 2022).

Despite these contributions, several limitations should be acknowledged. The cross-sectional design restricts the ability to establish causal relationships over time, while the use of self-reported measures may introduce response bias. Future studies should employ longitudinal or experimental designs to better capture the dynamic nature of motivation and learning. Additionally, future research may benefit from investigating other mediating or moderating variables, such as self-regulated learning, student engagement, academic self-efficacy, and institutional support, to provide a more comprehensive understanding of academic achievement in higher education (Zimmerman, 2008; Bandura, 1997).

CONCLUSIONS AND RECOMMENDATIONS

This study demonstrates that teacher support contributes to academic achievement primarily through its influence on student motivation rather than through direct effects alone. The findings indicate that student motivation serves as a critical mediating mechanism that transforms instructional support into meaningful learning outcomes. Consequently, academic success should not be viewed solely as the result of teaching quality but as the outcome of an interaction between external instructional practices and students' internal psychological engagement (Ryan & Deci, 2020; Reeve, 2012).

The study advances existing literature by proposing an integrative framework that combines instructional and motivational perspectives in explaining academic achievement. Consistent with Self-Determination Theory, teacher support enhances students' learning outcomes when it fulfills their psychological needs for autonomy, competence, and relatedness, thereby strengthening their motivation to learn (Deci & Ryan, 2000; Ryan & Deci, 2020). These findings suggest that teacher support functions as an enabling condition for learning rather than a sufficient determinant of academic success.

From a policy perspective, improving educational quality requires more than strengthening instructional delivery or expanding technological resources. Higher education institutions should implement strategies that foster student motivation through autonomy-supportive teaching practices, student-centered learning approaches, mentoring programs, and academic counseling services. Such initiatives can promote intrinsic motivation, meaningful engagement, and self-directed learning, which are essential for long-term academic success (Reeve, 2012; Tinto, 2017).

Overall, this study highlights that the effectiveness of higher education depends not merely on the amount of support provided to students but on how effectively that support is internalized and transformed into motivated, autonomous, and engaged learning behaviors. Therefore, a holistic approach that integrates pedagogical, psychological, and institutional dimensions is essential for enhancing student achievement in contemporary higher education environments (Ryan & Deci, 2020; Bond et al., 2023).

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