ACADEMIC MOTIVATION AND SELF-EFFICACY AS DETERMINANTS OF ACADEMIC PERFORMANCE OF SECONDARY SCHOOL STUDENTS IN ANAMBRA STATE, NIGERIA

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AUTHORS’ CONTRIBUTIONS
This work was carried out in collaboration among all authors. All authors read and approved the final manuscript.

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ABSTRACT

Academic performance is the quest of every student. This study explored academic motivation and academic self-efficacy as determinants of academic performance of secondary school students in Anambra State. The study adopted a correlation research design and was guided by three research questions and three null hypotheses tested at the 0.05 level of significance. The population of the study comprised 19,742 senior secondary class two (SS2) students from which a sample size of 1,250 was drawn through a convenient sampling technique. Three instruments were used for the study titled: Academic Motivation Questionnaire (AMQ), Academic Self-Efficacy Questionnaire (ASEQ) and Academic Performance Questionnaire (APQ) and validated by three experts in the field of Educational Psychology. The Cronbach Alpha method was adopted in determining the reliability of the instruments and they yielded alpha coefficients of 0.77, 0.74 and 0.67 for AMQ, ASEQ and APQ respectively. Data collected were analyzed using simple correlation for answering research questions and simple regression analyses for testing the null hypotheses. Findings indicated that both academic motivation and academic self-efficacy have a low and positive relationship with academic performance. It further showed that academic motivation and academic self-efficacy jointly contributed positively to the academic performance of secondary school students in Anambra State, Nigeria. Based on the findings of the study, it was recommended among others that teachers and parents should continue to inspire, encourage and motivate the students for better academic performance.

Keywords: Academic motivation; academic self-efficacy; academic performance; secondary school students.

1. INTRODUCTION

“Education is the centre for the growth and development of any nation and remains the bedrock of achieving balanced developmental objectives. It is the recognized and regulated process for building the political, economic and social development of any nation” [1]. Education in general and secondary education, in particular, is a fundamental concept for harnessing a knowledge-based economy and a
developed society. The Nigerian government in its National Policy on Education [2] made provision for educational opportunities for all citizenry irrespective of social status, sex or race. According to Anierobi and Unachukwu [3], “the policy is to ensure that the desire that Nigeria should be a land full of opportunities for all citizens able to generate a great and dynamic economy and grow into a united, strong and self-reliant nation is achieved. These educational opportunities are divided into three stages namely: primary, secondary, and tertiary levels of education”.

The Policy further provides that secondary schools in Nigeria will practice six years of schooling sequel to the 6-3-3-4 system of education that is adopted and practised in the country to date. Secondary school education, therefore, serves as a bridge between primary schools and tertiary institutions. The Policy specified basic aims of secondary school education which include majorly: Preparing the recipients for formal education, which can be measured through academic performance. Academic performance refers to the achievement of educational and learning goals but also necessary for transformation. This study adopted the definition of academic performance by Steinmayr, Weidinger, Schwinger and Spinath [5] as a complex factor that encompasses performance outcomes in the cognitive, affective and psychomotor domains indicating the extent to which a learner has accomplished specific goals linked to the different domains of learning taught at school. This is to say that it can be measured by a self-report by the students on their cognitive, affective and psychomotor outcomes in their academic endeavour.

Generally, academic performance is a thing of concern to educationists and educational researchers. This is because it determines a learner's success in formal education, which can be measured through observations, interviews, ratings and tests with numerous variables exerting influence. Though the desire of stakeholders of education is for the maximal academic performance of students, fact remains that poor academic performance has been witnessed among many students and is a thing of concern [6].

The issue of poor academic performance among learners in secondary schools has been recorded in Anambra State in the recent past. The chief examiner's report of 2019 cited in Unachukwu, Anierobi, Nwosu and Okeke [7] revealed a decline in external examination performance of students in English Language and Mathematics in Anambra State. Similarly, Okoye and Nnamani [8] revealed that day-students achieved poorly in their examinations due to possible distractions from home. In another study, Amaonye, Unachukwu and Anachuna [9] established that there is a high repetition rate in public secondary schools in Anambra State which is an indicator of poor academic performance among the students. The issue of poor academic performance is also witnessed among secondary students outside Nigeria. For instance, Namele, Upoalkpajo and Ayambire [10] found poor academic performance among senior high school students in Kongo District because they were not actively engaged in curricular tasks. This low percentage in academic performance is worrisome and could be linked to certain factors.

Researchers such as Salaudeen, Gbolagade and Sangoniyi [11] found that indiscipline by students or stakeholders is a major factor negatively affecting the academic performance of secondary school students. Obidile, Amobi, Uzoekwe and Akuezuilo [12] underscored institutional and parents' socio-economic factors such as lack of adequate instructional materials, facilities, ineffective teaching methods, and income level of parents as various factors that contribute to the poor academic performance of students. Rowell [13] identified various factors like school climate, educators' beliefs and perceptions, and family and social values as a determinant of the academic performance of students.

Apart from these factors, many researchers such as Onyekwere, Okoro and Unamba [14] and Baris [15] posited that “academic motivation can influence the level of academic performance of secondary school students. Academic motivation is one of the important sources of power that determine the direction, intensity, and determination of student behaviour in the teaching-learning process” [16]. “Academic motivation is widely studied in education and emerged with educational advancement. It is of particular interest to educational psychologists and counsellors because of the crucial role motivation plays in student learning and thus, has been identified as what influences learner's behaviour towards learning in a school setting” [13]. “Academic motivation is, therefore, the students' desire or interest in participating in learning and school experiences”
The concept of academic motivation is an important factor in academic behaviour in any learner despite the level of academic attainment [16]. Academic Motivation is broadly divided into intrinsic, extrinsic and amotivation [18], though, this study focused only on the intrinsic and extrinsic aspects of academic motivation. Intrinsic motivation refers to an inner force that motivates students to engage in academic activities because they are interested in learning and they enjoy the learning process as well [14]. On the other hand, Onyekwere et.al asserted that extrinsic motivation drives learners to engage in an academic task for external reasons. Extrinsic motivation is those external factors like parental expectation, and expectations of role models, that drives a learner to attain or earn a good result or grade in academic tasks. Legault [19] posited that extrinsic motivation promotes effort and performance with rewards serving as positive reinforcement for the desired behaviour.

Studies such as Nauzeer and Jaunky [20] and Gupta and Mili [21] showed that academic motivation has a positive relationship with the academic performance and achievement of students. Similarly, Kyrshko, Fleischer, Grunschel and Leutner [22] found that self-efficacy for motivational regulation is a positive predictor of academic satisfaction which no doubt, will positively impact the academic performance of the students. In their study, Harirri, Kawarn, Haenilah, Rini and Supaman [23] revealed that student motivation has a positive relationship with the study strategies of students. When students adopt good study strategies as a result of extrinsic or intrinsic motivation, there should be a positive ripple effect on their academic performance. In a study with junior secondary school students in Benue, Nigeria, Abah, Ogugua and Okoh [24] found that intrinsic motivation significantly correlated with the academic performance of the students in mathematics while Onyekwere, Okoro and Unamba [14] recorded that both extrinsic and intrinsic motivation positively influence students' academic performance.

Thus, it is expected that a learner with a high academic motivation should display interest, propelled by how the learner feels about themselves, their inner capabilities and their perception of what they can achieve. On the other hand, a learner with low academic motivation may display a lack of interest which can hamper their perception of their ability to accomplish necessary tasks otherwise, known as self-efficacy. In other words, motivation can impact the academic self-efficacy of students. In their study, Maraghi, Mortazavi-Tabatabaei, Ahmady and Hosseini [25] and El-Sayed, Mousa and Abd-Elhamid [26] showed that educational and academic self-efficacy is positively related to student motivation. On the other hand, though Titrek, Cetin, Kaymak and Kasiksi [27] found a significant difference in both the academic self-efficacy perception and academic motivation levels of prospective teachers at Sakarya University, the study further revealed that academic motivation has a positive correlation with academic self-efficacy.

The learner's self-efficacy could no doubt determine their accomplishments in their academic task and pursuit. Self-efficacy is an important factor in determining one's life attainment. It generally refers to the trust an individual has towards himself to produce certain tasks or responsibilities properly and effectively [28] and self-efficacy beliefs play a role in shaping the thought pattern, perception and behaviour of individuals [29]. This implies that the level of one's self-efficacy will determine their disposition toward taking on challenges and their chances of success in achieving set goals. Self-efficacy, therefore, is the belief that one can take up an academic task and accomplishes it. According to Hanum, Binti, Suraya and Yunus [30], it refers to the level of confidence and self-belief of a learner to complete a task and to produce something at its best according to their capabilities.

Many studies such as Koseoglu [31]; Hanum, Binti, Suraya and Yunus [30] asserted that self-efficacy can have a positive impact on learners' disposition toward academic tasks, engagements and activities. In their studies, Yousf, Razak, Nordin & Zulkfli [32] found that self-efficacy has a low correlation with academic performance while academic motivation has a significant relationship with academic performance. Bhati, Baral and Meher [33], Muema, Muola and Muriungi [34]; Hayat, Shateri, Amini and Shokrpour [35] and Kolo, Jaafar and Ahmad [36] recorded a positive relationship between academic self-efficacy and academic performance among students in various schools outside the study area. Students with low self-efficacy could feel unmotivated to learn, they are easily bored with a task requiring high mental coordination and easily quit when they encounter learning difficulties. By implication, individuals with a high level of self-efficacy could be more confident in mastering difficult tasks and persist in achieving these challenging tasks.

In as much as academic motivation and self-efficacy have been shown to individually contribute to the outcomes of students' academic goals, some studies outside the present study area proved that motivation and self-efficacy when combined are paramount to the
academic performance of students. For instance, Kogei [37] showed that self-efficacy and academic motivation had a positive and significant relationship with the academic achievement of students in Kenya ($\beta=0.17, p=0.00$). Similarly, Ugwuanyi, Okeke and Ageda [38] found motivation and self-efficacy have a significant and positive relationship with students' learning performance in Physics ($F (1, 374), = 90.33, p < 0.05$) among SS3 students in Nsukka, Nigeria. Could this finding be true with secondary school students in Anambra, Nigeria?

1.1 Statement of the Problem

The most concerning issue of many educationists and psychologist is how to capture or grasp and retain learners’ interest during the teaching and learning process, that is, how to retain the interest of the students to the end of the lesson. The issue of unmotivated and bored learners has posed a great hindrance to academic performance both in specific objectives of the lesson and national objectives of curriculum planners. Many researchers confirmed a decline in academic performance of secondary school students while others observed many factors such as lack of interest and poor self-worth as contributors to the low academic performance of students. There seems to be a dearth of studies on the relationship among the variables of interest in the study area. It is of this concern that the researchers embarked on this study on academic motivation and self-efficacy as determinants of academic performance of secondary school students in Anambra State, Nigeria. To give a guide to the study, three research questions and three null hypotheses were posed:

The following research questions were raised to guide this study:

1. What is the relationship between academic motivation and academic performance of secondary school students in Anambra, Nigeria?
2. What relationship does self-efficacy have on the academic performance of secondary school students in Anambra, Nigeria?
3. How do academic motivation and self-efficacy jointly determine the academic performance of secondary school students in Anambra, Nigeria?

The following null hypotheses guided the study:

1. Academic motivation does not significantly determine the academic performance of secondary school students in Anambra, Nigeria.
2. Self-efficacy does not significantly determine the academic performance of secondary school students in Anambra, Nigeria.
3. Academic motivation and self-efficacy do not significantly determine the academic performance of secondary school students in Anambra, Nigeria.

2. METHOD

This study adopted a correlation survey research design. The population of this study comprised 19,742 senior secondary two (SS2) class students in 262 public secondary schools in Anambra State. The sample size was 1,250 SS2 students drawn through a convenient sampling procedure. Three schools were picked using convenient random sampling while students who volunteered to participate in the exercise after briefing and assuring them confidentiality were used for the study.

2.1 Instrument for Data Collection

Three research instruments were used for this study designed by the researchers. The instruments were titled: Academic Motivation Questionnaire (AMQ), Academic Self-Efficacy Questionnaire (ASEQ) and Academic Performance Questionnaire (APQ) and each has 10 items. The instruments were structured on a four-point response scale of Strongly Agree (SA), Agree (A), Disagree (D) and Strongly Disagree (SD) and weighted 4, 3, 2 and 1 respectively.

2.2 Validity and Reliability of the Instrument

The validity of the instruments was determined by experts at Nnamdi Azikiwe University, Awka. To determine the reliability of the instruments, there was a trial test on 50 secondary school students of Nnamdi Azikiwe University high school, Awka. Cronbach Alpha was adopted to estimate the internal consistency of the instruments. The analysis yielded alpha coefficients of 0.77, 0.74 and 0.67 for AMQ, ASEQ and APQ respectively which were considered high and showed that the instruments were reliable for use.

The purpose of the research was explained to the participants and they were assured of confidentiality and anonymity of their responses. All the students that were willing to participate in the exercise were given the questionnaires to respond to without any form of coercion.

2.3 Method of Data Analysis
Data collected was analyzed using Pearson Moment Product Correlation for answering the research questions, that is, to determine the nature of the relationship that exists between the variables. Regression analysis was used for testing the null hypotheses at the 0.05 level of significance to determine the association of the variables. The statistical analysis was done with SPSS version 21.

3. RESULTS

Research Question 1: What is the relationship between academic motivation and academic performance of secondary school students in Anambra, Nigeria?

Data in Table 1 shows that the correlation coefficient between academic motivation and academic performance of secondary school students is $r = 0.159$ ($p \leq 0.05$). This reveals that there is a low but positive relationship between academic motivation and academic performance of secondary school students in Anambra, Nigeria.

Research Question 2: What is the relationship between academic self-efficacy and academic performance of secondary school students in Anambra, Nigeria?

Data in Table 2 shows that the correlation coefficient between academic motivation and academic performance of secondary school students is $r = 0.135$ ($p \leq 0.05$). This reveals that there is a low but positive relationship between academic self-efficacy and academic performance of secondary school students in Anambra, Nigeria.

Research Question 3: What is the joint contribution of academic motivation and self-efficacy to the academic performance of secondary school students in Anambra, Nigeria?

Data in Table 3 shows that the joint correlation coefficient between the independent variables (academic motivation and self-efficacy) and the dependent variable (academic performance of secondary school students) is $r = 0.210$ ($p \leq 0.05$). In other words, academic motivation and academic self-efficacy jointly and positively contributed to the academic performance of the students. This, therefore, reveals that there is a low but positive relationship between the independent variables (academic motivation and self-efficacy) and the academic performance of secondary school students in Anambra, Nigeria.

Hypothesis 1: Academic motivation does not significantly determine the academic performance of secondary school students in Anambra, Anambra State.

Data in Table 4 show that an F-ratio of 6.450 with an associated probability value of 0.012 was obtained. This probability value of 0.012 was less than the 0.05 level of significance and therefore, was found to be significant. Thus, the null hypothesis was not accepted. The inference drawn was, therefore, that there was a significant relationship between academic motivation and academic performance of secondary school students in Anambra, Nigeria.

Table 1. Pearson r on the relationship between academic motivation and academic performance of secondary school students in Anambra, Nigeria

<table>
<thead>
<tr>
<th>N</th>
<th>Correlation Coefficient (r)</th>
<th>Remark</th>
</tr>
</thead>
<tbody>
<tr>
<td>1,250</td>
<td>0.159</td>
<td>Low Correlation</td>
</tr>
</tbody>
</table>

Table 2. Pearson r on the relationship between academic self-efficacy and academic performance of secondary school students in Anambra, Nigeria

<table>
<thead>
<tr>
<th>N</th>
<th>Correlation Coefficient (r)</th>
<th>Remark</th>
</tr>
</thead>
<tbody>
<tr>
<td>1,250</td>
<td>0.135</td>
<td>Low Correlation</td>
</tr>
</tbody>
</table>

Table 3. Model Summary for a Joint Contribution of Academic Motivation and Self-Efficacy to the Academic Performance of Secondary School Students in Anambra, Nigeria

<table>
<thead>
<tr>
<th>N</th>
<th>Correlation Coefficient (r)</th>
<th>Remark</th>
</tr>
</thead>
<tbody>
<tr>
<td>1,250</td>
<td>0.210</td>
<td>Low Correlation</td>
</tr>
</tbody>
</table>
Table 4. Regression analysis of the relationship between academic motivation and academic performance of secondary school students in Anambra, Nigeria

<table>
<thead>
<tr>
<th>Model</th>
<th>SS</th>
<th>Df</th>
<th>MS</th>
<th>F</th>
<th>R²</th>
<th>β</th>
<th>Sig</th>
</tr>
</thead>
<tbody>
<tr>
<td>Regression</td>
<td>66.713</td>
<td>1</td>
<td>66.713</td>
<td>6.450</td>
<td>0.025</td>
<td>0.159</td>
<td>0.012</td>
</tr>
<tr>
<td>Residual</td>
<td>2565.111</td>
<td>248</td>
<td>10.343</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>2631.824</td>
<td>249</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Predictors (constant): academic motivation; Dependent variable: academic performance

Table 5. Regression analysis of the relationship between academic self-efficacy and academic performance of secondary school students in Anambra, Nigeria

<table>
<thead>
<tr>
<th>Model</th>
<th>SS</th>
<th>Df</th>
<th>MS</th>
<th>F</th>
<th>R²</th>
<th>β</th>
<th>Sig</th>
</tr>
</thead>
<tbody>
<tr>
<td>Regression</td>
<td>48.087</td>
<td>1</td>
<td>48.087</td>
<td>4.616</td>
<td>0.018</td>
<td>0.135</td>
<td>0.033</td>
</tr>
<tr>
<td>Residual</td>
<td>2583.737</td>
<td>248</td>
<td>10.418</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>2631.824</td>
<td>249</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Predictors (constant): academic self-efficacy; Dependent variable: academic performance

Table 6. Regression analysis of the joint determination of academic performance of secondary school students in Anambra, Nigeria by academic motivation and academic Self-Efficacy

<table>
<thead>
<tr>
<th>Model</th>
<th>SS</th>
<th>Df</th>
<th>MS</th>
<th>F</th>
<th>R²</th>
<th>β</th>
<th>Sig</th>
</tr>
</thead>
<tbody>
<tr>
<td>Regression</td>
<td>115.993</td>
<td>2</td>
<td>57.997</td>
<td>5.694</td>
<td>0.044</td>
<td>0.210</td>
<td>0.004</td>
</tr>
<tr>
<td>Residual</td>
<td>2515.831</td>
<td>247</td>
<td>10.186</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>2631.824</td>
<td>249</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Predictors (constant): academic motivation, self-efficacy; Dependent variable: academic performance
Hypothesis 2: Self-efficacy does not significantly determine the academic performance of secondary school students in Anambra, Nigeria.

Data in Table 5 show that an F-ratio of 4.616 with an associated probability value of 0.033 was obtained. This probability value of 0.033 was less than the 0.05 level of significance and therefore, was found to be significant. Thus, the null hypothesis was not accepted. The inference drawn was, therefore, that there was a significant relationship between academic self-efficacy and academic performance of secondary school students in Anambra, Nigeria.

Hypothesis 3: Academic motivation and self-efficacy do not jointly and significantly determine the academic performance of secondary school students in Anambra, Nigeria.

Data in Table 6 reveal that an F-ratio of 5.694 with an associated probability value of 0.004 was obtained. This probability value of 0.004 was less than the 0.05 level of significance and therefore, was found to be significant. Therefore, the null hypothesis was not accepted. The inference drawn was, thus, that the joint relationship between the independent variables (academic motivation and academic self-efficacy) and academic performance of secondary school students in Anambra, Nigeria was significant.

4. DISCUSSION

The study revealed that academic motivation has a positive relationship \((\beta = 0.159)\) with the academic performance of the students in Anambra State, Nigeria. The statistical analysis also showed that the relationship between the variables is significant. This implies that motivation is an essential factor that promotes academic performance among students. Motivation strategies adopted by stakeholders in education toward the students can spur students into developing an interest in both the curricular and extra-curricular activities presented to them at school. The ripple effect of the interest will lead to the academic performance of the students. This finding aligns with the existing literature such as Nauzeer and Jaunky [20] and Gupta and Mili [21] which showed that academic motivation has a positive relationship with the academic performance and achievement of students. It also validates the finding by Hariri, Kawarn, Haenilah, Rini and Supaman [23] which revealed that student motivation has a positive relationship with the study strategies of students. Motivation can come from internal or external sources. In light of this, the finding of this study agrees with Abah, Ogugua and Okoh [24] that intrinsic motivation significantly correlated with the academic performance of the students in mathematics while Onyekwere, Okoro and Unamba [14] recorded that both extrinsic and intrinsic motivation positively influence students’ academic performance.

The finding of this study showed that the relationship between academic self-efficacy and academic performance is low and positive \((\beta = 0.135)\). When further subjected to testing, it revealed a significant relationship between the variables. This proves that students should be confident in their ability to take up and accomplish an academic task to perform well in their academic pursuits. Making learning participatory with appropriate feedback and student-centred should be adopted by teachers to help students develop confidence in their ability to face their academic tasks which will help them perform better. This validates the finding by Koseoglu [31] and Mohamed and Jamal (2017) that self-efficacy has a positive impact on learners’ disposition towards academic tasks, engagements and activities. This proves that self-efficacy plays an indirect role in the academic performance of students because it takes commitment to academic activities to perform well in school. This finding also aligns with Yousf, Razak, Nordin & Zulkfli [32] found that self-efficacy has a low correlation with academic performance. Finally, the finding corroborates with Bhati, Baral and Meher [33]; Muema, Muola and Muriungi [34]; Hayat, Shateri, Amini and Shokrpour [35] and Kolo, Jaafar and Ahmad [36] which found a positive relationship between academic self-efficacy and academic performance among students.

Finally, this study showed that academic motivation and self-efficacy jointly determined \((\beta =.210)\) the academic performance of secondary school students in Anambra State, Nigeria. Further statistical testing revealed that the independent variables (academic motivation and self-efficacy) jointly and significantly determined the dependent variable (academic performance). This is evidence that the combination of motivation and self-efficacy in the life of the learner is paramount for their success. Deductively, motivating students and helping them boost their confidence in their ability to take up and accomplish any assigned academic task is crucial for the academic performance of students. This finding agrees with Koge [37] who showed that self-efficacy and academic motivation had a positive and significant relationship with the academic achievement of students. It also aligns with Ugwuanyi, Okeke and Ageda [38] that motivation and self-efficacy have a significant and positive relationship with students' learning performance.

5. CONCLUSION
From the findings, the researchers conclude that motivation enhances students' academic performance. Making learning fun and interesting will enhance the students' internal drive to learn and maximally enhance their academic performance. The researchers also conclude that self-confidence in their academic ability spurs the learner to be active in classroom activities, stand out and persevere amidst academic adversity for academic success.

6. RECOMMENDATIONS

Based on the findings of this study, the researchers recommended that Government should organize scholarship schemes and other packages for students as incentives for outstanding academic performance. This will go a long way to motivate students in their academic pursuits. Teachers should adopt motivation strategies while teaching the students to enhance the maximal level of their academic performance. Intrinsically motivated students who find every academic activity fun and interesting should not always be given extrinsic rewards for it will reduce their performance level. Also, rewards and incentives given to students should be varied to avoid monotony. Teachers should also make the classroom an enjoyable place to stimulate students' interest and increase their self-confidence even in the face of academic adversity. Finally, Parents should assist to encourage and motivate the students in their academic endeavours to help the students build strong confidence and enhance their academic performance.

COMPETING INTERESTS

Authors have declared that no competing interests exist.

REFERENCES


