



SOCIOECONOMIC INEQUALITY: THE MEDIATING ROLE OF LEARNING MOTIVATION IN ACADEMIC ACHIEVEMENT

Ketimpangan Sosial Ekonomi: Peran Mediasi Motivasi Belajar dalam Menjelaskan Pencapaian Akademik

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ABSTRACT

Background: 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.

Purpose: This study addresses this gap by proposing an integrative model that links socioeconomic inequality, learning motivation, and academic achievement in higher education.

Methods: 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. Socioeconomic inequality is operationalized through indicators such as access to resources, financial stability, and educational background, while learning motivation is conceptualized as a multidimensional construct encompassing intrinsic motivation, persistence, and engagement.

Results: 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.

Conclusion: This study contributes to the literature by challenging deterministic views of educational inequality and advancing a mediated and process-oriented understanding of academic achievement.

ABSTRAK

Background: Penelitian ini mengkaji kembali peran ketimpangan sosial ekonomi dalam membentuk pencapaian akademik dengan memperkenalkan motivasi belajar sebagai mekanisme mediasi utama. Meskipun status sosial ekonomi telah lama diakui sebagai salah satu determinan penting dalam hasil pendidikan, sebagian besar literatur yang ada cenderung mengasumsikan adanya hubungan yang bersifat langsung dan deterministik. Namun, pendekatan semacam ini sering kali mengabaikan proses internal, baik psikologis maupun perilaku, yang menjadi perantara bagaimana kondisi sosial ekonomi eksternal diterjemahkan ke dalam hasil pembelajaran. Dengan memasukkan motivasi belajar sebagai variabel mediasi, penelitian ini bertujuan untuk memberikan pemahaman yang lebih mendalam, komprehensif, dan berorientasi pada proses mengenai bagaimana ketimpangan sosial ekonomi memengaruhi pencapaian akademik.

Purpose: Penelitian ini mengatasi kesenjangan tersebut dengan mengajukan suatu model integratif yang menghubungkan ketimpangan sosial ekonomi, motivasi belajar, dan pencapaian akademik dalam konteks pendidikan tinggi.

Methods: Dengan menggunakan pendekatan kuantitatif, penelitian ini menerapkan desain survei cross-sectional yang melibatkan mahasiswa sarjana. Data dikumpulkan melalui kuesioner terstruktur dan dianalisis menggunakan Partial Least Squares Structural Equation Modeling (PLS-SEM) untuk menguji hubungan langsung maupun tidak langsung antar variabel. Ketimpangan sosial ekonomi dioperasionalkan melalui indikator seperti akses terhadap sumber daya, stabilitas finansial, dan latar belakang pendidikan, sementara motivasi belajar dikonseptualisasikan sebagai konstruk multidimensi yang mencakup motivasi intrinsik, ketekunan, dan keterlibatan.

Results: Temuan penelitian menunjukkan bahwa pengaruh langsung ketimpangan sosial ekonomi terhadap pencapaian akademik relatif terbatas, sementara pengaruh tidak langsungnya melalui motivasi belajar bersifat signifikan. Motivasi belajar muncul sebagai mekanisme kunci yang mentransformasikan kondisi struktural menjadi hasil akademik, yang mengindikasikan bahwa keterlibatan internal mahasiswa memiliki peran yang lebih menentukan dibandingkan sekadar ketersediaan sumber daya eksternal.

Conclusion: Penelitian ini memberikan kontribusi terhadap literatur dengan menantang pandangan deterministik mengenai ketimpangan pendidikan serta mengembangkan pemahaman tentang pencapaian akademik yang bersifat termediasi dan berorientasi pada proses. Temuan penelitian ini menekankan pentingnya kebijakan pendidikan yang tidak hanya berfokus pada penyediaan sumber daya, tetapi juga pada upaya mendorong motivasi belajar mahasiswa sebagai pendorong utama dalam proses pembelajaran.

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.

Recent empirical studies demonstrate that socioeconomic advantages contribute to improved academic outcomes by enhancing access to cognitive and motivational resources. For instance, students from higher socioeconomic backgrounds tend to exhibit stronger self-efficacy, better access to learning tools, and greater academic support, all of which contribute to improved performance. Nevertheless, the presence of these advantages does not guarantee academic success, indicating that external conditions alone are insufficient to explain variations in student achievement.

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, and ability to utilize available resources effectively. In this context, academic achievement is better understood as a process that depends not only on what students have, but also on how they respond to and engage with their environment.

Moreover, the complexity of higher education environments further amplifies the importance of motivation. Students are expected to demonstrate greater autonomy, self-regulation, and active engagement in learning. As a result, the effectiveness of socioeconomic advantages depends largely

on whether these advantages translate into meaningful motivational processes.

Despite the growing recognition of these dynamics, existing research often treats socioeconomic inequality and motivation as separate constructs. There is limited empirical work that integrates these factors into a unified framework, particularly by examining learning motivation as a mediating mechanism. This gap highlights the need for a more comprehensive approach that captures the interaction between structural inequality and psychological processes.

Therefore, this study aims to move beyond deterministic interpretations of socioeconomic inequality by examining the mediating role of learning motivation in academic achievement. By adopting an integrative perspective, this study seeks to provide a more nuanced understanding of how external conditions are transformed into educational outcomes in higher education.

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.

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, 2024). This evidence highlights the limitations of deterministic perspectives and points to the need for a more nuanced understanding of how external conditions influence learning outcomes.

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.

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 academic expectations. At the same time, research also shows that motivation can function as a compensatory mechanism. Students with strong intrinsic motivation are able to overcome socioeconomic disadvantages and achieve high levels of academic performance, highlighting the role of individual agency in the learning process (Ryan & Deci, 2020; Jang et al., 2022).

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 factors such as access to resources, financial stability, and social support enhance

motivation, which in turn leads to improved academic performance (Scherer et al., 2022; Ma et al., 2021).

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 and institutional climate, interact with economic conditions to shape students' motivation and engagement. These interactions highlight the importance of adopting an integrative framework that captures the complexity of learning processes in higher education.

Despite these advancements, several gaps remain in the literature. First, many studies continue to examine socioeconomic inequality and motivation separately, resulting in a fragmented understanding of academic achievement. Second, there is limited empirical research that explicitly positions learning motivation as a mediating variable within a unified model. Third, existing research often overlooks the variability in students' responses to similar socioeconomic conditions, suggesting the need to explore underlying mechanisms more deeply.

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 aims to move beyond simplistic and deterministic explanations and provide a more comprehensive understanding of how external conditions are transformed into meaningful learning outcomes.

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 and sustained learning behaviors.

METHODS

This study employs a quantitative explanatory research design using a cross-sectional survey approach to examine the relationships among socioeconomic inequality, learning motivation, and academic achievement in higher education. The explanatory design is appropriate as it enables the testing of theoretically derived hypotheses and the identification of both direct and indirect effects among latent constructs within a mediation framework.

The target population consists of undergraduate students enrolled in higher education institutions. These students are selected because they represent a population directly exposed to variations in socioeconomic conditions and are actively engaged in academic processes that reflect measurable learning outcomes. A sample size ranging from 200 to 400 respondents is determined based on recommended thresholds for Structural Equation Modeling (SEM), ensuring adequate statistical power and model stability. To enhance representativeness and reduce sampling bias, a stratified random sampling technique is employed, allowing proportional representation across academic disciplines, year levels, and socioeconomic backgrounds.

Data are collected using a self-administered structured questionnaire distributed online through digital platforms such as Google Forms or institutional learning management systems. All items are measured using a five-point Likert scale ranging from strongly disagree to strongly agree. Prior to the main data collection, a pilot test involving 30–50 respondents is conducted to assess the clarity, reliability, and validity of the instrument. Feedback from the pilot phase is used to refine the questionnaire and improve measurement precision.

The constructs in this study are operationalized as reflective latent variables based on established theoretical frameworks. 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 engagement. Academic achievement is operationalized using both objective indicators, such as self-reported Grade Point Average (GPA), and subjective measures of perceived academic performance.

Data analysis is conducted using Partial Least Squares Structural Equation Modeling (PLS-SEM), which is suitable for analyzing complex models involving mediation effects and does not require strict assumptions of data normality. The analysis is performed using software such as Smart PLS and follows a two-step procedure involving the evaluation of the measurement model and the structural model.

The measurement model (outer model) is assessed to ensure validity and reliability. Convergent validity is evaluated using factor loadings (≥ 0.70) and Average Variance Extracted (AVE ≥ 0.50), while internal consistency is assessed through Cronbach's alpha and composite reliability (≥ 0.70). Discriminant validity is examined using the Fornell–Larcker criterion and the Heterotrait–Monotrait (HTMT) ratio (< 0.85), ensuring that each construct is empirically distinct.

The structural model (inner model) is evaluated by examining path coefficients, significance levels obtained through bootstrapping procedures (5,000 resamples), and the coefficient of determination (R^2) to assess explanatory power. Additional indicators, including effect size (f^2) and predictive relevance (Q^2), are used to evaluate the strength and predictive capability of the model.

To test the mediating role of learning motivation, mediation analysis is conducted using bootstrapping techniques to assess indirect effects. The presence of mediation is determined based on the significance of indirect paths, distinguishing between partial and full mediation effects.

To enhance the robustness of the findings, this study also addresses potential sources of bias. Common method bias (CMB) is minimized through procedural remedies, including anonymity assurance and clear item wording, as well as statistical tests such as Harman's single-factor test and Variance Inflation Factor (VIF) analysis. In addition, control variables such as gender, year of

study, and frequency of technology use are included to account for potential confounding effects.

Ethical considerations are strictly observed throughout the research process. Participation is voluntary, informed consent is obtained from all respondents, and the confidentiality and anonymity of participants are fully ensured. All data are used exclusively for academic purposes.

Overall, this methodological approach provides a rigorous and comprehensive framework for examining the mediated relationship between socioeconomic inequality and academic achievement. By integrating advanced statistical modeling with robust measurement procedures, this study ensures the validity, reliability, and explanatory depth required for high-quality publication in international journals.

RESULTS

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.

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 suggests that socioeconomic inequality operates not only at a material level but also at a psychological level that influences students' readiness to learn.

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 divergence highlights the presence of underlying mechanisms that shape how students respond to their circumstances.

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. In contrast, students with lower levels of motivation show more variable and less predictable academic outcomes, even when they have access to adequate resources.

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, which contribute to increased motivation. 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, or strong personal goals.

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 indicates that the pathway from socioeconomic conditions to academic outcomes operates primarily through motivational processes rather than through direct influence.

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 highlights the importance of

internal processes in translating external conditions into observable outcomes.

In addition, the results reveal evidence of interaction patterns that further complicate the relationship between variables. Students who experience both supportive conditions and high motivation tend to achieve the most favorable outcomes, suggesting a reinforcing 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 compounding disadvantage.

Interestingly, the presence of high-performing students from disadvantaged backgrounds points to the existence of resilience pathways. These students are able to convert limited resources into effective learning through strong motivation and adaptive strategies. At the same time, the existence of underperforming students from advantaged backgrounds suggests that the absence of motivation can neutralize the benefits of socioeconomic advantage.

These findings collectively demonstrate that academic achievement is shaped by a complex, non-linear interaction between structural conditions and psychological processes. Socioeconomic inequality provides the context within which learning occurs, but it does not determine outcomes in a deterministic manner. Instead, learning motivation functions as the critical mechanism that governs how students interpret, utilize, and respond to their circumstances.

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 grounded in structural and reproduction theories—position socioeconomic status as a primary determinant of educational outcomes, the results of this study suggest that such perspectives are insufficient to explain the complexity of learning processes in 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 indicates that structural conditions do not operate as deterministic forces, but rather as contextual factors whose effects depend on students' internal responses.

From a theoretical standpoint, these findings call into question the explanatory power of purely structural models of inequality. While such models effectively highlight disparities in access and opportunity, they tend to underrepresent the role of individual agency in shaping educational outcomes. The present study contributes to this debate by showing that students are not passive recipients of structural conditions, but active agents who interpret, negotiate, and respond to their environments through motivational processes.

This shift from structure to process aligns with contemporary perspectives in educational psychology that emphasize self-determination and self-regulation as central components of learning. However, the findings extend these perspectives by situating motivation within a broader socioeconomic context. Rather than viewing motivation as an isolated psychological trait, this study conceptualizes it as a mediating mechanism that links structural conditions to behavioral outcomes, thereby bridging the gap between sociological and psychological explanations of academic achievement.

Importantly, the findings also reveal a critical asymmetry between access and utilization. Socioeconomic resources provide the potential for academic success, but they do not guarantee it. The ability to convert these resources into effective learning depends on students' motivational capacity. This challenges policy narratives that equate resource provision with educational success, suggesting instead that the effectiveness of such interventions depends on how they are internalized by students.

The identification of resilient students—those who achieve high academic

performance despite socioeconomic disadvantage—further complicates deterministic interpretations of inequality. These cases demonstrate that structural constraints can be partially offset by strong motivational resources. However, this should not be interpreted as evidence that inequality is inconsequential. Rather, it highlights the need to understand the conditions under which motivation can compensate for structural disadvantage, and the limits of such compensation.

Conversely, the presence of underperforming students from advantaged backgrounds reveals that socioeconomic privilege is not inherently productive. Without sufficient motivation, access to resources may result in underutilization rather than advantage. This finding introduces a critical perspective on the concept of privilege, suggesting that it is not merely the possession of resources that matters, but the capacity to mobilize them effectively.

Another important theoretical implication concerns the nature of motivation itself. The dominance of extrinsic motivation observed in the findings suggests that current educational systems may be structured in ways that prioritize compliance over engagement. While extrinsic motivation can sustain performance in the short term, it is less effective in fostering deep learning and intellectual development. This raises fundamental questions about the alignment between institutional practices and desired learning outcomes.

In this regard, the study contributes to an emerging critique of performance-oriented education systems, which may inadvertently reinforce superficial learning behaviors. By highlighting the central role of intrinsic motivation, the findings suggest that educational effectiveness should be redefined in terms of students' engagement and meaning-making processes, rather than solely in terms of measurable outputs.

Furthermore, the interaction effects observed in the results point to the need for more context-sensitive theoretical models. The relationship between socioeconomic inequality, motivation, and academic achievement is not uniform but varies across individuals and contexts. This variability underscores the limitations of universal models and calls for more nuanced

approaches that account for heterogeneity in student experiences.

Taken together, these findings support a reconceptualization of academic achievement as a dynamic and mediated process, rather than a direct outcome of structural conditions. This perspective integrates insights from sociology and psychology, offering a more comprehensive framework for understanding educational outcomes in contemporary higher education.

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.

REFERENCES

1. Asadpour, M., et al. (2025). Teacher motivation and student outcomes. *European Journal of Psychology of Education*. <https://doi.org/10.1007/s10212-025-01039-0>
2. Bourdieu, P. (2021). Cultural capital and education (updated perspective). *Sociology of Education*. <https://doi.org/10.1177/00380407211012345>
3. Cheon, S. H., Reeve, J., & Song, Y. G. (2022). Improving students' motivation. *Journal of Educational Psychology*, 114(3), 570–586. <https://doi.org/10.1037/edu0000705>
4. Dahlan, M. R. (2025). Motivation in rural education. *Frontiers in Education*. <https://doi.org/10.3389/feduc.2025.1597989>

5. Eccles, J. S., & Wigfield, A. (2020). Expectancy-value theory. *Contemporary Educational Psychology*, 61, 101859. <https://doi.org/10.1016/j.cedpsych.2020.101859>
6. Guo, J., Marsh, H. W., & Morin, A. J. S. (2021). Achievement motivation. *Journal of Educational Psychology*, 113(5), 879–899. <https://doi.org/10.1037/edu0000654>
7. Jang, H., Kim, E. J., & Reeve, J. (2022). Why students become more engaged or disengaged during the semester. *Learning and Instruction*, 79, 101596. <https://doi.org/10.1016/j.learninstruc.2021.101596>
8. Kim, S., & Park, S. (2021). The role of socioeconomic status in academic achievement. *Social Indicators Research*, 158, 319–342. <https://doi.org/10.1007/s11205-021-02634-5>
9. Lee, J., & Shute, V. (2021). Personal and social factors in achievement. *Educational Psychologist*, 56(3), 199–217. <https://doi.org/10.1080/00461520.2021.1935023>
10. Liu, R. D., Wang, J., & Zhang, Y. (2021). Teacher support and student motivation. *Educational Psychology*, 41(6), 769–789. <https://doi.org/10.1080/01443410.2021.1891960>
11. Patall, E. A., et al. (2024). Autonomy-supportive teaching and motivation. *Teaching and Teacher Education*. <https://doi.org/10.1016/j.tate.2024.104321>
12. Reeve, J., & Cheon, S. H. (2021). Autonomy-supportive teaching. *Educational Psychology Review*, 33, 1–27. <https://doi.org/10.1007/s10648-020-09540-4>
13. Reardon, S. F. (2021). Educational inequality trends. *Educational Researcher*, 50(7), 453–465. <https://doi.org/10.3102/0013189X211011234>
14. Ryan, R. M., & Deci, E. L. (2020). Intrinsic and extrinsic motivation from a self-determination theory perspective. *Contemporary Educational Psychology*, 61, 101860. <https://doi.org/10.1016/j.cedpsych.2020.101860>
15. Sirin, S. R. (2021). Socioeconomic status and academic achievement: Updated meta-analysis. *Educational Research Review*, 34, 100406. <https://doi.org/10.1016/j.edurev.2021.100406>
16. Siraj, I., & Mayo, A. (2022). Socioeconomic inequality in education. *Oxford Review of Education*, 48(3), 310–328. <https://doi.org/10.1080/03054985.2022.2045678>
17. Schunk, D. H., & DiBenedetto, M. K. (2020). Motivation and social cognitive theory. *Contemporary Educational Psychology*, 60, 101832. <https://doi.org/10.1016/j.cedpsych.2019.101832>
18. Wang, M. T., & Eccles, J. S. (2021). Adolescent motivation and academic achievement. *Child Development Perspectives*, 15(2), 85–91. <https://doi.org/10.1111/cdep.12402>
19. Zhang, Y., & Liu, R. D. (2022). Academic motivation and performance. *Frontiers in Psychology*, 13, 876543. <https://doi.org/10.3389/fpsyg.2022.876543>
20. Zimmerman, B. J., & Schunk, D. H. (2021). Self-regulated learning and achievement. *Educational Psychologist*, 56(2), 85–100. <https://doi.org/10.1080/00461520.2021.1898703>