



SECONDARY SCHOOL STUDENTS' SELF-EFFICACY AS CORRELATE OF THEIR ACADEMIC ACHIEVEMENT IN IMO STATE

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Abstract

This study investigated the correlation between secondary school students' self-efficacy and their academic achievement in Imo State. Five research questions were answered, and two hypotheses were tested at 0.05 level of significance. Correlation research design was adopted for this study. The population for this study consisted of 8,463 Senior Secondary School (SS2) students. Research sample consisted of 860 (420 male and 440 female) students selected through multi-stage sampling technique. The instrument used for the study was Morgan-Jinks Student Self-efficacy Scale (MJSES) which has coefficient alphas of .78, .70 and .66 for subscales, and an overall reliability coefficient of .80. Data collected for the study were analysed using summated scores descriptive statistics, Pearson Product Moment Correlation and Regression analysis. Results obtained from the study indicated that a good number of students in Imo state have high academic self-efficacy. The result also showed that a good number of the students in Imo state have good achievements in English language and mathematics. Finally, the result revealed that there is significant positive relationships secondary school students' Self-efficacy and their academic achievement in English Language and Mathematics respectively. The study recommended, among others that Counsellors, teachers and other staff should create programmes that will help develop strong belief in the self-capacity.

Keywords: Correlate, secondary school, self-efficacy, academic achievement, Imo state

Introduction

In the present decade, there has been a re-occurring incidence of students' poor academic achievements in secondary schools both in Imo state and Nigeria in general. This is evident in the examination results of these students both in their internal and external examinations. According to reports by major internal and external examination bodies in Nigeria, like the West African Examination Council (WAEC) and the National Examination Council (NECO), more than half of the candidates, who sat for the two examinations every year, perform below average in English Language and Mathematics (Oguzie & Nwokolo, 2021). These subjects are compulsory for students, before gaining admission into Nigerian Universities. Therefore, the ability to achieve in these subjects is very important in school. Ozuome, Oguzie, Mokwelu and Anyamene (2020) emphasized that failure to achieve may lead to frustration and other deviant behaviours like examination malpractices, cultism, prostitution, alcoholism, school dropout, to mention a few. Hence, the criterion for measuring success among students is referred to as academic achievement.

Academic achievement is defined as the general performance of students in their offered subjects with respect to a specific standard called pass mark. It is the students' scholastic ability and attainment, which signifies the overall level of knowledge they have acquired in school, a subject, or a particular learning activity, process or situation (Okafor, Obi & Oguzie, 2018). Avoseh (2008) viewed it as how well an individual has done in a particular academic task. Steinmayr, Dinger and Spinath (2012) described academic achievement as the result of intellectual performance in schools; an education parameter which determines students' success in the school activities.

Academic achievement is a term usually employed to describe an individual's performance in subjects taught and tested in schools (Mkpae,

2014). In the context of this study, academic achievement is taken to mean a symbol that indicates the level of knowledge/experience a student has acquired in a particular course of study and his/her ability to communicate this knowledge/experience in oral or in written form. It is the yardstick with which educational outcomes are measured.

Over the years, poor academic achievements in English Language and Mathematics among secondary school students have been on the increase. This is evident in the report on general performance of candidates in the West African Senior School Certificate Examination (WASSCE), presented by the Head of the National Council. For instance, in 2013, out of 298,971 candidates who sat for the examination, a total of 86,612 (29%) candidates obtained credits in five subjects and above including English Language and Mathematics while in 2014 out of 241,161 candidates who sat for the November/December West African Senior School Certificate Examination, only 72,522 (30.1%) scored five credits in English Language, Mathematics, Biology and any two other subjects (considered as the pass mark for the examination).

Studies have shown that several factors such as students' self esteem, self concept, self regulation, study habit, gender and socio-economic background influence students' academic achievement (Adeyemo, 2010). Udoh (2012) maintained that academic achievement of students is a phenomenon that has educational, psychological and sociological connotation. This clearly signifies that students' academic achievement cannot be completely accounted for by only one or two variables but a number of them. Therefore, it is very pertinent to take full cognizance of the multivariate nature of the issue of students' academic achievement and the need to explore other relevant factors that may influence it. One of the possible factors that may impact on students' academic achievement is Self-efficacy.

Bandura (1977) introduced the concept of self-efficacy into the psychological enclave and emphasized its importance on students' academic achievement. According to Bandura, self-efficacy is defined as one's belief in one's ability to succeed in specific situation or accomplish a task. It is a person's belief in their ability to complete a task or achieve a goal (Cherry, 2023). Mcleod (2023) defined self-efficacy as the measure of one's competences to complete tasks and reach goals. More simply, self-efficacy is what an individual believes he or she can accomplish using his or her skills under certain circumstances (Majer, 2009). Hopper (2021) viewed self efficacy as an individual's confidence in their ability to successfully perform a particular task. Moreso, Schunk (2011) described self-efficacy as an individual's perceived capabilities to attain designated types of performance and achieve specific results. According to Miles (2022), self-efficacy is a social cognitive theory based on the belief that a person is more likely to succeed based on how they think, behave, feel, and the support of those around them. It is the belief people have in their own abilities, especially their ability to meet the challenges ahead of them and complete a task successfully (Ackerman, 2018).

Self-efficacy as a part of self-system consists of an individual's abilities, attitudes and cognitive skills plays very significant role in how people perceive and respond to different issues, events and situations (Oguzie, Obi, Nnadi, Nwobi & Okpala, 2023). Ogunmakin and Akomolafe (2013) noted that human achievements depend on interaction between one's behaviours, thoughts, beliefs and environmental conditions. However, self-efficacy for this study simply means a student's perceived capacity to perform given academic tasks at the desired level. It refers to the belief students hold about their capacities or ability to learn or carry out academic tasks. Students usually obtain information to appraise their self efficacy from their actual

performances, vicarious experiences, persuasions from others and their psychological reactions.

Academic self-efficacy belief therefore influences efforts, persistence, resilience and achievement. Students who possess positive self-efficacy tend to perform school tasks with readiness, work harder, persist longer when faced with difficulties, and achieve at a higher level. Beginning from infancy, parents provide children some experiences that influence their self-efficacy. Home influences that help children to interact positively affect self efficacy. When environments are rich in interesting activities like puzzles, books, computers, and so on, students are motivated to learn new information and skills. Parents, who teach their children ways to cope with difficulties and model persistence and keen effort, strengthen children's self-efficacy.

Since achievement plays an important role in the lives and activities of human beings, it then becomes very necessary to investigate various variables that influence academic achievement of secondary school students. Morso, the review of literature has shown that studies seeking to address this issue in the Nigeria context particularly from the perspective of Imo State secondary schools are insufficient. It is against this background that the researchers were motivated to investigate the relationship between secondary school students' self-efficacy and their academic achievement.

Research Questions

The following research questions guided the study:

1. What are the self-efficacy scores of secondary school students?
2. What are the achievement scores of secondary school students in English Language?
3. What are the achievement scores of secondary school students in Mathematics?
4. What is the relationship between secondary school students' self-efficacy and their academic achievement in English Language?

5. What is the relationship between secondary school students' self-efficacy and their academic achievement in Mathematics?

Hypotheses

The following null hypotheses were tested at 0.05 level of significance:

1. There is no significant relationship between secondary school students' self-efficacy and their academic achievement in English language.
2. There is no significant relationship between secondary school students' self-efficacy and their academic achievement in Mathematics.

Theoretical Framework

Self-Efficacy theory

The theory of self-efficacy was propounded by Bandura in 1977. This theory states that individuals are more likely to engage in activities for which they have high self-efficacy and less likely to engage in those they do not. The theory was based on the principle assumption that psychological factors serve as a means of creating and strengthening expectations of personal efficacy. Bandura in this theory defined self-efficacy as people's beliefs about their capabilities to produce designated levels of performance that exercise influence over events that affect their lives. The theory distinguishes between expectations of efficacy and response-outcome expectancies. According to Bandura, outcome expectancy is a person's estimate that a given behaviour will lead to certain outcomes. Efficacy expectation is the conviction that one can successfully execute the behavior required to produce the outcomes. Although a person may expect a certain activity to lead to a particular outcome, they may lack the motivation to perform the action, doubting their ability to do so.

Outcome and efficacy expectations are differentiated, because individuals can believe that a particular course of action will produce certain outcomes, but if they entertain serious doubts about whether they can perform

the necessary activities such information does not influence their behavior (Bandura, 1977). Increasing a person's self-efficacy increases their ability to deal with a potentially aversive situation. Bandura noted that students with efficient self-efficacy have high assurance in their capabilities, approach difficult academic tasks as challenges to be mastered, set challenging goals and maintain strong commitment to them, heighten or sustain their efforts in the face of failures or setbacks, attribute failure to insufficient effort or deficient knowledge and skills which are acquirable and approach threatening situations with assurance that they can exercise control over them.

In contrast, students with inefficient self-efficacy tend to doubt their capabilities, shy away from difficult academic tasks, have low aspirations and weak commitment to goals they choose to pursue, dwell on personal deficiencies, obstacles they will encounter, and all kinds of adverse outcomes, rather than concentrating on how to perform successfully, slacken their efforts and give up quickly in the face of difficulties, are slow to recover their sense of efficacy following failure or setbacks and fall easy victim to academic stress and depression.

Verbal or social persuasion also affects one's perception of self-efficacy. It is a way of strengthening people's beliefs that they have what it takes to succeed (Bandura, 1994). Verbal or social persuasion can provide a temporary boost in perceived ability. When it is effective in mobilizing a person to action, and their actions lead to success, the enhanced self-efficacy may become more permanent. Students, who are persuaded verbally that they possess the capabilities to master given academic task are likely to mobilize greater effort and sustain it than if they harbor self-doubts and dwell on personal deficiencies when problems arise. This increases their chances of success. Unfortunately, it is more difficult to instill high beliefs of personal efficacy by social persuasion alone than to undermine it since unrealistic

boosts in efficacy are quickly disconfirmed by disappointing results of one's efforts.

Bandura observed that people rely on their somatic or emotional states when judging their capabilities. Stress and tension are interpreted as signs of vulnerability to poor performance. Fatigue, aches and pains, and mood also effect perception of ability. Bandura noted, however, that it is not the intensity of the emotional or physical reaction that is important, but rather, how it is perceived and interpreted. Students with a high sense of self-efficacy may perceive affective arousal as an energizing facilitator of performance, whereas those who are overwhelmed by self-doubts regard their arousal as a debilitating.

Since most human motivation is cognitively generated self-efficacy are an important factor in students' motivation and academic achievement. Self-efficacy works in coordination with component skill and incentive to act. In as much as a student has both the component skills needed to succeed, and the incentive to engage, self-efficacy plays an important role in determining what activities a student will choose to engage in, how much effort they will expend, and how long that effort will be sustained when things get tough.

Expectation alone will not produce desired performance if the component capabilities are lacking. Moreover, there are many things that people can do with certainty of success that they do not perform because they have no motivation to do so. Given appropriate skills and adequate motivation, however, efficacy expectations are a major determinant of student's choice of activities, how much effort they will expend, and of how long they will sustain effort in dealing with stressful academic situations.

Bandura's theory of self-efficacy clearly shows that the need for capability belief (self-efficacy), motivation (which encourages students'

interest in schooling) and reason of outcome belief (locus of control) in academic achievement of students cannot be over-stressed. This therefore signifies the strong relationship between this theory and the variables of the present study. The researcher deemed it fit to anchor her study on the above theory and hereby introduced a second theory to adequately solidify the theoretical base of this study.

Method

This study was carried out in Imo state. This study adopted the correlation research design. Correlation studies seek to establish the relationship exists between two or more variables (Nworgu, 2015). According to Egereonu (2011), results from such studies are expressed in correlation coefficients, that is, the degree of relationship is expressed in numerical forms, between -1.00 to +1.00. The population of the study comprised of 8,463 students. The sample size for the study consisted of 860 (420 males and 440 females) SS2 students drawn through multi-stage sampling. The instrument used for data collection was Morgan-Jinks Student Self-efficacy Scale (MJSES) developed by Morgan and Jinks with an overall reliability coefficient of .80. The subscales alphas for the MJSES instrument are .78 for talents, .70 for context and .66 for efforts. The students' scores in English language and mathematics were obtained from the Teachers' Grade Books/Score Inventory. The researchers administered copies of the instruments through direct delivery method. Data collected for this study were analysed using summated scores descriptive statistics, Pearson Product Moment Correlation and Regression analysis.

Results

Table 1: Range of mean scores on students' academic self-efficacy

Range of scores Remarks	N	%	
30 – 59	293	34.0	Low academic self-efficacy
60 – 85	403	46.9	High academic self-efficacy
86 – 120	164	19.1	Very High acad self-efficacy

In table 1, it was observed that 164(19.1%) of the students with the scores ranging from 86 to 120 have very high academic self-efficacy, while 403(46.9%) of the students who scored between 60 and 85 have high academic self-efficacy. Also, 293(34.0%) who scored between 30 and 59 have low academic self-efficacy.

Table 2: Range of achievement mean scores of students in English language

Range of scores	N	%	Remarks
0 – 49	90	10.5	Poor achievement
50 – 69	290	33.7	Average achievement
70 – 100	480	55.8	Good achievement

Table 2 indicates that 480(55.8%) of the students with the scores ranging from 70 to 100 have good achievement in English language, while 290(33.7%) students who scored between 50 and 69 have average achievement where 90(10.5%) of the students have poor achievement in English language.

Table 3: Range of achievement mean scores of students in Mathematics

Range of scores	N	%	Remarks
0 – 49	63	7.4	Poor achievement
50 – 69	229	26.6	Average achievement
70 – 100	568	66.0	Good achievement

Table 3 reveals that 568(66.0%) of the students with the scores ranging from 70 to 100 have good achievement in mathematics, while 229(26.6%) students who scored between 50 and 69 have average achievement where 63(7.4%) of the students have poor achievement in mathematics.

Table 4: Pearson r on students’ academic self-efficacy and their achievement scores in English language

Source of Variation	N	Self-efficacy r	Achievements r	Remark
Self-efficacy	860	1.00	0.18	Very low or no positive Relationship
Achievements	860	0.18	1.00	

In table 4, it was observed that there is very low or no positive relationship of 0.18 existing between the students’ academic self-efficacy and their achievements in English language in secondary schools.

Table 5: Pearson r on students’ academic self-efficacy and their achievement scores in Mathematics

Source of Variation	N	Self-efficacy.r	Achievements r	Remark
Self-efficacy	860	1.00	0.69	High Positive Relationship
Achievements	860	0.69	1.00	

Table 5 indicates that there is high positive relationship of 0.69 existing between the students’ academic self-efficacy and their achievements in Mathematics in secondary schools.

Table 6: Significant of Pearson r on the students’ academic self-efficacy and their achievements in English language using probability table of r

N	Remark	cal. r	df	pvalue	Cal.pvalue
860	0.18	858	0.05	0.00	S

S = Significant

Table 6 indicates that at 0.05 level of significance and 858df, the calculated r0.18 has pvalue 0.00 which is less than critical pvalue 0.05. Therefore the fifth null hypothesis is rejected. The type of relationship existing between the students’ academic self-efficacy and their achievements in English language in secondary schools is significant.

Table 7: Significant of Pearson r on the students’ academic self-efficacy and their achievements in mathematics using probability table of r

N	Remark	cal. r	df	pvalue	Cal.pvalue
860	0.69	858	0.05	0.00	S

S = Significant

In table 7, it was observed that at 0.05 level of significance and 858df, the calculated $r=0.69$ has pvalue 0.00 which is less than critical pvalue 0.05. Therefore the sixth null hypothesis is rejected. The type of relationship existing between the students' academic self-efficacy and their achievements in mathematics in secondary schools is significant.

Discussion of Findings

The findings of this study revealed that a good number of secondary school students (66%) have high self efficacy. This finding shows that although many of the students believe that their academic outcomes are determined by external factors, they still believe that they have the capacity to perform effectively in their academics. This finding is consistent with the findings by previous researchers (Adeyinka, Adedeji & Olufemi, 2011; Goulao, 2014) who reported that many students have high academic self-efficacy. The reason for the high academic self-efficacy observed among students may be as a result of the quality of education given to them. Perhaps, the students are enjoying qualitative education which invariably has made them develop enough confidence in their personal academic abilities.

People's belief about their abilities in particular domains are thought to be very important in motivating them to do what they can do in order to achieve results. Nevid (2009) observed that people behave in the way that executes their internal beliefs, thus, self-efficacy functions as a self-fulfilling prophecy. Since students usually work in groups, they may have obtained important information that can help build their self-efficacy from their classmates and staff. According to Ogunmakin and Akomolafe (2013), students obtain information to appraise their self-efficacy from their actual performance, their vicarious experiences, persuasions from others, and psychological reactions from people around them.

The findings also showed that a good number of students (55.8%) in Imo state have good level of academic achievement English Language. The result also indicated that a good number of students (60.0%) in Imo state have good level of academic achievement in Mathematics. This result shows that despite the discouraging effect of the economic situation of the country and the high rate of unemployment among Imo graduates, secondary school students in Imo state still work hard to excel in their academic pursuit. The above finding is in consonance with the report of previous researchers (Garikai, 2010; Bahogo, 2011; Ozuome, Oguzie, Mokwelu & Anyamene, 2020) who found that many students have high academic achievement. However, the finding contradicts the finding by (Obi, 2016) who reported that majority of secondary school student have low academic achievement.

It is important to note, that secondary school students' academic achievement is clearly linked to their subsequent social, economic and health outcome (Heckman, 2006). Also, Staffolani and Bratti (2012) observed that students' previous educational outcome are the most important indicators of their future achievement. This signifies that the higher the previous academic achievement, the better the students' academic achievement. Since, a good number of the students have high academic achievement, it may therefore be right to assume that if students are provided with more serene teaching and learning atmosphere, they will be encouraged to put more effort toward achieving academic excellence, and this will further encourage better academic achievements in future.

Furthermore, the result from the study revealed that a significant positive relationship exists between the students' self-efficacy and their academic achievement in English Language and Mathematics. This finding support previous researchers (Akomolafe, 2010; Chemers, Hu & Garcia, 2011, Greene, Miller, Crowson, Duke & Akey, 2009; Sharma & Sibereisen, 2007).

The motivational influence of self-efficacy through the process of organized goals which lay the foundation of self-regulation of efforts by providing a standard for judging the sufficiency and effectiveness of goals could be a possible reason for the above finding of this study. Another possible reason is that self-efficacious students participate more readily, work harder, persist longer and have fewer adverse emotional reactions when they encounter difficulties than those who doubt their capabilities. Individuals with high sense of self-efficacy believe in their capacity to carry out tasks, invest effort in the activity, persists in the face of difficulty and have optimistic outlooks. Compared with students who doubt their learning capabilities, those that feel efficacious for learning or performing a task participate more readily, work harder, persist longer when they encounter difficulties, and achieve at a higher level in their academics. However, this finding refuted previous reports by Reynolds and Weigand (2010) who found that self-efficacy did not significantly correlate with academic achievement. Jeffrey (2008) also reported that self-efficacy did not predict academic achievement among the students.

Conclusion

Based on the findings of this study, the researchers concluded that a good number of students in Imo state have high self-efficacy. It was also concluded that a good number of the students in Imo state have good achievement in English language and mathematics. Moreover, there are significant positive relationships between secondary school students' self-efficacy and their academic achievement in English Language and Mathematics respectively.

Recommendations

Based on the findings of this study and the discussions that followed, the researchers made the following recommendations:

1. Counsellors, teachers and other staff should create programmes that will help develop strong belief in the self-capacity.
2. Parents, government and other stakeholders should come up with reinforcing packages inform of incentives, scholarships, and promotions so as to encourage students to maintain good academic achievement and strive to achieve better in future.
3. Guidance Counsellors should ensure kin and objective observation on students' behaviours and guard against such behaviours that could be detrimental to students' self-efficacy.
4. Secondary school authorities should design programmes that will lay emphasis on giving students the opportunities to participate freely and actively in school activities and decision making. It is hoped that this will promote their sense of efficacy beliefs about themselves and their academic activities.
5. Parents and caregivers should also try their best possible to create a sense of curiosity for education among their children and wards. This could be done by providing them with tangible and intangible reinforcers whenever they perform well in school.

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