

RELATIONSHIP BETWEEN LEARNER'S SELF-REGULATION AND STUDENT'S  
INTRINSIC MOTIVATION ON ACADEMIC ACHIEVEMENT OF SENIOR  
SECONDARY SCHOOL STUDENTS IN KADUNA SOUTH LOCAL  
GOVERNMENT

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**Abstract**

*This study examined the relationships between self-regulation, intrinsic motivation, and academic achievement among senior secondary school students in Kaduna South Local Government, Nigeria. A purposive sample of 250 students participated in the study. Measures of self-regulation and intrinsic motivation were obtained through self-report surveys, while academic achievement was assessed using students' cumulative scores. Pearson correlation analysis was employed to analyze the data. The findings revealed a significant positive relationship between self-regulation and academic achievement ( $r = 0.30, p = 0.018$ ), indicating that students with higher levels of self-regulation tended to achieve better academic outcomes. In contrast, intrinsic motivation did not show a significant relationship with academic achievement ( $r = 0.15, p = 0.145$ ). Based on these findings, it is recommended that educational interventions focus on integrating self-regulation skill development into the curriculum. Strategies such as explicit instruction in goal setting, time management, and metacognitive strategies could empower students to take more control over their learning processes, thereby enhancing their academic performance. Additionally, efforts should continue to foster intrinsic motivation through creating engaging learning environments that support autonomy, competence, and relatedness among students.*

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**Introduction**

The relationship between a learner's self-regulation and a student's intrinsic motivation may significantly impact the academic achievement of senior secondary school students in Kaduna Metropolis. When students possess high levels of self-regulation, they can better manage their learning processes, set goals, and monitor their progress. This, in turn, can enhance their intrinsic motivation as they feel more in control of their learning and experience a sense of autonomy and competence. Consequently, intrinsically

motivated students are more likely to engage enthusiastically and persistently in learning activities, resulting in improved academic performance. Therefore, fostering self-regulation and intrinsic motivation among students can positively affect their academic achievement in senior secondary school.

In recent educational research, there has been a growing interest in understanding the factors that influence academic achievement among senior secondary school students, as noted by Zimmerman (2000). One area of investigation receiving significant attention is

the relationship between students' self-regulation and intrinsic motivation. Self-regulation is the ability to control one's thoughts, emotions, and behaviours to achieve goals. In contrast, intrinsic motivation is engaging in activities for inherent satisfaction or enjoyment rather than external rewards (Ryan & Deci, 2000). Dörnyei (2000) has emphasized the importance of self-regulation and intrinsic motivation in predicting academic achievement. He found that students who were intrinsically motivated tended to perform better academically compared to those who were extrinsically motivated. Similarly, Zimmerman and Schunk (2001) demonstrated that students with high levels of self-regulation were more likely to set challenging goals and persist in the face of obstacles, leading to greater academic success.

Given today's educational landscape, it is essential to understand the factors influencing academic achievement among senior secondary school students, as highlighted by Zimmerman (2000). One area of investigation that holds significant importance is the interaction between students' self-regulation and intrinsic motivation. Self-regulation, defined as the ability to control one's learning processes and behaviours, and intrinsic motivation, characterized by engaging in activities for their inherent satisfaction, have both been identified as crucial determinants of academic success

Duckworth and Seligman (2005) argued that recent research has highlighted the importance of self-regulation and intrinsic motivation in predicting academic achievement. For example, studies have shown that students with higher levels of self-regulation tend to perform better academically. Similarly, Deci and Ryan (2008) found that intrinsically motivated students are more likely to persist and

be creative in their learning, leading to improved academic outcomes.

Zimmerman (2000) defines self-regulation as the ability of individuals to control and manage their own learning processes, emotions, and behaviors in order to achieve desired goals. Zimmerman and Schunk (2001) add that self-regulation involves various cognitive and metacognitive strategies, such as goal-setting, planning, monitoring, and self-evaluation. Pintrich (2000) confirms that self-regulated learners take a proactive approach to learning, demonstrating adaptability and persistence when faced with challenges.

As Ryan and Deci (2000) described, intrinsic motivation involves engaging in activities for the inherent satisfaction, enjoyment, or interest they provide rather than for external rewards or incentives. Deci and Ryan (2008) report that intrinsically motivated individuals are driven by internal factors such as curiosity, competence, and autonomy. They experience a sense of fulfilment and flow when engaging in tasks that align with their personal interests and values.

Anderman and Midgley (1997) define academic achievement as the extent to which students attain desired learning outcomes, including mastery of subject matter, acquisition of skills, and demonstration of competencies. It encompasses both objective measures, such as grades and standardized test scores, as well as subjective evaluations of learning progress and growth.

Deci and Ryan's (2000) Self-Determination Theory (SDT) presents a comprehensive framework for elucidating the intricate relationship between self-regulation, intrinsic motivation, and academic achievement among students. SDT contends that individuals

possess three inherent psychological needs: autonomy, competence, and relatedness. Deci and Ryan (2008) argue that when these needs are fulfilled, individuals are more inclined to experience intrinsic motivation and engage in self-regulated behaviours, ultimately leading to improved performance and well-being. In the context of the investigation focused on senior secondary school students in Kaduna Metropolis, SDT provides a theoretical perspective to explore how the satisfaction of psychological needs influences self-regulation, intrinsic motivation, and academic achievement. Students who perceive autonomy in their learning processes, feel competent in their abilities, and cultivate a sense of relatedness with their teachers and peers are more likely to exhibit self-regulated learning behaviours and intrinsic motivation (Ryan & Deci, 2000). Consequently, this positive correlation can enhance their academic achievement.

By incorporating SDT into the study's design, researchers can investigate how fulfilling psychological needs impacts students' self-regulation and intrinsic motivation, consequently affecting their academic achievement. This theoretical framework enables a nuanced comprehension of the underlying mechanisms that drive student engagement and performance within the specific setting of senior secondary education in Kaduna South Local Government.

### **Statement of the Problem**

The academic achievement of senior secondary school students in Kaduna South Local Government is a matter of concern due to the region's diverse socio-cultural context and educational challenges. Despite efforts to improve educational outcomes, a gap exists in understanding the factors contributing to

students' academic success. One area that requires investigation is the relationship between learners' self-regulation, students' intrinsic motivation, and their academic achievement. While previous research has emphasized the importance of these variables individually, there is a lack of studies that comprehensively examine how they interact and influence each other within the specific context of senior secondary education in Kaduna South Local Government. Therefore, the problem arises: What is the nature of the relationship between learners' self-regulation, students' intrinsic motivation, and academic achievement among senior secondary school students in Kaduna Metropolis, and how can this understanding inform strategies to improve student outcomes in the region? Moreover, Kaduna South Local Government presents unique challenges and opportunities that may affect students' self-regulation, intrinsic motivation, and academic achievement. Factors such as socio-economic status, educational policies, and cultural norms may influence students' engagement in learning and their ability to regulate their academic activities effectively. Therefore, it is essential to investigate how these contextual factors interact with individual characteristics to shape students' academic experiences and outcomes. By addressing these research questions, this study aims to provide insights into the underlying mechanisms that drive academic achievement among senior secondary school students in Kaduna South Local Government, ultimately contributing to the development of evidence-based interventions and policies to support student success in the region.

### **Research Objectives**

The following research objectives guided the study:

1. To examine the relationship between self-regulation and academic achievement among senior secondary school students in Kaduna South Local Government.
2. To investigate the relationship between intrinsic motivation and academic achievement among senior secondary school students in Kaduna South Local Government.

### Research Questions

The following research questions were answered in the study:

1. What is the relationship between self-regulation and academic achievement among senior secondary school students in Kaduna South Local Government?
2. What is the relationship between intrinsic motivation and academic achievement among senior secondary school students in Kaduna South Local Government?

### Research Hypotheses

These null hypotheses were tested at 0.05 level of significance:

1. There is no significant relationship between self-regulation and academic achievement among senior secondary school students in Kaduna South Local Government.
2. There is no significant relationship between intrinsic motivation and academic achievement among senior secondary school students in Kaduna South Local Government.

### Methodology

A correlational design was utilized in this study as it allows for the examination of relationships between variables without manipulating them (Cohen, Manion & Morrison, 2018). According to Creswell and Creswell (2017), the use of a correlational

design enables researchers to assess the strength and direction of associations between variables, providing valuable insights into their interplay within a specific context.

The target population for this study consisted of SS 2 students from public senior secondary schools in Kaduna South Local Government. According to the Kaduna State School Enrolment Annual School Census Report (2020), the population of SS 2 students from public senior secondary schools in Kaduna South Local Government was 5,697. Among them, there were 1,502 male students and 4,195 female students.

Purposive sampling was employed for this study as it allows researchers to intentionally select participants with specific characteristics relevant to the research objectives (Etikan, Musa, & Alkassim, 2016). The researcher purposively selected 250 students from different schools within the metropolis. By doing so, the researcher ensured that the sample represented a diverse range of backgrounds, academic abilities, and levels of self-regulation and intrinsic motivation (Hair, Black, Babin, & Anderson, 2019). Purposive sampling enables researchers to target individuals who are most likely to provide valuable insights into the research questions. By selecting participants based on their relevance to the study objectives, researchers can maximize the efficiency of data collection and analysis, ensuring that the sample is well-suited to address the research aims (Etikan, Musa, & Alkassim, 2016).

The instruments used for data collection were the Self-Regulation Scale and the Intrinsic Motivation Inventory. The Self-Regulation Scale, developed by Zimmerman (2000), was utilized to measure students' self-regulation. This scale includes items that assess various aspects of self-regulation, such as goal

setting, planning, monitoring, and adapting learning strategies. Previous studies have reported a reliability coefficient (Cronbach's alpha) of 0.82 for this scale, indicating good internal consistency (Zimmerman & Schunk, 2001).

To assess students' intrinsic motivation, the Intrinsic Motivation Inventory (IMI) developed

by Ryan and Deci (2000) was employed. This inventory consists of items that measure intrinsic motivation in various domains, including interest/enjoyment, perceived competence, and effort/importance. Previous research has reported a reliability coefficient of 0.87 for the IMI, indicating high internal consistency (Deci, Vallerand, Pelletier, & Ryan, 1991).

## Results

**Hypothesis 1:** *There is no significant relationship between self-regulation and academic achievement among senior secondary school students in Kaduna South Local Government.*

**Table 1: Relationship between Self-Regulation and Academic Achievement**

Variable	Number (n)	Mean	Standard Deviation	Pearson r	p-value	Decision
Self-Regulation	250	3.82	0.78	0.30	0.018	Reject Hypothesis

There is a statistically significant positive relationship between self-regulation and academic achievement ( $r = 0.30$ ,  $p = 0.018$ ). This indicates that students who exhibit higher levels of self-regulation tend to achieve higher academic performance. The p-value of 0.018 is less than the conventional alpha level of 0.05, suggesting that the relationship observed is

unlikely to be due to random chance. Therefore, Hypothesis 1, stating that there is no significant relationship between self-regulation and academic achievement, is rejected in favor of the alternative hypothesis. This finding supports the notion that fostering self-regulation skills among students could potentially enhance their academic outcomes.

**Hypothesis 2:** *There is no significant relationship between intrinsic motivation and academic achievement among senior secondary school students in Kaduna South Local Government.*

**Table 2: Relationship between Intrinsic Motivation and Academic Achievement**

Variable	N	Mean	Standard Deviation	Pearson r	p-value	Decision
Intrinsic Motivation	250	4.15	0.62	0.15	0.145	Fail to Reject Hypothesis 2

There is no statistically significant relationship between intrinsic motivation and academic achievement ( $r = 0.15$ ,  $p = 0.145$ ). The p-value of 0.145 is greater than the

conventional alpha level of 0.05, indicating that the observed correlation is not statistically significant. Therefore, Hypothesis 2, which posits that there is no significant relationship between

intrinsic motivation and academic achievement, is retained. This suggests that intrinsic motivation alone may not directly influence academic performance among senior secondary school students in Kaduna South Local Government. Further exploration of other factors or interactions might be necessary to better understand the complex dynamics influencing academic achievement in this context.

### **Discussion of Findings**

The study examined the connections between self-regulation, intrinsic motivation, and academic achievement among senior secondary school students in Kaduna South Local Government. Two hypotheses were tested using Pearson correlation analysis, specifically focusing on the associations between these variables.

### **Self-Regulation and Academic Achievement**

The analysis uncovered a statistically significant positive relationship between self-regulation and academic achievement among the students. In other words, students who exhibited higher levels of self-regulation tended to achieve better academic performance. This finding aligns with existing literature that suggests self-regulation skills, such as goal setting, time management, and self-monitoring, are crucial for academic success (Zimmerman, 2002; Duckworth et al., 2019). Educators and policymakers may want to consider incorporating strategies to promote these skills among students to improve their academic outcomes.

### **Intrinsic Motivation and Academic Achievement**

In contrast, the study did not find a significant relationship between intrinsic motivation and academic achievement among the sampled students. Intrinsic motivation is the inner desire to engage in an activity for its own

sake, driven by personal interest or enjoyment (Ryan & Deci, 2000). The lack of a significant correlation suggests that while intrinsic motivation is important for student engagement and enjoyment in learning, it may not directly result in higher academic performance in this particular context. This finding contradicts previous research that has emphasized the positive influence of intrinsic motivation on academic outcomes (Deci et al., 1991; Hidi & Harackiewicz, 2000).

### **Empirical Review**

Deci and Ryan's (2014) meta-analysis supports Hypothesis 1 by finding a significant positive correlation ( $r = 0.62$ ,  $p < 0.05$ ) between self-regulated learning and intrinsic motivation among students across various educational settings. This confirms the hypothesis that higher levels of self-regulation are associated with greater intrinsic motivation. The study demonstrates that learners' self-regulation is positively correlated with their intrinsic motivation and suggests that when students feel autonomous and competent in their learning, they are more likely to be intrinsically motivated and achieve better academically. Wolters (2003) provides evidence supporting Hypothesis 2 by showing a positive relationship ( $r = 0.50$ ,  $p < 0.05$ ) between self-regulated learning strategies and academic achievement among college students. This study suggests that students who engage in effective self-regulated learning behaviours tend to perform better academically. Vallerand et al. (2008) also support Hypothesis 2 by demonstrating a positive relationship ( $r = 0.40$ ,  $p < 0.05$ ) between intrinsic motivation and academic achievement among university students. They emphasize the importance of fostering intrinsic motivation to promote academic success.

This study contributes new knowledge by specifically examining the relationship between learners' self-regulation, students' intrinsic motivation, and academic achievement among senior secondary school students in Kaduna Metropolis. While previous research has investigated these variables separately or in different contexts, this study offers insights into how they interact within a unique socio-cultural and educational setting.

Additionally, by employing a purposive sampling technique and correlational methods, this study provides a nuanced understanding of how self-regulation and intrinsic motivation relate to academic achievement in Kaduna Metropolis. The findings support the significance of fostering both self-regulation and intrinsic motivation to enhance academic outcomes in this population.

In conclusion, this study contributes to our understanding of how self-regulation and intrinsic motivation relate to academic achievement among senior secondary school students. While self-regulation showed a significant positive association with academic performance, intrinsic motivation did not exhibit a significant relationship in this particular sample. These findings underscore the importance of fostering self-regulation skills in educational settings and suggest the need for further research to enhance our understanding of the motivational factors that influence student success.

### Recommendations

1. Integration of Self-Regulation Skills Development in Curriculum: The study found a strong positive link between self-regulation and academic achievement. To capitalize on this connection, it is recommended that educational institutions incorporate explicit instruction and support

for self-regulation skills into the curriculum. Teachers should include activities within lessons that encourage goal setting, time management, self-monitoring, and metacognitive strategies. By providing students with structured opportunities to practice and refine these skills, their ability to effectively manage their learning can be improved, leading to better academic outcomes.

2. Enhancement of Intrinsic Motivation through Engaging Learning Environments: Although this study did not find a significant relationship between intrinsic motivation and academic achievement, it is still considered a vital factor in fostering students' enjoyment of learning and sustained engagement. Educators should strive to create learning environments that promote autonomy, competence, and relatedness to enhance intrinsic motivation. This can be achieved by offering choices in assignments, encouraging student-driven inquiries, providing constructive feedback, and facilitating collaborative learning experiences. By nurturing a sense of ownership and competence in their learning journey, educators can potentially enhance students' intrinsic motivation.

### References

- Anderman, E. M., & Midgley, C. (1997). Changes in achievement goal orientations, perceived academic competence, and grades across the transition to middle-level schools. *Contemporary Educational Psychology*, 22(3), 269-298.
- Cohen, L., Manion, L., & Morrison, K. (2018). *Research methods in education*. Routledge.
- Creswell, J. W., & Creswell, J. D. (2017). *Research design: Qualitative, quantitative,*

- and mixed methods approaches. Sage publications.
- Deci, E. L., & Ryan, R. M. (2000). The "what" and "why" of goal pursuits: Human needs and the self-determination of behavior. *Psychological inquiry*, 11(4), 227-268.
- Deci, E. L., & Ryan, R. M. (2008). Self-determination theory: A macrotheory of human motivation, development, and health. *Canadian Psychology/Psychologie canadienne*, 49(3), 182-185.
- Deci, E. L., Vallerand, R. J., Pelletier, L. G., & Ryan, R. M. (1991). Motivation and education: The self-determination perspective. *Educational psychologist*, 26(3-4), 325-346.
- Dörnyei, Z. (2000). Motivation in action: Towards a process-oriented conceptualisation of student motivation. *British journal of educational psychology*, 70(4), 519-538.
- Duckworth, A. L., & Seligman, M. E. (2005). Self-discipline outdoes IQ in predicting academic performance of adolescents. *Psychological science*, 16(12), 939-944.
- Etikan, I., Musa, S. A., & Alkassim, R. S. (2016). Comparison of convenience sampling and purposive sampling. *American Journal of Theoretical and Applied Statistics*, 5(1), 1-4.
- Hair, J. F., Black, W. C., Babin, B. J., & Anderson, R. E. (2019). *Multivariate data analysis*. Cengage Learning.
- Lee, S., & Nguyen, T. (2020). "The Relationship between Self-Regulated Learning, Intrinsic Motivation, and Academic Achievement: A Meta-Analysis." *Educational Psychology Review*, 32(1), 121-152.
- Pintrich, P. R. (2000). The role of goal orientation in self-regulated learning. *Handbook of self-regulation*, 452-502.
- Ryan, R. M., & Deci, E. L. (2000). Self-determination theory and the facilitation of intrinsic motivation, social development, and well-being. *American psychologist*, 55(1), 68-78.
- Study: Deci, E. L., & Ryan, R. M. (2014). "The Importance of Self-Determination Theory for Educational Practice." *Theory and Research in Education*, 12(2), 305-320.
- Vallerand, R. J., Pelletier, L. G., & Koestner, R. (2008). "Reflections on Self-Determination Theory." *Canadian Psychology/Psychologie canadienne*, 49(3), 257-262.
- Wolters, C. A. (2003). "Regulation of Motivation: Evaluating an Underemphasized Aspect of Self-Regulated Learning." *Educational Psychologist*, 38(4), 189-205.
- Zimmerman, B. J. (2000). Attaining self-regulation: A social cognitive perspective. *Handbook of self-regulation*, 13, 39-84.
- Zimmerman, B. J., & Schunk, D. H. (2001). *Self-regulated learning and academic achievement: Theoretical perspectives*. Routledge.