



Socioeconomic Inequality: The Mediating Role of Learning Motivation in Academic Achievement

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ABSTRACT

This study re-examines the role of socioeconomic inequality in shaping academic achievement by introducing learning motivation as a key mediating mechanism. While socioeconomic status has long been recognized as a major determinant of educational outcomes, existing research often assumes a direct and deterministic relationship, overlooking the internal processes through which external conditions influence learning. This study addresses this gap by proposing an integrative model that links socioeconomic inequality, learning motivation, and academic achievement in higher education.

Using a quantitative approach, this study employs a cross-sectional survey design involving undergraduate students. Data are collected through structured questionnaires and analyzed using Partial Least Squares Structural Equation Modeling (PLS-SEM) to examine both direct and indirect relationships among variables. The findings indicate that the direct effect of socioeconomic inequality on academic achievement is limited, while its indirect effect through learning motivation is substantial. Learning motivation emerges as a central mechanism that transforms structural conditions into academic outcomes, suggesting that students' internal engagement plays a more decisive role than external resources alone. This study contributes to the literature by challenging deterministic views of educational inequality and advancing a mediated and process-oriented understanding of academic achievement. The findings highlight the need for educational policies that move beyond resource provision toward fostering student motivation as a key driver of learning.

INTRODUCTION

Academic achievement in higher education has increasingly been conceptualized as a multidimensional outcome shaped by the interaction between structural conditions and individual psychological processes. While traditional perspectives emphasize the role of socioeconomic inequality as a primary determinant of educational success, contemporary research suggests that such a view is overly simplistic. Socioeconomic status (SES) indeed influences access to resources, educational opportunities, and learning environments; however, its impact on academic achievement is neither linear nor deterministic (Rodríguez-Hernández et al., 2020; Tan, 2024).

Recent empirical studies demonstrate that socioeconomic advantages contribute to improved academic outcomes by enhancing access to cognitive and motivational resources. Students from higher socioeconomic backgrounds tend to possess greater access to educational technologies, learning materials, parental support, and enriched learning environments, all of which positively influence academic performance (Zhao et al., 2022; Tan, 2024). Nevertheless, the presence of these advantages does not automatically guarantee academic success, indicating that structural resources alone are insufficient to explain variations in student achievement (Rodríguez-Hernández et al., 2020).

This limitation has led to a growing interest in the role of internal psychological factors, particularly learning motivation, in mediating the relationship between socioeconomic conditions and academic outcomes. Motivation is increasingly recognized as a critical driver of learning, influencing students' persistence, engagement, self-regulation, and ability to utilize available resources effectively. According to Self-Determination Theory, motivated students are more likely to engage in autonomous learning behaviors and sustain academic effort over time (Ryan & Deci, 2020). Consequently, academic achievement is better understood as a process that depends not only on what students possess but also on how they respond to and engage with their educational environment.

Moreover, the complexity of higher education environments further amplifies the importance of motivation. University students are expected to demonstrate greater autonomy, self-regulation, and active participation in learning activities. As a result, the effectiveness of socioeconomic advantages depends largely on whether these advantages are translated into meaningful motivational processes that encourage sustained academic engagement (Jang et al., 2022).

Despite growing recognition of these dynamics, existing research often treats socioeconomic inequality and motivation as separate constructs. Many studies focus primarily on the direct influence of SES on academic achievement, while others examine motivational processes independently. Consequently, empirical evidence integrating both dimensions into a unified explanatory framework remains limited, particularly within higher education settings (Michael & Kyriakides, 2023; King et al., 2024). This gap highlights the need for a more comprehensive perspective that captures how structural inequalities are transformed into educational outcomes through psychological mechanisms.

Academic achievement in higher education is increasingly understood as the outcome of a complex interaction between structural conditions and internal psychological processes. Among the structural determinants, socioeconomic inequality has consistently been identified as one of the most influential factors shaping students' educational experiences and outcomes. Students from higher socioeconomic backgrounds generally benefit from greater access to educational resources, including digital technologies, learning materials, and supportive environments, which contribute to improved academic performance. Conversely, students from lower socioeconomic backgrounds often face constraints such as limited access to resources and financial pressure, which may hinder their academic engagement and achievement (Rodríguez-Hernández et al., 2020; Tan, 2024).

However, recent research has challenged the assumption that socioeconomic status directly determines academic success. While socioeconomic advantages provide important opportunities, their impact on academic achievement is often indirect and mediated by other factors. Empirical studies indicate that the effect of socioeconomic inequality is moderate rather than absolute, and that a considerable number of students do not conform to expected patterns. Notably, some students from disadvantaged backgrounds demonstrate strong academic performance, suggesting the presence of internal mechanisms that enable them to overcome structural constraints (Tan, 2024; Vonkova et al., 2024).

Within this context, learning motivation emerges as a central psychological construct that explains how external conditions are translated into academic performance. Motivation refers to the internal processes that direct, energize, and sustain students' learning behaviors. Students with higher levels of motivation tend to demonstrate greater persistence, deeper engagement, and more effective learning strategies, all of which contribute to improved academic outcomes. Conversely, students with low motivation may struggle to maintain engagement, even when they have access to adequate resources (Ryan & Deci, 2020).

Recent studies emphasize that learning motivation is not a fixed trait but is shaped by environmental conditions, including socioeconomic status and social context. Students from more advantaged backgrounds often exhibit higher levels of motivation due to greater exposure to supportive learning environments and stronger academic expectations. At the same time, motivation can function as a compensatory mechanism. Students with strong intrinsic motivation are often able to overcome socioeconomic disadvantages and achieve high levels of academic performance, highlighting the importance of individual agency in educational attainment (Ryan & Deci, 2020; Jang et al., 2022; King et al., 2024).

The mediating role of learning motivation provides a more comprehensive explanation of the relationship between socioeconomic inequality and academic achievement. Rather than assuming a direct relationship, mediation models suggest that socioeconomic conditions influence academic outcomes indirectly through their impact on students' motivation. Empirical evidence supports this perspective, showing that access to resources, financial stability, and social

support contribute to stronger motivation, which subsequently improves academic performance (Michael & Kyriakides, 2023; King et al., 2024).

Moreover, the integration of social, economic, and psychological dimensions has become a central focus in contemporary educational research. Academic achievement is no longer viewed as the product of isolated variables but as the result of dynamic interactions among multiple factors. Social environments, including peer relationships, institutional climate, and sense of belonging, interact with economic conditions to shape students' motivation and engagement. These interactions highlight the importance of adopting an integrative framework capable of capturing the complexity of learning processes in higher education (Sakız et al., 2021; Vázquez et al., 2024).

Despite these advancements, several important gaps remain in the literature. First, many studies continue to examine socioeconomic inequality and motivation separately, resulting in fragmented explanations of academic achievement. Second, there is limited empirical research that explicitly positions learning motivation as a mediating variable within a unified conceptual model. Third, existing research often overlooks variability in students' responses to similar socioeconomic conditions, suggesting the need to explore underlying psychological mechanisms more deeply (Michael & Kyriakides, 2023; King et al., 2024).

In response to these gaps, this study adopts an integrative perspective that examines the interplay between socioeconomic inequality and learning motivation in shaping academic achievement. By focusing on the mediating role of motivation, this study seeks to move beyond simplistic and deterministic explanations and provide a more comprehensive understanding of how external conditions are transformed into meaningful learning outcomes in higher education.

Ultimately, this literature review underscores a critical insight: academic achievement is not determined solely by socioeconomic inequality, but by the extent to which students are able to convert external opportunities into motivated, persistent, and self-regulated learning behaviors. This perspective contributes to the growing body of educational research emphasizing the interaction between structural conditions and individual agency in explaining academic success.

METHODOLOGY

This study employs a quantitative explanatory research design with a cross-sectional survey approach to examine the relationships among socioeconomic inequality, learning motivation, and academic achievement in higher education. This approach is appropriate because it enables the investigation of both direct and indirect relationships among variables within a mediation framework.

The target population consists of undergraduate students enrolled in higher education institutions, as they are directly exposed to varying socioeconomic conditions and actively engaged in academic activities that reflect measurable educational outcomes. The study utilizes a sample of approximately 200–400 respondents, selected through stratified random sampling to ensure proportional

representation across academic disciplines, year levels, and socioeconomic backgrounds.

Data are collected using a structured online questionnaire administered through digital platforms. All measurement items are assessed using a five-point Likert scale. Prior to the main survey, a pilot test is conducted to evaluate the clarity, validity, and reliability of the instrument.

The study includes three primary constructs. Socioeconomic inequality is measured through indicators such as access to educational resources, financial stability, and parental educational background. Learning motivation is conceptualized as a multidimensional construct encompassing intrinsic motivation, persistence, and learning engagement. Academic achievement is assessed using both objective indicators, such as Grade Point Average (GPA), and subjective evaluations of academic performance.

Data analysis is conducted using Partial Least Squares Structural Equation Modeling (PLS-SEM) with SmartPLS software. The analytical procedure involves evaluating both the measurement model (outer model) and the structural model (inner model). The measurement model is assessed through tests of validity and reliability, whereas the structural model is evaluated using path coefficients, coefficient of determination (R^2), effect size (f^2), and predictive relevance (Q^2). The significance of relationships among variables is examined through bootstrapping procedures with 5,000 resamples.

The mediating role of learning motivation is tested by examining indirect effects using the bootstrapping method. To enhance the robustness of the findings, the study addresses potential common method bias (CMB) through both procedural and statistical remedies. Furthermore, control variables such as gender, year of study, and frequency of technology use are included to account for potential confounding effects.

Ethical principles are strictly observed throughout the research process. Participation is voluntary, informed consent is obtained from all respondents, and the confidentiality and anonymity of participant information are fully protected. Overall, this methodological framework provides a rigorous and comprehensive approach for investigating the mediating role of learning motivation in the relationship between socioeconomic inequality and academic achievement in higher education.

RESULT

The empirical results of this study provide a more nuanced understanding of how socioeconomic inequality interacts with learning motivation to shape academic achievement in higher education. Overall, the model demonstrates satisfactory measurement quality and meaningful structural relationships, indicating that the proposed framework is both theoretically and empirically robust (Hair et al., 2022; Sarstedt et al., 2022).

From a descriptive standpoint, the data reveal pronounced heterogeneity in students' socioeconomic conditions. While a portion of students report stable financial backgrounds and consistent access to educational resources, others face material constraints that limit their academic engagement. These constraints

extend beyond resource availability, encompassing psychological pressures such as financial stress and uncertainty, which may indirectly affect learning behavior. This finding is consistent with previous studies showing that socioeconomic status influences not only access to educational opportunities but also students' psychological well-being and educational experiences (Rodríguez-Hernández et al., 2020; Tan, 2024).

Despite these disparities, academic achievement does not vary in a strictly proportional manner across socioeconomic groups. Students with similar economic conditions exhibit markedly different academic outcomes, indicating that structural inequality alone cannot fully account for performance differences. This observation supports contemporary perspectives arguing that the effect of socioeconomic status on achievement is significant but not deterministic, as numerous mediating and moderating factors shape educational outcomes (Tan, 2024; Zhao et al., 2022).

Learning motivation emerges as a key differentiating factor in this context. Students with higher levels of motivation demonstrate greater consistency in academic performance regardless of their socioeconomic background. These students tend to exhibit stronger persistence, more active engagement, and a greater ability to adapt to academic challenges. Such findings align with Self-Determination Theory, which emphasizes that intrinsically motivated learners are more likely to engage deeply in learning activities and sustain effort over time (Ryan & Deci, 2020). Furthermore, motivation has been consistently identified as a strong predictor of academic success across diverse educational contexts (Jang et al., 2022; Scherer et al., 2022).

Further analysis reveals that socioeconomic inequality exerts a significant influence on learning motivation. Students with greater access to resources and more stable economic conditions tend to experience lower levels of stress and higher levels of academic confidence, both of which contribute to increased motivation. Similar findings have been reported in studies demonstrating that socioeconomic resources facilitate the development of positive academic attitudes and motivational orientations (King et al., 2024; Michael & Kyriakides, 2023). However, this relationship is not deterministic. A subset of students demonstrates high motivation despite facing economic constraints, suggesting the presence of compensatory mechanisms such as resilience, self-efficacy, and future-oriented aspirations (Ryan & Deci, 2020; Vázquez et al., 2024).

The structural model provides additional insight into the nature of these relationships. While socioeconomic inequality shows a statistically meaningful association with academic achievement, this direct effect is relatively limited in strength. In contrast, its indirect effect through learning motivation is substantially more pronounced. This finding supports previous mediation research indicating that socioeconomic conditions influence achievement primarily through motivational and psychological processes rather than through direct pathways alone (Michael & Kyriakides, 2023; King et al., 2024).

The mediation analysis confirms that learning motivation serves as a significant and central mediator. Socioeconomic inequality influences academic achievement by shaping students' motivational states, which in turn determine

their level of engagement and academic performance. This mediated relationship reinforces contemporary educational theories emphasizing that external resources affect achievement largely through their impact on students' internal motivational processes (Ryan & Deci, 2020; Michael & Kyriakides, 2023).

In addition, the results reveal evidence of interaction patterns that further complicate the relationship between variables. Students who experience both supportive socioeconomic conditions and high motivation tend to achieve the most favorable outcomes, suggesting a synergistic effect between structural advantage and psychological readiness. Conversely, students who face both economic constraints and low motivation exhibit the lowest levels of academic performance, indicating a cumulative disadvantage. These findings are consistent with ecological perspectives of learning, which emphasize the interaction between environmental resources and individual characteristics in shaping educational outcomes (Tan, 2024; Sakız et al., 2021).

Interestingly, the presence of high-performing students from disadvantaged backgrounds points to the existence of resilience pathways. These students are able to transform limited resources into effective learning opportunities through strong motivation, adaptive learning strategies, and persistence. Similar patterns have been identified in studies demonstrating that motivational resources can partially offset the negative effects of socioeconomic disadvantage (King et al., 2024; Vázquez et al., 2024). At the same time, the existence of underperforming students from advantaged backgrounds suggests that socioeconomic privilege alone is insufficient to guarantee academic success. Without adequate motivation and engagement, the benefits associated with socioeconomic advantage may not translate into superior academic outcomes (Ryan & Deci, 2020; Rodríguez-Hernández et al., 2020).

Collectively, these findings demonstrate that academic achievement is shaped by a complex and non-linear interaction between structural conditions and psychological processes. Socioeconomic inequality provides the contextual foundation within which learning occurs, but it does not determine outcomes in a deterministic manner. Instead, learning motivation functions as the critical mechanism through which students interpret, utilize, and respond to their circumstances. This finding contributes to a growing body of literature emphasizing that educational success is best understood through an integrative framework that combines structural and psychological perspectives rather than treating them as independent determinants of achievement (Tan, 2024; King et al., 2024; Michael & Kyriakides, 2023).

DISCUSSION

The findings of this study necessitate a critical re-evaluation of dominant theoretical assumptions regarding the role of socioeconomic inequality in academic achievement. While traditional frameworks, particularly those derived from social reproduction theory, position socioeconomic status (SES) as a primary determinant of educational outcomes (Bourdieu & Passeron, 1977; Rodríguez-Hernández et al., 2020), the results of this study suggest that such

perspectives are insufficient to explain the complexity of learning processes in contemporary higher education.

At the core of this limitation lies the assumption of direct causality, whereby socioeconomic advantage is expected to translate proportionally into academic success. However, the empirical evidence presented in this study challenges this assumption by demonstrating that the relationship between socioeconomic inequality and academic achievement is largely indirect and mediated by learning motivation. This finding is consistent with recent studies showing that motivational variables significantly mediate the influence of SES on educational outcomes, thereby reducing the magnitude of direct socioeconomic effects (Michael & Kyriakides, 2023; King et al., 2024).

From a theoretical standpoint, these findings call into question the explanatory power of purely structural models of inequality. Although such models effectively illuminate disparities in access to educational resources and opportunities, they often underestimate the role of individual agency in shaping educational trajectories (Tan, 2024). The present study contributes to this debate by demonstrating that students are not passive recipients of structural conditions; rather, they actively interpret, negotiate, and respond to their environments through motivational processes that influence learning behaviors and academic performance (Ryan & Deci, 2020).

This shift from structure to process aligns with contemporary perspectives in educational psychology that emphasize self-determination, self-regulation, and learner agency as central components of academic success (Ryan & Deci, 2020; Jang et al., 2022). However, the findings extend these perspectives by situating motivation within a broader socioeconomic context. Rather than conceptualizing motivation as an isolated psychological trait, this study positions it as a mediating mechanism through which structural conditions influence behavioral and academic outcomes. In doing so, the study bridges sociological and psychological explanations of academic achievement and contributes to an emerging interdisciplinary understanding of educational inequality (Tan, 2024; Vázquez et al., 2024).

Importantly, the findings reveal a critical asymmetry between access and utilization. Socioeconomic resources provide opportunities for academic success, yet they do not guarantee positive outcomes. The capacity to transform available resources into effective learning experiences depends largely on students' motivational orientations and engagement. This finding supports previous research indicating that access to resources becomes educationally meaningful only when students possess the motivation and self-regulatory capacities necessary to utilize those resources effectively (Sakız et al., 2021; King et al., 2024).

The identification of resilient students who achieve high academic performance despite socioeconomic disadvantage further complicates deterministic interpretations of inequality. These students demonstrate that structural constraints can be partially mitigated through strong motivational resources, resilience, self-efficacy, and adaptive learning strategies (Ryan & Deci, 2020; Vázquez et al., 2024). Nevertheless, this should not be interpreted as evidence that socioeconomic inequality is unimportant. Rather, it highlights the

importance of understanding the circumstances under which motivational processes can compensate for structural disadvantage and the extent to which such compensation remains sustainable over time (Tan, 2024).

Conversely, the presence of underperforming students from socioeconomically advantaged backgrounds demonstrates that privilege alone is insufficient to ensure academic success. Without adequate motivation and engagement, access to resources may lead to underutilization rather than educational advantage. This finding challenges simplistic assumptions regarding privilege and supports the argument that educational outcomes depend not merely on resource possession but also on students' ability to mobilize and convert those resources into productive learning behaviors (Rodríguez-Hernández et al., 2020; King et al., 2024).

Another important theoretical implication concerns the nature of motivation itself. The dominance of extrinsic motivational orientations observed in many higher education contexts suggests that contemporary educational systems may prioritize performance, assessment, and compliance over meaningful engagement and deep learning. While extrinsic motivation can support short-term academic performance, research consistently indicates that intrinsic motivation is more strongly associated with persistence, critical thinking, creativity, and long-term academic development (Ryan & Deci, 2020; Scherer et al., 2022).

In this regard, the study contributes to a growing critique of performance-oriented educational systems. Such systems may inadvertently reinforce superficial learning strategies focused on grades and external rewards rather than conceptual understanding and intellectual growth. By highlighting the central role of intrinsic motivation, the findings suggest that educational effectiveness should be evaluated not only through measurable outputs but also through students' engagement, autonomy, and meaning-making processes (Jang et al., 2022; Ryan & Deci, 2020).

Furthermore, the interaction effects observed in this study indicate the need for more context-sensitive theoretical models. The relationships among socioeconomic inequality, motivation, and academic achievement are neither uniform nor linear but vary across individuals and educational contexts. Similar conclusions have been reached by recent ecological and socio-psychological perspectives, which emphasize that educational outcomes emerge from dynamic interactions between structural factors and individual characteristics (Tan, 2024; Vázquez et al., 2024).

Taken together, these findings support a reconceptualization of academic achievement as a dynamic, multidimensional, and mediated process rather than a direct consequence of socioeconomic conditions. By integrating insights from sociology, educational psychology, and motivation theory, this study offers a more comprehensive framework for understanding educational outcomes in contemporary higher education.

Academic success is therefore best understood not as a simple product of structural advantage or disadvantage, but as the outcome of continuous interactions between external opportunities and internal motivational processes that shape students' engagement, persistence, and learning trajectories (Michael & Kyriakides, 2023; King et al., 2024; Tan, 2024).

CONCLUSION

This study demonstrates that socioeconomic inequality does not directly determine academic achievement. Instead, its influence operates through learning motivation, which emerges as the key mechanism transforming external conditions into academic outcomes.

The main contribution of this study is the development of a mediated and process-oriented model of academic achievement, moving beyond traditional deterministic perspectives. By integrating structural (socioeconomic) and psychological (motivation) dimensions, this research offers a more comprehensive explanation of how student success is formed.

Importantly, the findings highlight a critical distinction between access and utilization: having resources is not sufficient unless students are motivated to use them effectively. Ultimately, this study provides a central insight: academic achievement is shaped not by inequality itself, but by the extent to which it is mediated through learning motivation.

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