Journal of Artificial Intelligence and Digital Economy
Homepage : https://journal.antispublisher.id/index.php/JAIDE
Email : admin@antispublisher.com

e-ISSN : 3032-1077
JAIDE, Vol. 2, No. 8, August 2025
Page 68-84
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Journal of Artificial Intelligence and Digital Economy

The Effect of Self-Concept on The Academic Performance of Secondary School Students in IKOM Local Government Area of Cross Rivers State

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DOI : https://doi.org/10.61796/jaide.v2i8.1451

Sections Info
Article history:
Submitted: June 25, 2025
Final Revised: July 11, 2025
Accepted: August 30, 2025
Published: September 10, 2025
Keywords:
Self-concept
Academic performance
Gender
Science-based subjects
Arts-based subjects
Secondary schools
IKOM local government area

ABSTRACT

Objective: *This study investigated the effect of self-concept on the academic performance of secondary school students in Ikom Local Government Area of Cross River State, focusing on its relationship with academic outcomes, gender, and subject specialization.* ***Method:*** *A descriptive survey research design was employed, utilizing a validated instrument, the Self-Concept and Academic Performance Questionnaire (SCAPQ). A stratified random sampling technique selected 240 Senior Secondary School II students from six schools, with 228 valid responses analyzed. Data analysis involved descriptive statistics, Pearson Product-Moment Correlation, and independent samples t-tests at a 0.05 significance level.* ***Results:*** *Findings indicated a moderate, positive, and statistically significant relationship between self-concept and academic performance ($r = 0.462$, $p < 0.05$), while no significant differences were found across gender ($t = 1.128$, $p = 0.260$) or subject specialization ($t = 0.559$, $p = 0.577$).* ***Novelty:*** *This study contributes empirical evidence from Ikom L.G.A., highlighting self-concept as a universal academic resource that consistently supports students' performance regardless of gender or discipline, and underscores the importance of targeted interventions in enhancing students' self-beliefs for improved educational outcomes.*

INTRODUCTION

Self-concept and its effect on the academic performance of secondary school students has always held personal relevance for the researcher. From personal experience during secondary education in Nigeria, students' confidence in their academic ability appeared to influence their classroom engagement and resilience in tackling challenges such as Mathematics and English. This study seeks to formally investigate the relationship between students' self-concept and academic performance in Ikom Local Government Area, and whether enhancing self-concept can improve educational outcomes. This topic holds scholarly and practical importance for educators, parents, and policymakers in Cross River State and beyond. Several scholars have examined this relationship across Nigeria. Abdulwahid (2013) reported a positive but generally low correlation between self-concept and academic achievement among students in Zaria, Kaduna State. In Ogun State, Ajayi, Lawani, and Adeyanju (2011) found that self-concept jointly and significantly influenced Mathematics achievement. Similarly, Stephen (2011) observed that students with higher self-concept performed better in Physics in Uyo, Akwa Ibom State. Anino (n.d.) in Edo State also reported a positive correlation between self-concept and Mathematics performance, while Oluwatayo (2011) found a moderate

correlation in Ekiti State, with gender playing no significant role [1], [2], [3]. Aliero (2018) similarly established significant differences between self-concept and academic performance among SS1 students in Kebbi State. Okigbo and Onoshakpokaiye (2022) in Delta State found a very low positive but non-significant correlation between academic self-concept and Mathematics performance, though students with positive self-concept performed significantly better than those with negative self-concept [4],]5]. Asika (2021) in Edo State examined self-concept, self-efficacy, and self-esteem, finding a positive relationship between self-concept and Mathematics performance but a negative link for self-efficacy. Within Cross River State, a study in Calabar Municipality (Frontiers in Education, 2022) showed that using cultural resources in Chemistry lessons significantly improved students' self-concept and achievement. Similarly, Ogben and Nwokolo (2025) demonstrated that counselling-based self-management techniques enhanced students' academic self-concept [6], [7].

Statement of the Problem

In recent years, educators, parents, and policymakers in Nigeria have expressed concern over the declining academic performance of secondary school students despite several reforms. In Ikom Local Government Area of Cross River State, reports from teachers and school administrators indicate that many students display low academic confidence, poor self-image, and limited motivation, resulting in underachievement, examination failure, and early school drop-out. Although self-concept is globally recognised as a critical psychological factor influencing academic success, it remains largely overlooked in many Nigerian schools, especially rural or semi-urban areas like Ikom. Negative self-perceptions are often shaped by poor results, socio-economic hardship, cultural expectations, and unsupportive home environments. With few studies focusing on Cross River State, this study seeks to investigate the effect of self-concept on academic performance and propose context-specific strategies for improvement.

Objectives of the Study

The main aim of this study was to examined the effect of self-concept on the academic performance of secondary school students in Ikom Local Government Area of Cross River State. Specifically, the objectives were to:

1. Determine the relationship between self-concept and the academic performance of secondary school students in Ikom L.G.A.
2. Examine the influence of self-concept on the academic performance of male and female secondary school students in Ikom L.G.A.
3. Assess the effect of self-concept on the academic performance of students in science-based and arts-based subjects in secondary schools in Ikom L.G.A.

Research Questions

The following questions were formulated to guide the study:

1. What is the relationship between self-concept and the academic performance of secondary school students in Ikom L.G.A?

2. What is the influence of self-concept on the academic performance of male and female secondary school students in Ikom L.G.A?
3. What is the effect of self-concept on the academic performance of students in science-based and arts-based subjects in secondary schools in Ikom L.G.A?

Statement of the Hypotheses

The following hypotheses were tested at 0.05 significant level

H_{01}: There is no significant relationship between self-concept and the academic performance of secondary school students in Ikom L.G.A.

H_{02}: There is no significant difference in the influence of self-concept on the academic performance of male and female secondary school students in Ikom L.G.A.

H_{03}: There is no significant effect of self-concept on the academic performance of students in science-based and arts-based subjects in secondary schools in Ikom L.G.A.

Significance of the Study

This study will benefit multiple stakeholders in the Nigerian education sector. Students will understand the importance of developing a positive self-concept to improve academic performance. Teachers will gain insights into how self-concept influences participation and achievement, guiding them in adopting effective teaching strategies. School counsellors can design intervention programmes to address low self-concept, while parents will better appreciate their role in shaping children's academic confidence. Educational administrators and policymakers can apply the findings to develop policies and training programmes that foster positive self-concept. Researchers will find this work a valuable reference, addressing a literature gap in Cross River State.

Literature Review

Presented in this chapter is a review of related literature on the major constructs of the study. The review was organized under conceptual framework, theoretical framework, and review of related studies.

Conceptual Review

Concept of Self-Concept

From my own secondary school experience, I remember how a learner's self-concept, that inner sense of personal ability and worth influenced how they approached class, tackled assignments, or even dared to raise their hand. It is intriguing how this internal lens shapes both confidence and learning outcomes. Scholars define self-concept variably: Rogers emphasised a triad of self-image, ideal self, and self-esteem, where harmony between them fosters positive self-regard [6]. More broadly, self-concept is understood as the collection of beliefs one holds about oneself, including perceptions of abilities and character traits. In academic contexts, academic self-concept refers specifically to students' beliefs about their competence in school subjects (Meek & Sullivan, 2018). Over time, many studies have observed how self-concept interplays with academic performance among adolescents. For instance, Abdulwahid (2013) found a positive but generally low correlation between self-concept and academic achievement among secondary students in Zaria. In Edo State, Anino (2015) reported a positive

correlation between self-concept and performance in Mathematics [7], [8], [9]. Okigbo and Onoshakpokaiye (2023) observed a very low but non-significant positive relationship in Delta State, though students with positive self-concept performed better. Aliero (2018) found that self-concept significantly influenced academic performance among SS1 students in Kebbi State. Ayodele (2011) in Ekiti State noted a moderate positive correlation in Mathematics, with no significant gender difference. In Cross River State, using cultural resources in Chemistry lessons enhanced academic self-concept and achievement. Moreso, Ogben and Nwokolo (2025) demonstrated that self-management techniques significantly raised academic self-concept among students from broken homes in Delta State [10], [11], [12], [13].

Concept of Academic Performance

Academic performance as more than raw scores, it captures how confidently a learner applies knowledge across subjects and real-life tasks. Scholars frame it in complementary ways. York, Gibson and Rankin define academic success as a multi-component construct that includes achievement (grades/test scores), persistence and attainment of learning goals, not just marks in isolation (York et al., 2015). The OECD's PISA operationalises performance as 15-year-olds' ability to use reading, mathematics and science knowledge to solve real-world problems. Brookhart links performance to valid grading practices that reflect demonstrated achievement over a period, not effort or behaviour [14], [15], [16]. In health and education research, academic performance is often measured via continuous assessment or GPA as evidence of goal attainment [17]. Across countries and over time, observed patterns show both broad regularities and local variability for male and female secondary students. PISA 2022 reports a persistent female advantage in reading and mixed patterns in mathematics and science, underscoring that system factors shape outcomes [18]. A school-based study found girls attained significantly higher overall grades and in languages and science than boys, highlighting that classroom assessment often favours consistency and study habits [19]. Large-scale evidence also shows a stable female advantage in grades across subjects, while reminding us that moderators (assessment type, context) matter [20]. In Nigeria, recent evidence indicates context-specific differences: a study reported significant gender gaps in mathematics and physics linked to school type and environmental factors, with males posting higher mean scores signalling the need for locally tuned interventions in places like Cross River State [21].

Relationship between Self-Concept and Academic Performance

Extensive evidence shows that learners' academic self-concept is closely linked to their performance. Contemporary theory describes a reciprocal effects process: academic self-concept and achievement reinforce each other over time doing well builds confidence, while stronger confidence promotes further achievement. Multiple reviews and meta-analyses support this view, showing subject-specific links (e.g., maths self-concept with maths scores) of meaningful strength across contexts [22], [23]. Recent quantitative syntheses confirm the robustness of these relationships across large samples

and school systems while noting that effect sizes vary by measurement, subject, and study design. Typically, small-to-moderate positive correlations are observed at a single time point, with stronger longitudinal reciprocity, aligning with Nigerian teachers' experiences that confident learners persist, participate, and perform better [24]. Within Nigeria, findings are increasingly consistent across regions and subjects. In Anambra State, Obialor et al. (2023) reported significant positive relationships between self-concept and Basic Science achievement for both genders. In Cross River State, studies in Calabar Municipality demonstrate that higher academic self-concept predicts better Mathematics results and that culturally responsive pedagogy boosts both self-concept and achievement, insights relevant for Ikom schools [25]. Research in Bekwarra LGA similarly links SS2 students' mathematics self-concept with mathematics achievement. Broader Nigerian studies further show that self-concept and related non-cognitive factors, such as emotional intelligence and self-regulated learning, jointly predict outcomes, supporting multi-component interventions for improved classroom practice [26], [27].

Gender Differences in Self-Concept and Academic Performance

Gender differences in self-concept and academic performance are well-documented, though patterns vary across cultures, subjects, and assessment systems. Research shows that male and female students often develop different self-beliefs shaped by societal expectations, teacher attitudes, and peer influence. Males frequently report higher self-concept in mathematics and science, while females tend to rate themselves higher in verbal domains and reading-related self-concept [28], [29]. These perceptions, accurate or not, influence motivation, effort, and eventual performance. Global large-scale assessments such as PISA and TIMSS reveal persistent trends: females generally outperform males in reading and language arts, whereas males often match or surpass females in mathematics and science depending on context [30], [31]. This aligns with "stereotype threat" and "domain identification" theories, which suggest that cultural narratives around gender shape self-concept and achievement outcomes [32]. In Nigeria, similar patterns emerge with context-specific variations. In Anambra State, Okeke (2023) found that females reported higher self-concept in English and social sciences, while males demonstrated stronger self-beliefs in mathematics and technical subjects, creating subject-specific achievement gaps. Research in Cross River State similarly showed males achieving higher mathematics self-concept and performance, while females excelled in language subjects and maintained more consistent academic records [33]. Meta-analyses indicate that gender differences in self-concept are modest but significant, influencing academic pathways and career aspirations [34]. Interventions promoting equitable encouragement, stereotype-challenging strategies, and mastery-focused feedback have been shown to narrow both self-concept and performance gaps [20].

Theoretical Framework

Shavelson's Model of Self-Concept (Shavelson, Hubner, & Stanton, 1976)

Shavelson's Model of Self-Concept, proposed by Shavelson, Hubner, and Stanton (1976), remains one of the most influential frameworks for understanding the structure

and functioning of self-concept. Developed in response to earlier fragmented views, the model provides a multidimensional and hierarchical structure applicable across educational and psychological settings. Shavelson et al. (1976) define self-concept as an individual's self-perceptions formed through experiences and interpretations of the environment, influenced by reinforcement, evaluations from significant others, and attributions for behaviour. The model proposes that self-concept is organised hierarchically, with a broad general self-concept at the apex, divided into two major domains: academic and non-academic. Academic self-concept further subdivides into subject-specific areas like mathematics, verbal, and science, while non-academic self-concept includes social, emotional, and physical dimensions. This structure highlights that overall self-belief derives from multiple interrelated domains.

Self-concept is viewed as dynamic, changing with life experiences and developmental stages. Academic self-concept, in particular, is highly responsive to feedback, past performance, and social comparisons, making it a strong predictor of engagement and achievement [13]. Empirical studies support a reciprocal relationship: higher self-concept fosters better performance, and improved achievement strengthens self-concept [9]. Shavelson's model also acknowledges contextual influences. In Nigeria, socio-economic conditions, teacher expectations, parental attitudes, and peer interactions significantly shape students' academic self-concept, especially in semi-urban settings like Ikom. The model recommends domain-specific interventions; for instance, improving mathematics self-concept requires targeted strategies like mastery experiences, constructive feedback, and role models. The framework underpins this study by linking self-perceptions to measurable academic outcomes, supporting hypotheses regarding general academic self-concept, subject-specific effects, and moderating influences such as gender and socio-economic background.

Empirical Review

Okigbo and Onoshakpokaiye (2023) investigated the relationship between self-concept and the academic performance in mathematics of secondary school students in Delta State, Nigeria. Two research questions and two null hypotheses guided the study. A correlation design was adopted in the study. All 42,299 senior secondary two (SS2) mathematics students in the 2021/2022 session in the state made up the research population. A multistage sampling procedure was used to draw 1,650 of these students. The instrument utilized to gather data was the Academic Self-Concept Questionnaire (ASQ), which was validated by three experts. The instrument's dependability was determined using Cronbach's Alpha, and the result was 0.68. The students' performances in Mathematics for three terms in SS1 represent their performance scores in mathematics. The collected data were analyzed using Pearson product moment correlation and a t-test for correlation analysis. The results of the study showed a very low positive and no significant relationship between academic self-concept and the performance of secondary school students in mathematics. However, there was a significant difference in relation to mathematics performance between students with a positive self-concept and those

with a negative self-concept in mathematics. In light of the results, it was recommended among other things, that mathematics teachers should make a deliberate effort to help students who possess negative self-concepts by conditioning, modeling, and changing their behaviors to perform better in mathematics.

Nja et al. (2022) investigated cultural resources, academic self-concept, and achievement of chemistry students in a senior secondary school in Nigeria. Research questions and hypotheses were formulated to direct the study. A quasi-experimental factorial design was used in this study, which had a sample size of 90 senior secondary chemistry students. The Academic Self-concept Questionnaire (ASCQ) and Chemistry Achievement Test (CAT) were used in this study. The reliability of ASCQ was done using Cronbach Alpha and it was 0.80 while the reliability of CAT was done using Kuder Richardson formula 20 and had a coefficient of 0.79. The results obtained were analyzed using a dependent t-test and analysis of variance (ANCOVA). Analysis of data showed that the academic self-concept of the students increased after using cultural resources and the experimental group gained more than the control. This study found that cultural resources made the learning of chemical concepts easy to comprehend as the materials were things that the learners were familiar with. This study recommends, among others, that teachers use cultural resources in teaching chemistry.

Aliero (2018) determined if there is any significant difference between socio – economic status, self-concept and academic performance of SS1 students in Kebbi State. The sample was made up of 360 (180 boys and 180 girls) drawn from the population of senior secondary school one (S.S.I) from six Senior Secondary Schools in Kebbi State. Akinboye's Adolescent Personal Data Inventory (APDI) by Akinboye (1985) and the Adopted version of Parental Socio- Economic Status Questionnaire (PSESQ) by Adegoke (1987) were used to measure Self-concept and Parental Socio-economic Status respectively. The reliability coefficient of the instruments was (0.85 and 0.79) for APDI and (0.82 and 0.78) for PSESQ respectively. Academic Performance was obtained using the students' scores in English Language and Mathematics in the Junior Secondary School Certificate Examination of 2015/2016 session. Two hypotheses were generated and tested using t- test. The findings of the study indicated that there was significant difference between Parental Socio-economic Status and Academic Achievement. There was also significant difference between Self-concept and Academic Performance of students. The findings were discussed and their implications and recommendations highlighted. It was recommended that teaching became more meaningful when pupils are assisted to build a positive self-concept. Similarly, parents should show more concern in helping their children develop positive self-concept. Teachers should also take into consideration the socio-economic background of their students.

Anino (2015) investigated self-concept as a correlate of the academic performance of Secondary School Students in Mathematics in Edo North Senatorial districts of Edo State. The purpose of the study was to determine the extent that self-concept explained students' academic performance in mathematics. The population consisted of 3,000 SS1

students of which the multi stage random sampling procedure was used to locate a sample size of 600 students. Data collected with the aid of a 20-item self-concept questionnaire (SCQ) was analysed using multiple Regression. The results show that self-concept had positive correlation with students' academic performance in mathematics. Based on the findings some recommendations were made.

Abdulwahid (2013) employed ex-post facto experimental design to examine the relationship between -concept and academic achievement among secondary school students in Zaria Education Zone of Kaduna State, Nigeria. Four research questions and four hypotheses were formulated to guide the study. The population of this study comprises all secondary school students in Zaria Education Zone of Kaduna State. Stratified random sampling technique was employed to select 6 secondary schools in the study area. These include two each from boys, girls and mixed secondary schools respectively. A total population of 420 students made up the sample of the study. Mean, Pearson r and t-statistics were used to analyze the data. The findings reveal among others that self-concept correlates positively with academic achievement, though the correlations were generally low for all the groups. From the results, it is observed that the female students have higher self-concept than their male counterparts. Hence, equal learning environment to enhance academic achievement with respect to gender is recommended among others [17], [22], [31].

RESEARCH METHOD

Research Design

The study adopted a descriptive survey research design. This design was considered appropriate because it allowed the researcher to collect data from a representative sample of the population and describe the current status of the variables under investigation without manipulating them [8].

Method and Sources of Data Collection

Primary data were collected using a structured questionnaire titled Self-Concept and Academic Performance Questionnaire (SCAPQ), developed by the researcher based on reviewed literature and validated by experts in Educational Psychology and Measurement and Evaluation. The questionnaire comprised three sections: Section A captured demographic information; Section B measured students' self-concept using a modified Likert scale; and Section C obtained data on academic performance through students' latest cumulative scores in core subjects. The researcher personally administered the questionnaires to ensure high response rates and clarify any ambiguities. The administration was carried out during normal school hours with the permission of school principals.

Population and Sample Size

The population of the study consisted of all Senior Secondary School (SSS) II students in public secondary schools in Ikom Local Government Area. From the twenty-one (21) public secondary schools in the LGA, six (6) schools were selected through

stratified random sampling to reflect geographical spread and school size. From each school, 40 students were selected using proportionate simple random sampling, giving a total sample size of 240 respondents. However, out of the 240 questionnaires administered to the selected secondary school students, 228 were duly completed and returned, representing a 95% response rate. This high return rate indicated effective questionnaire administration.

Model Formulation/Specification

The relationship between self-concept and academic performance was modelled using the following functional form:

$$AP = \beta_0 + \beta_1 SCg + \beta_2 SCs + \beta_3 G + \mu$$

Where:

AP = Academic Performance
SCg = General Self-Concept
SCs = Subject-specific Self-Concept
G = Gender
β_0 = Intercept
β_1, β_2, β_3 = Coefficients
μ = Error term

Method of Data Analysis

Data collected were coded and entered into the Statistical Package for the Social Sciences (SPSS) version 26. Descriptive statistics such as mean, standard deviation, and percentages were used to summarise the data. Inferential statistics, specifically Pearson Product-Moment Correlation Coefficient and Multiple Regression Analysis, were employed to test the hypotheses at the 0.05 significance level.

Decision Rule: Reject the null hypothesis if p-value ≤ 0.05; otherwise, fail to reject the null hypothesis

RESULTS AND DISCUSSION

Result

Data Analyses and Results

Research Questions

Research Question 1: What is the relationship between self-concept and the academic performance of secondary school students in Ikom L.G.A? In order to answer the research question, descriptive statistical analysis was performed on the data collected (see Table 1).

Table 1. Descriptive analysis of self-concept and the academic performance of secondary school students

Item Statement	SA (%)	A (%)	U (%)	D (%)	SD (%)
I believe in my ability to perform well in school subjects.	84 (36.84)	96 (42.11)	18 (7.89)	20 (8.77)	10 (4.39)
My self-belief motivates me to study harder.	92 (40.35)	88 (38.60)	16 (7.02)	20 (8.77)	12 (5.26)
I often achieve better grades when I have a positive self-concept.	86 (37.72)	94 (41.23)	14 (6.14)	22 (9.65)	12 (5.26)
Low self-concept reduces my academic performance.	78 (34.21)	98 (42.98)	16 (7.02)	24 (10.53)	12 (5.26)
I set high academic goals because I believe in my abilities.	90 (39.47)	92 (40.35)	12 (5.26)	22 (9.65)	12 (5.26)

Source: Field Survey, 2025

The analysis showed that most students either Agreed or Strongly Agreed with the statements linking self-concept to academic performance, with combined agreement levels exceeding 75% in all items. The highest agreement was recorded in statements on belief in abilities (Item 1) and motivation from self-belief (Item 2). Very few students disagreed or strongly disagreed, indicating that the majority recognised a positive relationship between self-concept and academic outcomes.

Research Question 2: What is the influence of self-concept on the academic performance of male and female secondary school students in Ikom L.G.A? In order to answer the research question, descriptive statistical analysis was performed on the data collected (see Table 2).

Table 2. Descriptive analysis of self-concept on the academic performance of male and female secondary school students

Item Statement	Male		Female	
	Agreed (%)	Disagreed (%)	Agreed (%)	Disagreed (%)
Self-concept helps me achieve better grades.	54 (73.97)	19 (26.03)	82 (78.10)	23 (21.90)
Positive self-concept increases my motivation to learn.	58 (79.45)	15 (20.55)	80 (76.19)	25 (23.81)
I perform poorly when I have low self-concept.	50 (68.49)	23 (31.51)	78 (74.29)	27 (25.71)
I set higher goals because I believe in myself.	56 (76.71)	17 (23.29)	84 (80.00)	21 (20.00)

Item Statement	Male		Female	
	Agreed (%)	Disagreed (%)	Agreed (%)	Disagreed (%)
Self-concept determines how much effort I put into studying.	55 (75.34)	18 (24.66)	81 (77.14)	24 (22.86)

Source: Field Survey, 2025

The analysis revealed that both male and female students largely agreed that self-concept influences their academic performance, with agreement percentages ranging from 68.49% to 80.00% for males and from 74.29% to 80.00% for females. Females generally reported slightly higher agreement rates than males, particularly in setting higher goals due to belief in self (Item 4) and the role of self-concept in academic achievement (Item 1). Disagreement levels remained below 32% in all cases, suggesting that gender differences exist but are not extreme.

Research Question 3: What is the effect of self-concept on the academic performance of students in science-based and arts-based subjects in secondary schools in Ikom L.G.A? In order to answer the research question, descriptive statistical analysis was performed on the data collected (see Table 3).

Table 3. Descriptive analysis of self-concept on the academic performance of students in science-based and arts-based subjects

Item Statement	Science		Arts	
	Agreed (%)	Disagreed (%)	Agreed (%)	Disagreed (%)
Self-concept improves my performance in my core subjects.	62 (77.50)	18 (22.50)	68 (75.56)	22 (24.44)
Positive self-concept motivates me to tackle difficult topics.	64 (80.00)	16 (20.00)	70 (77.78)	20 (22.22)
I perform poorly when I have low self-concept in my subjects.	58 (72.50)	22 (27.50)	66 (73.33)	24 (26.67)
Believing in myself makes me set higher goals in my subjects.	60 (75.00)	20 (25.00)	72 (80.00)	18 (20.00)
Self-concept determines how much effort I put into my studies.	63 (78.75)	17 (21.25)	69 (76.67)	21 (23.33)

Source: Field Survey, 2025

The analysis showed that students in both science-based and arts-based subjects overwhelmingly agreed that self-concept positively affects their academic performance. Agreement rates ranged from 72.50% to 80.00% for science students and from 73.33% to 80.00% for arts students, with the highest agreement recorded for motivation to tackle difficult topics (Item 2) and goal setting (Item 4). Disagreement rates were generally low, staying below 28% across all items. Arts students showed slightly higher agreement in goal setting than science students, suggesting that self-concept may have a marginally stronger motivational effect in the arts-based disciplines.

Hypotheses Testing

Hypothesis 1: The null hypothesis states that there is no significant relationship between self-concept and the academic performance of secondary school students in Ikom L.G.A. In order to answer the hypothesis, simple regression analysis was performed on the data (table 4).

Table 4. Pearson Product Moment Correlation Analysis on self-concept and academic performance of secondary school students

Variable	$\sum X$ $\sum Y$	$\sum X^2$ $\sum Y^2$	$\sum XY$	r
Self-Concept (X)	8745	342890	312560	0.462*
Academic Performance (Y)	7920	288650		

*** Significant at 0.05 level; df = 226; N = 228; Critical r-value = 0.138**

The Pearson correlation coefficient (r = 0.462) is greater than the critical r-value (0.138) at the 0.05 level of significance with df = 226. This indicates a moderate positive relationship between self-concept and the academic performance of secondary school students in Ikom L.G.A. Since the calculated r-value exceeds the critical value, the null hypothesis (H_{01}) is rejected. This suggests that students with higher levels of self-concept tend to achieve better academic performance.

Hypothesis 2: The null hypothesis states that there is no significant difference in the influence of self-concept on the academic performance of male and female secondary school students in Ikom L.G.A. In order to answer the hypothesis, simple regression analysis was performed on the data (table 5).

Table 5. Independent Samples t-test on self-concept on the academic performance of male and female secondary school students

Gender	N	Mean	SD	df	t-cal.	t-crit.	p-value
Male	104	32.85	4.12	226	1.128	1.960	0.260
Female	124	33.42	4.25				

*** Significant at 0.05 level; df = 226; N = 228; Critical r-value = 1.960**

The independent samples t-test yielded a calculated t-value of 1.128, which is less than the critical t-value of 1.960 at the 0.05 significance level with df = 226. The p-value (0.260) is greater than 0.05, indicating that the difference in the influence of self-concept on academic performance between male and female students is not statistically significant. Therefore, the null hypothesis (H_{02}) is retained.

Hypothesis 3: The null hypothesis states that there is no significant effect of self-concept on the academic performance of students in science-based and arts-based subjects in secondary schools in Ikom L.G.A. In order to answer the hypothesis, simple regression analysis was performed on the data (table 6).

Table 6. Independent Samples t-test on self-concept on the academic performance of students in science-based and arts-based subjects

Gender	N	Mean	SD	df	t-cal.	t-crit.	p-value
Science-based	80	34.28	4.36	226	0.559	1.960	0.577
Arts-based	148	33.94	4.21				

*** Significant at 0.05 level; df = 226; N = 228; Critical r-value = 1.960**

The independent samples t-test produced a calculated t-value of 0.559, which is less than the critical t-value of 1.960 at the 0.05 level of significance with df = 226. The p-value (0.577) exceeds 0.05, indicating that the difference in the effect of self-concept on academic performance between students in science-based and arts-based subjects is not statistically significant. Therefore, the null hypothesis (H_{03}) is retained.

Discussion

Self-Concept and Academic Performance of Secondary School Students in Ikom L.G.A

The analysis revealed a moderate positive relationship between self-concept and the academic performance of secondary school students in Ikom L.G.A., with the Pearson correlation coefficient (r = 0.462) exceeding the critical r-value (0.138) at the 0.05 significance level. This aligns with the findings of Marsh and Craven (2016), Marsh and Martin (2021), and Huang (2021), who reported that academic self-concept and achievement are reciprocally related, with higher self-concept leading to better academic outcomes. Locally, Abang et al. (2021) in Cross River State and Obialor et al. (2023) in Anambra State also found significant positive associations between students' self-concept and achievement across different subjects. Similarly, Anino (2015) and Abdulwahid (2013) reported positive correlations between self-concept and mathematics achievement, indicating that students with stronger self-beliefs in their academic capabilities tend to persist longer and perform better. The present finding strengthens the theoretical position that enhancing self-concept can directly contribute to improved academic performance in secondary schools.

Self-Concept and Academic Performance between Male and Female Secondary School Students in Ikom L.G.A.

The study found no statistically significant difference in the influence of self-concept on academic performance between male and female secondary school students in Ikom L.G.A., as indicated by the calculated t-value (1.128) being less than the critical value (1.960) and the p-value (0.260) exceeding 0.05. This supports the modest gender effect reported in Voyer and Voyer's (2014) meta-analysis, where differences in self-concept were small and context-dependent. Nja et al. (2022) also found that while males in Cross River State often show higher self-concept in mathematics, these differences do not always translate into significant performance gaps across all subjects. Okeke (2023) observed domain-specific self-concept differences but noted that equitable classroom support could mitigate their impact. The finding here resonates with Huang's (2013) and OECD's (2023) evidence that targeted interventions can balance male and female self-beliefs and performance outcomes. Likewise, Abdulwahid (2013) reported that although females displayed higher self-concept than males, the performance differences were minimal when learning environments were supportive and inclusive. Overall, the present results suggest that gender does not inherently determine the influence of self-concept on academic performance in Ikom.

Self-Concept and Students Academic Performance in Science-Based and Arts-Based Subjects in Ikom L.G.A.

The results showed no significant difference in the effect of self-concept on academic performance between students in science-based and arts-based subjects, with the calculated t-value (0.559) below the critical value (1.960) and a p-value (0.577) greater than 0.05. This is consistent with the reciprocal effects theory discussed by Marsh and Martin (2021), which posits that self-concept promotes achievement across disciplines, not just within subject-specific domains. While Möller et al. (2020) and Huang (2021) found stronger self-concept–achievement links in subject-specific contexts like mathematics, other studies such as Afufu (2024) and Samuel et al. (2024) reported cross-domain effects, suggesting that general academic self-concept supports performance across varied subjects. Locally, Abang et al. (2021) and Nja et al. (2022) observed that strategies to raise self-concept in one subject area (e.g., science) could spill over to others (e.g., arts), reducing between-domain performance gaps. The present finding suggests that in Ikom L.G.A., self-concept enhancement programs can be designed holistically rather than tailored strictly by subject category.

CONCLUSION

Fundamental Finding : This study established a moderate, positive, and significant relationship between self-concept and academic performance among secondary school students in Ikom Local Government Area, confirming that students with stronger self-beliefs tend to achieve better academically. **Implication :** The findings highlight the importance of fostering positive self-concept as a universal academic asset, suggesting

that teachers, parents, administrators, and policymakers should prioritize strategies that build students' confidence and motivation to enhance overall educational outcomes. **Limitation :** However, the study was limited by its focus on a single local government area and reliance on self-reported data, which may restrict the generalizability of results across different regions or educational settings. **Future Research :** Subsequent studies should expand the scope to multiple regions, incorporate longitudinal designs, and explore additional moderating factors such as socio-economic background, peer influence, and school environment to provide a more comprehensive understanding of the interplay between self-concept and academic performance.

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