

RELATIONSHIP BETWEEN LEARNING STYLES, ACHIEVEMENT MOTIVATION, AND ACADEMIC PERFORMANCE IN ENGLISH LANGUAGE STUDIES AMONG SECONDARY SCHOOL STUDENTS IN ALIMOSHO, LAGOS STATE, NIGERIA

¹Wuraola Deborah Akeredolu & ²Ayoka Mopelola Olusakin

¹Department of Educational Foundations, University of Lagos
wuradebo1@gmail.com 08025805161

²Department of Educational Foundations, University of Lagos
08033043979

Abstract

This study examined the relationship between learning styles, achievement motivation, and academic performance of senior secondary school students in Lagos State. A descriptive survey design was employed. The population consisted of all secondary school students in Alimosho Local Government Area of Lagos State, and the sample comprised 100 Senior Secondary Class II Students selected by simple random sampling. Four (4) Senior Secondary Schools were used in the study. Senior Secondary Class II students were chosen because they were deemed academically mature enough to provide reliable responses. Data were collected using two standardised questionnaires (containing 30 and 32 items, respectively). Four hypotheses were tested using Pearson Product Moment Correlation, independent samples t-tests, and one-way Analysis of Variance (ANOVA) at the 0.05 significance level with SPSS. Findings indicated that learning styles had no significant effect on students' academic performance, whereas achievement motivation was significantly related to academic performance. Additionally, the study found no significant differences in achievement motivation across different learning style groups, and no significant gender differences in academic performance. Based on these results, it was recommended that school administrators should implement continuous assessment and reward systems to boost student's motivation. Teachers should publicly acknowledge students' efforts, and government and educational stakeholders should support instructional practices that address diverse learning style preferences.

Keywords: academic performance, achievement motivation, gender, learning styles, secondary education

Background to the study

Academic performance in secondary education in Nigeria continues to attract scholarly attention due to concerns about students' outcomes in core subjects such as English Language. For example, West African Examinations Council's performance reports for the 2024 and 2025 West African School Certificate Examination (WASSCE) sessions revealed notable trends in English Language results. In the 2024 WASSCE

outcomes, approximately 1.8 million candidates sat for the examination, and about 503,275 of them failed English Language, representing a 7.69% decline in performance compared to the previous results. The 2025 WASSCE results further showed a decline: only 38.32% of candidates achieved five credits (including English and Mathematics), which amounted to 754,545 out of 1,969,313 candidates—a 33.8%

drop from the prior year. WAEC later released corrected results for 2025, showing an improvement from an initial 38% pass (rate) to 62% after review. In sum, performance in English for (year) 2024–2025 presented significant challenges. The high failure rate in 2024 and the decline in credit passes in 2025 (even accounting for the revised improvement) indicate that much work remains. Nearly half of the examinees performed poorly, underscoring the need for further efforts to improve outcomes so that fewer students will seek alternative qualifications for higher education entry.

Researchers have therefore focused on various psychological and instructional factors that could explain differences in student achievement. Among these, achievement motivation and learning style are key variables. Achievement motivation refers to the internal drive that leads students to pursue academic goals, remain persistent in tasks, and achieve standards of excellence (Erhuvwu & Adeyemi, 2019). Motivation can be likened to an engine that propels learning: it changes students' attitudes from boredom to interest and drives them to continue learning. Students with strong achievement motivation typically adopt positive attitudes toward their studies, set clear goals, and put forth considerable effort to master subjects, often achieving higher grades than less-motivated peers (Aljaffer et al 2024). Consequently, fostering motivation is crucial, and educators must understand it deeply. Psychologist Ryan and Deci (2000), distinguish two forms of motivation: intrinsic motivation (arising from within the learner) and extrinsic motivation (driven by external factors). Intrinsic motivation refers to an internal curiosity and interest that energises the learner, whereas extrinsic motivation comes from rewards or pressures in the environment. Bontempi, (2025) refers to intrinsic motivation as something done out of natural interest in the task

engaged in, while he described extrinsic motivation as participating in a task in order to get a reward or to avoid being punished.

Learning style, on the other hand, describes an individual's preferred way of processing, organising, and retaining information. It reflects each person's characteristic strengths and preferences in learning (Lawrence, 2024). Learning styles vary between individuals and are influenced by cognitive, emotional, and environmental factors, as well as by prior experience (Taheri, 2023). Because of these differences, it is important for educators to recognise the diverse learning preferences of their students so they can incorporate effective strategies into lessons, curricula, and assessments. Understanding learning styles also help teachers tailor their lesson plans and teaching techniques (Lawrence, 2024). Although students differ in style, it is often assumed that each student possesses an inner motivation to achieve academic goals, which links the concepts of learning styles and achievement motivation (Anjala, 2025).

Recent Nigerian studies (Adeyemi & Adeyinka, 2020; Yusuf, 2021; Okeke, 2022) suggest that motivational factors strongly predict secondary school achievement. Both intrinsic and extrinsic forms of motivation play important, complementary roles in learning. As noted above, intrinsic motivation comes from a personal drive and sustained curiosity, while extrinsic factors like the prospect of high grades, fear of failure, or positive feedback can also move students from passivity to active engagement in learning. In reality, many students respond to external incentives in addition to their internal drive.

Gender differences also influence educational outcomes. In many patriarchal societies, boys are often given more challenging tasks than girls, reflecting societal expectations that can affect academic performance. Tiruneh

and Philipos, (2014) observed that families tend to hold different expectations for sons and daughters, which can later influence their academic results. Similarly, Wakuma (2024) noted that insufficient rewards and low motivation were among the factors contributing to the poorer performance of female students.

However, empirical findings regarding the influence of learning styles are inconsistent. Some educators like Hattie and O'Leary, (2025) advocate differentiated instruction based on learning preferences, whereas others (e.g., Pashler et al., 2018; Newton & Salvi, 2020) argue that learning styles have little predictive power for achievement. Given this debate, this study examined both the combined and separate effects of learning styles and achievement motivation on students' academic performance in English Studies.

Research Hypotheses

The following null hypotheses were tested in the study:

Ho1: Learning styles have no significant influence on students' academic performance.

Ho2: Achievement motivation is not significantly related to students' academic performance.

Ho3: There is no significant difference in achievement motivation among students with different learning styles.

Ho4: There is no significant gender difference in students' academic performance.

Methodology

The study used a descriptive survey design to gather both quantitative and qualitative data. The target population was all secondary school students in the Alimosho Local Government Area

of Lagos State. A sample of one hundred (100) Senior Secondary School II students was selected using simple random sampling technique. Four secondary schools were randomly chosen. These schools represent the senior secondary schools' population in the area. After randomly selecting the participants, the questionnaires were administered to the students in a controlled classroom setting. Only students who consented and were present at the time of administration completed the instruments. 25 students were randomly chosen from each of the 4 schools ($25 \times 4 = 100$). One hundred copies of the questionnaires were distributed by the researcher for the collection of data out of which ninety four (94) were finally used for the analysis of the data. The remaining copies were discarded due to incomplete information and improper filling. This translated to a response rate of 94%. This sampling approach was chosen to ensure that the sample was representative and homogeneous. Senior Secondary II students were selected because they were considered sufficiently mature to provide reliable responses.

Three research instruments were used for data collection. Achievement motivation was measured with the Achievement Motivation Inventory by Muthee and Thomas, (2009), which contains 32 items: 18 positively worded and 14 negatively worded statements. Respondents rated each item on a five-point Likert scale (1 = strongly disagree to 5 = strongly agree). The scoring was adjusted in that instead of completely agree to completely disagree, it read strongly agree and strongly disagree so that higher overall scores indicated higher levels of achievement motivation (with positively worded items scored directly and negatively worded items scored reversely). The preferred learning style of students was assessed using a modality questionnaire (Sayed, et-al, 2025). This instrument includes 30 items divided into three

sections (10 items each) corresponding to auditory, visual, and kinesthetic styles. Students responded on a three-point scale (e.g., 1 = sometimes applies, 3 = often applies). After all items were completed, each section's scores were summed. Each section's total ranged from 10 to 30, and the section with the highest total indicated the students' dominant learning style. A student who scored equally high in multiple sections was considered a multisensory learner. Additionally, the researcher developed an English Language Achievement Test (ELAT) consisting of 25 multiple-choice questions drawn from the SSS 2 English Language Test Blue Print. The selection of items were prepared based on the behavioural objectives of topics that have been taught during instructional exercises and the topics on the blue print. Content validity of the ELAT was ensured by using a table of specifications linking items to curricular objectives. All the instruments (the Achievement Motivation Inventory, the learning style questionnaire, and the ELAT) were reviewed for validity and reliability. The ELAT's internal consistency was assessed using the split-half method, and Cronbach's alpha coefficients were calculated for the two questionnaires to

ensure they reliably measured the intended constructs.

Before data collection, permission was obtained from the school authorities, and meetings were held with school administrators to schedule the survey. The researcher personally administered the copies of the questionnaire and the ELAT to the selected students and collected them immediately upon completion, resulting in a 100% response rate. However, due to wrong filling, six of them were discarded. Data analysis adopted both quantitative and qualitative techniques. The quantitative data were summarised with descriptive statistics (frequencies, means, and percentages) and presented in Tables. The four hypotheses were tested at the 0.05 level of significance using Statistical Package for Social Sciences (SPSS). Specifically, Pearson's Product Moment Correlation, independent samples t-tests, and one-way ANOVA were used for testing the hypotheses. Qualitative responses were analysed by coding common themes and constructing narrative summaries.

Results:

Descriptive Analysis of Demographic Data

Table 1 showing gender distribution

Variable	Frequency	Percent
Male	45	47.9
Female	49	52.1
Total	94	100.0

Table 1 shows that the majority of respondents (52.1%) were females while the remaining 45 respondents representing 47.9% were males.

Table 2 showing age distribution

Variable	Frequency	Percent
11-14 years	13	13.8
15-18 years	80	85.1
19-22 years	1	1.1
Total	94	100.0

Table 2 shows that 13.8% of the respondents were between 11-14 years age group; 85.1% were between 15-18 years and 1.1% were 19-22 years. Based on this output, it could be seen that most of the respondents were between the 15-18 years age group.

Hypotheses testing

Ho1: Learning styles have no significant effect on students' academic performance.

Table 3 One-way Analysis of the influence of learning styles on the academic performances of students.

Learning Styles

Group	N	Mean	SD
VISUAL	40	14.18	2.97
AUDITORY	22	13.27	2.12
KINESTHETIC	32	13.63	3.20
TOTAL	94	13.78	2.87

Source	Sum of Squares	Df	Mean Square	F	Sig.	Remark
Between Groups	12.670	2	6.335	0.763	0.469	Accept Ho
Within Groups	755.639	91	8.304			
Total	768.309	93				

$p < 0.05$, $df = 2$ & 91 , critical $F = 3.11$

Table 3 indicates a calculated F-value of 0.763 for the effect of learning styles on academic performance. This value is below the critical F-value of 3.11 ($d.f. = 2, 91, \alpha = 0.05$), so the result is not statistically significant. The null hypothesis that learning styles do not significantly influence academic performance was therefore accepted, and the alternative hypothesis was rejected. This implies that, in this sample, students' preferred learning styles had no significant impact on their academic outcomes.

Ho2: There is no significant relationship between achievement motivation and the academic performance of students in Alimosho Local Government.

Table 4: The relationship between achievement motivation in the academic performance of students. (N=94)

Variable	X	SD	Df	r-cal	r-crit
Achievement motivation	117.81	12.49	92	0.714	0.205
Academic Performance	13.78	2.87			

$p < 0.05$, $df = 186$, $r\text{-crit} = 0.195$

Table 4 shows that the calculated Pearson correlation ($r = 0.714$) is greater than the critical r value of 0.205 at d. f. = 92 and $\alpha = 0.05$. Thus, the null hypothesis (no significant relationship) was rejected, and the alternative hypothesis was accepted. In other words, achievement motivation has a significant positive relationship with students' academic performance.

Ho3: There is no significant difference in the achievement motivation of students with varying learning styles in Alimosho, Local Government

Table 5: One-way Analysis of the difference in achievement motivation between students with varying learning styles.

Source	N	Mean	SD			
VISUAL	40	115.68	11.39			
AUDITORY	22	120.40	12.98			
KINESTHETIC	32	118.69	13.38			
TOTAL	94	117.81	12.49			
Source	Sum of Squares	Df	Mean Square	F	Sig.	Remark
Between Groups	355.585	2	177.793	1.143	0.323	Reject Ho
Within Groups	14152.968	91	155.527			
Total	14508.553	93				

$p < 0.05$, $df = 2$ & 91 , critical $F = 3.11$

The ANOVA result in Table 5 yielded an F-value of 1.143 for differences in achievement motivation across the three learning style groups. This is below the critical F-value (3.11), and the p-value (0.323) is above 0.05. Therefore, the null hypothesis of no significant difference in motivation between styles was accepted, and the alternative was rejected. The implication is that students' achievement motivation did not differ significantly based on their learning style preference

H₀₄: There is no significant gender difference in students' academic performance.

Table 6: An independent t-test table showing the gender difference in the academic performance of students.

Gender	N	X	SD	Df	t-cal	t-crit
Male	45	13.91	2.79			
Female	49	13.65	2.98	92	0.433	2.00

$p < 0.05$; $df = 92$; $t\text{-crit} = 2.00$

Table 6 shows that the t-calculated value ($t\text{-cal} = 0.433$) is less than the t-critical ($t\text{-crit} = 2.00$) given 92 degrees of freedom at 0.05 level of significance. Since the calculated value was less than the critical value, consequently, the null hypothesis which states that there is no significant gender difference in the academic performance of students was accepted while the alternate hypothesis which states that there is significant gender difference in the academic performance of students was rejected. This means there is no significant difference between male and female in the academic performance of students.

Summary of findings

1. Learning styles do not significantly influence the academic performances of students.
2. There is a significant relationship between achievement motivation and the academic performance of students.
3. There is no significant difference in achievement motivation between students with varying learning styles.
4. There is no significant gender difference in the academic performance of students.

Discussion of findings

The first hypothesis which proposed that learning styles would not have a significant impact on students' academic performance was supported, while the alternative hypothesis was not upheld. In other words, the results indicate that students'

preferred learning styles do not play a major role in determining how well they do academically.

This outcome is in line with more recent studies by Rogowsky, Calhoun, and Tallal [2020] that have challenged the value of tailoring teaching to specific learning style categories. Research by Newton and Miah [2000] had repeatedly shown that labeling students as having fixed preferences, such as visual or kinesthetic, and adjusting instruction accordingly does not lead to better results (Newton & Miah, 2017; Rogowsky et-al, 2020). It appears that sticking to rigid style-based approaches may offer little real benefit for actual learning gains.

For the second hypothesis, the claim that there is no significant relationship between motivation and academic performance was not supported, leading to the acceptance of the alternative: motivation does indeed relate significantly to how students perform. Put simply, higher levels of motivation are tied to stronger academic outcomes.

This positive relationship between achievement motivation and success fits well with established ideas in motivational psychology, which highlight how students' inner drive, commitment to goals, and perseverance are key predictors of doing well in school (Schunk & DiBenedetto, 2020; Eccles & Wigfield, 2020). The significant relationship found here really shows just how important motivation can be for reaching academic goals.

Similar patterns emerged in other works. For example, Alabi (2024) pointed out that early

exposure to high-achieving role models often builds a stronger drive to succeed, whereas the opposite tends to dampen that drive. AI Shuailli (2025) also emphasised motivation as central to explaining differences in behaviour. While some people avoid making efforts, others meet expectations adequately, and still others push boundaries, sometimes in questionable ways, to gain recognition in various areas of life. Harju (2024) noted that students with stronger internal motivation profiles often progressed further in their studies, while externally driven younger learners sometimes held more unhelpful beliefs and showed less engagement. Finlapson (2025) observed that high-achieving students typically displayed much greater achievement motivation compared to those who struggled. Skaalvik and Skaalvik (2025) similarly reported a notable tie between motivation levels and overall performance.

The third hypothesis, suggesting no significant variation in achievement motivation across different learning styles, was accepted, rejecting the alternative. This means that students' drive to achieve tends to remain fairly consistent regardless of their reported learning preferences. This aligns with views from Eggen and Kauchak (2024) who described intrinsic motivation as arising from internal factors like curiosity, a desire for understanding, and a sense of growing competence. They explained that true inner drive comes from wanting to master something for its own sake because the process feels rewarding, rather than for outside rewards or approval. In essence, students pursue new knowledge when it sparks interest and satisfies personal growth needs, independent of any particular style.

Finally, the fourth hypothesis that no meaningful gender differences exist in academic performance was supported, while the alternative was rejected. This indicates that male and female

students perform at comparable levels under similar conditions.

The lack of gender-based differences points to roughly equal academic potential between boys and girls when they receive equivalent teaching and support. This echoes earlier Nigerian studies showing that gender gaps in secondary education have narrowed considerably (Adeyemi, 2019; Ibrahim, 2021). Overall, these results point toward the value of targeted efforts to boost motivation through clear goal-setting, counseling, and programmes that build persistence and engagement to help lift performance across the board for all students.

Conclusion

The findings indicate that learning styles do not exert a significant influence on students' academic performance or on their levels of achievement motivation. By contrast, achievement motivation shows a statistically significant and a positive relationship with academic performance. No significant gender differences were found in academic performance. These results position achievement motivation as a stronger predictor of academic success than learning style preferences. Educational interventions that target and strengthen students' motivational dispositions, including intrinsic drive, goal commitment, and persistence, are therefore likely to produce more substantial gains in learning outcomes than instructional adjustments based solely on learning styles.

This interpretation aligns with accumulating empirical evidence that questions the practical value of learning-styles matching strategies in classroom settings, while reinforcing the consistent and well-documented role of motivational factors in explaining variation in academic achievement.

Recommendations

The following recommendations were put forward based on the findings of this study:

- School counsellors should design more interventions focused on goal setting, rather than overemphasising learning style categorisation.
- Teachers should adopt more instructional strategies that engage all learners than those that pay attention to the students' learning styles.
- School administrators should organise different co-curricular activities to motivate students and put in place rewards for those who excel in their studies from time to time; this way, students who have low intrinsic motivation improve their performance by getting motivated extrinsically.
- More seminars and talks should be organised by non-governmental organisations on the importance of motivation in improving academic performance of students. Moreover, seminars and career fairs can play important roles in achieving this.

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