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The Relationship Among Attribution Pattern, Study Habit, and Academic Achievement of In-School Adolescents in Nigeria

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Abstract: There are instances where students have access to good facilities, qualified teachers, and well-equipped laboratories, and their academic achievements and performances remain low. Of course, some factors rely on the students themselves and are responsible for poor academic achievement. Therefore, this study examined the relationship between attribution patterns, study habits, and academic achievement among in-school adolescents in Nigeria. Simple random sampling was employed to select fifty-four (54) schools, and six hundred and seventy-two (672) respondents were involved in the study. Two instruments were adopted for the study: Rotter's I-E control scale and Bakare's Study Habit Inventory (SHI). Also, the students' Junior School Certificate Examination (JSCE) results are used to measure students' academic achievement. Multiple Regression and Pearson Product Moment Correlation Coefficient analyses were used to analyse the data. The result of this study firmly established that the two independent variables (attribution pattern and study habit) and the moderator variables (gender) significantly predicted the academic achievement of secondary school students. The study confirmed that internal locus of control and desirable study habits indicate academic achievement. In contrast, external locus of control coupled with poor study habits is a pointer to low academic achievement. Since students' perception of causality is essential, it is recommended that parents, educational psychologists and teachers should encourage internally oriented students and assist externally oriented students and those found to have undesirable study habits to make an effort to control and exert themselves more in their academic activities.

Keywords: attribution pattern; locus of control; learning habit; academic achievement; adolescents.

Introduction

Education is the bedrock of a nation's progress and sustenance. It is a tool that a nation can utilise to progress economically, socially, politically, technologically, scientifically, and culturally more quickly (Bentil, 2023). Education is globally recognised as one of the most essential pillars of human growth and the fight against poverty. One of the Sustainable development goals (SDGs) established by the United Nations is quality education (SDG4). However, progress in achieving quality education will be in jeopardy if the student's academic achievement is abysmally low (Mirghani, 2020).

In recent years, parents, teachers, media workers, counsellors, educational administrators and sometimes the students have continued lamenting students' perceived low academic achievement in Nigeria. According to Kirori and Dickinson (2020), the observation is not unconnected with the yearly poor performances of students in the final West African Senior School Certificate Examination (W.A.S.S.C.E). For instance, Nigeria's deteriorating level in the education system is evident in the recent results released by the West Africa Examination Council. A total of 1,369,142 candidates registered for the examination in Nigeria; of the total number of candidates who sat for the examination, only 188,442 candidates, representing 13.67%, obtained credit and above in English Language, Mathematics and three other subjects. Also, the National Examination Council (NECO) reported that only 25% of the students who wrote the 2023 national examination had a pass mark in Mathematics and English Language.¹

Several studies have been conducted to ascertain the extent of poor academic achievement of students in Nigeria (Ajai et al., 2020; Cabrera & Torres, 2021). These studies drew attention to the drastic drop in the academic achievement of Nigerian students. Various factors and explanations have been put forward to justify the observed poor academic achievement among students in Nigeria. Prominent among these reasons is the momentous development in the country's education, such as expansion without proper physical and academic planning, plus inadequate provision of qualified teachers (Oladebinu et al., 2018; Oyewole, 2017). According to Cabrera and Torres (2021), factors responsible for poor academic achievement are social, psychological, financial, health and educational problems. There are, however, other researchers who reported that other factors responsible for the poor academic achievement problem include inappropriate teaching methods, inappropriate syllabi (Baffoe & Okae-Anti 2020), wrong curriculum contents, inadequate laboratory equipment, deteriorating physical condition of educational facilities and insufficient relevant teaching aids (Hassan et al., 2021).

On the contrary, there are some cases where some of the problems highlighted above are absent. In other words, students have access to good facilities and equipment and qualified teachers, but their academic performance remains poor (Apau, 2021). This suggests that some factors are responsible for poor academic performance among students. Psychological factors such as locus of control, students' level of interest, study habits, and intelligence quotient may influence students' academic achievement (Okeke & Ukoh 2020).

The focus of psychology study has shifted to finding a model that can predict achievement-related behaviour and a believable explanation for why people succeed or fail (Udegbe & Okoli, 2022). Many theoretical frameworks and empirical research have been developed, focusing on analysing cognition

¹ <https://waecgh.org/examination-statistics/>

regarding the factors contributing to success and failure (Ogbada et al., 2022). This fact-finding, based on an observer's assumptions about the reasons behind their or another person's behaviour, is known as the "attribution pattern." It is a behaviour analysis component that helps better understand and anticipate behaviour. Antidotes against a recurrence that is unsatisfying can thus be prepared in advance.

According to the attribution explanation of achievement-related behaviour, students' beliefs about what led to their successes and failures varied, and those beliefs impacted their academic performance. The direction of an attributor's attribution, which is based on their perceived causes of performance, may influence their emotional state of achievement behaviour toward academic achievement, according to Cuadro et al. (2023). An attributor is, therefore, more inclined to accept accountability for their conduct when they believe that internal forces are to blame for their success. Nonetheless, the attributor will likely feel less ashamed and assign blame to others if they think that outside forces are to blame for failures.

Concerning academic achievement, when a student attributes a failure to a difficult task and a belief that he could not have done better, such a student is likely to give up sooner, select a more straightforward task and lower his goals. However, if the student interprets his failure as contingent on lack of effort or poor study habits, they are likely to have higher motivation to try again for success. Though seemingly plausible, these postulates lacked sufficient empirical support (Akunne & Anyanmene 2021).

Several attribution studies have been conducted with students; Hojjati (2022) found that students attribute the success of their positive outcomes more to ability and effort than they did to their adverse outcomes or failure, while Haliru et al. (2015) found that students tended to attribute success mainly to external causes and failure to internal causes. Villa and Sebastian (2021) reported that students attributed success mainly to themselves and their teachers, while their failure is attributed to a few external causes. This potent, cogent, but somewhat confusing subject deserves elucidation (Ozuome et al., 2020).

According to Ebele and Olofu (2017), one of the factors that determine a student's level of academic achievement is study habits. Students' level of academic success is greatly influenced by their preparation and the learning strategies they intentionally build and use. According to Gahir et al. (2022), the most frequent obstacle to students' academic performance in all its manifestations is a lack of productive or constructive (excellent) study habits. In the meantime, social media distractions are rapidly causing Nigerian students' study habits to disappear (Fabunmi & Awoyemi, 2017). Many students would rather watch TV shows and movies, listen to CDs, and view videos, among other things.

Tus (2020) opined that students can improve their study habits if given helpful information and guidance. When a student's study habits are faulty, anxiety in examinations may develop, which may lead to poor academic achievement. Therefore, research needs to be conducted on these predictor variables of attribution and study habits related to students' academic achievement (Jafari et al., 2019). Based on this, this research aimed to study the relationship between attribution patterns, study habits, and academic achievement among senior secondary school students in Nigeria.

Statement of the Problem

Many students' goals while entering schools and colleges are academic success. However, this intent may be thwarted by the type of attribution pattern and study habits techniques employed by students. In other words, academic success may not be attained when a student is deficient in his study

habits and techniques. The fact that many academic failures are recorded at the secondary school level no longer makes news.

It is, for instance, believed that in key subjects like English Language and Mathematics at the West African School Certificate Examination, failure rates on average usually hit 70%.² It is not that Nigerian students at the secondary school level are generally weak academically. Still, they might have failed to exert control over their belief system or adequately concentrate on their studies. Poor study habits are indeed a problem among many Nigerian students. The poor academic achievement of Nigerian students poses a great challenge to national development and is worrisome (Kirori & Dickinson, 2020). Many factors have been adduced to be responsible for this trend and could be grouped under teacher, school, government, home and student factors. Most studies focused on teacher and material variables such as inappropriate teaching methods, appropriate syllabus, wrong curriculum contents, inadequate laboratory equipment, the deteriorating physical condition of educational facilities and insufficient relevant teaching aids (Baffoe & Okae-Anti, 2020; Hassan et al., 2021), affecting the teaching and learning of Mathematics and English (Cabrera & Torres, 2021).

The current poor academic achievement experience by learners at all levels may not be unconnected with poor study habits and imbibed belief that they could not do better. Study habits enable students to manifest different experiences, which in turn affects changes in behaviour, motivational levels, mental, physical, and interpretive skills development, as well as values and beliefs (Singh, 2021). There is a dearth of literature on student variables affecting students' academic achievement in Mathematics and English (Udegbe & Okoli, 2022). Hence, there is a need for this study on the relationship between attribution patterns, study habits, and academic achievement among in-school adolescents in Nigeria.

Wang (2021) asserted that student academic achievement is the foundation of education and that without it, any attempts to bring about social change would be in vain. As a result, it can be concluded from the claims above that a nation's desire to achieve its educational objectives depends on the academic achievement of its students. There seems to be little or no research that examines attribution pattern and study habit and their relationship with academic achievement. Based on this, the research aimed to study the relationship between attribution, study habits, and academic achievement among senior secondary school students in Nigeria.

Research Question

Specifically, the research question for this study is:

What is the relationship between attribution patterns, study habits and academic achievement of senior secondary school students in Nigeria?

Research Hypotheses

With the above questions, the following hypotheses are generated:

H1. There is no significant relationship between attribution patterns, study habits and academic achievement of secondary school students in Nigeria.

H2. There is no significant relationship between attribution pattern and academic achievement of senior secondary school students in Nigeria.

² <https://waecgh.org/examination-statistics/>

H3. There is no significant relationship between study habits and academic achievement of senior secondary school students in Nigeria.

H4. There is no significant relationship between attribution patterns, study habits, and academic achievement of senior secondary school students in Nigeria based on gender.

Literature Review

Education is an instrument that guarantees change and provides a pathway for every individual to achieve a decent livelihood (UNESCO, 2020). Thus, the fourth of the seventeen Sustainable Development Goals (SDGs) aims to achieve "universal access to high-quality, equitable education and opportunities for lifelong learning" by 2030. According to Bantilan et al. (2024), a key requirement for accomplishing a nation's overall educational objectives and achieving universal access to quality and equitable education depends on the level of student academic achievement. Nigerian students' academic achievement in external and certificate examinations has been a source of worry for education stakeholders. Academic ability may differ in students' academic achievement due to many factors. Some of such factors may be personal characteristics of the individual, like attribution patterns and study habits (Cuadro et al., 2023). In other words, Attribution style and study habits could play an essential role in student academic achievements.

Various researchers have perceived attribution patterns in similar ways. Attribution pattern deals with what individuals perceive as responsible for whatever happens to them. It is a way of attributing causes to events by one who has experienced them (Choudhury & Borooah 2017). According to Akanaeme et al. (2022), the concept of attribution pattern describes the cognitive process in which a person perceives the causes of what is happening to him, whether it is caused by him or by others. More so, a person might perceive an event as resulting from his effort/ability or lack of it (internal attribution pattern) or brought about by some other persons or something other than himself (external attribution pattern) (Atetwe et al., 2018).

In applying attribution pattern constructs, Kumar and Asha (2017) observed that if a person knows where their score was on the continuum of the attribution scale, it could provide an explanation for certain behaviours and, at the same time, provide some data for predicting such a person's behaviours. In explaining their uses further, Atetwe et al. (2018) noted that investigation on attribution falls into two categories. The first classification incorporates experimental design in which a subject, after performing a task, receives reinforcement that appears to be contingent upon his actions (internal attribution) or chance or some external forces (external attribution).

As conceived by Cuadro et al. (2023), the direction of attribution suggested that some individuals attribute external attributes to outside forces, i.e., chances, witchcraft, or some powerful, influential persons. Therefore, understanding causation enables one to evaluate an individual belief system (Udegbe & Okoli, 2022). Thus, external attribution absolves individuals from responsibilities and relieves them of reactive guilt. It also lowers their attempt to master their environments and heightens their predisposition to anxiety.

Regarding internal attributions, Merkinė et al. (2019) discovered that more significant social disapproval might result for individuals who make internal attributions for their adverse outcomes. Therefore, when explaining their negative actions, individuals may face a dilemma between the normative advantage of creating an internal attribution and the potential punishment of acknowledging responsibility. However, Merkinė et al. (2019) suggested that in contrast to the suggested qualification to the attribution of internality, more significant social approval should result for those who accept casual responsibility for their achievement in related performance even when that performance is poor.

Islam (2021) suggested that the way people perceive the nature of an event will have important implications for the kind of explanation offered. Oguzie et al. (2019), in their study on attribution in perceiving the causes of behaviour, found that whichever attribution a student makes about an event in his/her life will directly affect how he/she views his/her performance in these events. This discovery was made after studying three hundred male and female students. They attributed their performance to their various perspectives.

Study skills and study habits are terms used interchangeably in literature. Alade and Kuku (2017) noted that study skills are numerous techniques which are purely mental exercises required to manipulate the thought process to give meaning to the visual signs, select and organise messages in meaningful patterns and synthesise them into existing bodies of knowledge. Some major activities involved in the learning/studying process are doing homework, sitting down to study assigned portions, concentrating on learning and forming a scheme of comprehending facts. According to Ebele and Olofu (2017), these are necessary to recall relevant facts to successfully tackle examination questions. Asha and Anju (2020) maintained that the whole studying process is psychologically laden because it affects the thinking, feeling, personality, social interaction, and other activities of the students(s) concerned.

Oguzie et al. (2019) stated that experience has shown that the educational system in Nigeria has failed in the past years to emphasise effective study methods to students or make any provision for a formal or informal way of instruction on how to study. Studentship is a lifelong career; consequently, exploring and learning are processes that continue throughout life. Given this, cultivating effective study habits is a basic requirement for any individual's maintenance of a well-informed state of mind and a student's success in any academic and developmental endeavour (Sharma & Vyas, 2016).

Magulod (2019) stated that students' attitudes towards private study leave much to be desired, and most of the few who study from time to time cultivate poor methods of doing so. Looyeh et al. (2017) stated that this in no little way hampers effective learning. Galle et al. (2023) observed that many students have little or no interest in private study because they are lazy. He added that most students adopt disorganised methods of studying. Similarly, Ranju and Kulkarni (2020) stated that students in secondary schools and higher institutions have no systematic strategies for ensuring or developing good study habits. Gahir et al. (2022) think every student can improve his study habits if given helpful information and proper guidance.

Robres et al. (2021) stated that just like running, cooking, farming and planting, studying effectively must be mastered. It requires conscious effort and a system of principles and methods. Robres et al. (2021) added that good study habits can only be achieved through self-denial, discipline, sincerity of purpose, dogged determination, and training. It was further stressed that to study is, therefore, to make an earnest effort to know or be informed about a particular subject. Kaur & Pathania (2017) stated that good study habits and interest in subjects learnt most clearly differentiate between students and those who do poorly in classes.

The academic achievement of in-school adolescents in Nigeria is an issue that concerns governments and other educational stakeholders. In Nigeria, students' performance on standardised examinations has been troublingly low. Previous studies on students' achievement have focused on inadequate funding, infrastructural decay, parental background factors and pedagogical issues (Hassan et al. 2021). However, the present study considers the psychological aspects of academic achievement, looking at the relationships among attribution patterns, study habits and other contextual factors (such as gender) that are likely to impact students' academic performance. The aim is to identify some factors residents in the students themselves which are responsible for poor academic performance.

Methodology

Research Design

A correlation research design was used in this study. Correlation research design investigates whether any relationships exist between or among variables of interest. This study aimed to determine whether two independent variables—attribution pattern and study habits—had any meaningful correlation with one another and could predict respondents' academic achievement. This study will use a correlation design since it allows for the simultaneous measurement of several variables and their relationships. The design permits the research to examine how some single or combined variables might affect a particular pattern of behaviour. In this study, the independent or predictor variables are the two components of attribution and study habits. They are called predictor variables because they are presumed to influence academic achievement, the dependent or criterion variable.

Research Participants and Sampling

The target population for this study consisted of all Nigerian senior secondary school students. The immediate population, however, comprised all senior secondary school one (SS1) students. The respondents selected for the study from this population consisted of 336 boys and 336 girls, giving a total of 672 senior secondary school students (SS1) from 54 selected secondary schools in Nigeria. The sample represents students from private schools, public schools, and single-sex and mixed-sex schools. This sample was chosen based on the premise that most SS1 students would have little difficulty (if any) in reading and understanding the instructions that will be administered to them. Also, the students, having completed three years at the junior secondary school level, have academic achievement, intellectual ability and experience that should be sufficiently reliable for a work of this nature. Finally, the student's academic achievement in the junior secondary school (JSS) final examination administered is an essential data source for this study.

Multi-stage sampling techniques were employed. The research site was stratified into three regions. Thereafter, simple random sampling was used to select schools and respondents from each stratum involved in the study. The individuals were chosen so that at each draw, all the remaining items had an equal chance of being selected, and each choice was independent of any other choice. Thus, the dip hat method was employed in which a person gets into the selection by chance. The selection was done by numbering pieces of paper, and a male student who picked from number 1 to 54 automatically became a participant. The same procedure was followed for the selection of girls in each school.

Instruments and Measures

The objective of this study is to investigate the extent to which students' attribution patterns and study habits relate to their academic achievement. Therefore, two instruments were adopted for data collection in this study, and they are described below.

Rotter's Internal – External Control Scale (Rotter's I-E Scale)

The Rotter's I – E scale measured the respondents' attribution pattern. This instrument attempts to measure individual differences in the generalised belief regarding control of personal destiny. A low score towards internality indicates that the respondent believes in external forces like luck or chance to take control over their life. A high score towards internality means that the respondent believes he has control over his own life; this implies that he is an internally controlled individual.

Description of Rotter's I-E Scale. Rotter's I-E scale consists of twenty-nine (29) paired forced-choice items, six of which are filler items. These six fillers were included to camouflage the objectives of

the scale (Numbers 6, 8, 14, 19, 24 and 27 are the filler items). For example, 6a, which is one of the filler items, reads, 'children get into trouble because their parents punish them too much' while item 6b reads 'the trouble with most children nowadays is that their parents are too easy with them' it could be seen that these items have no relationship with the belief of an individual who is either internally or externally controlled.

Administration of Rotter's I-E Scale. The students were seated in a classroom, and after establishing a good rapport with them, the researcher spelt out the instructions to them. Examples were given on how to fill out the questionnaire. The respondents responded to the questionnaire independently. After completion, the researcher collected the questionnaire forms from the respondents for scoring.

Study Habits Inventory

Study habit inventory is a personality self-rating scale that measures students' study habits. This inventory, by its classification and framing, is meant to identify the secondary school students' defective or poor study habits. The instrument (inventory) enables the students to describe (to the best of their knowledge) the factors /conditions associated with their study pattern/time and the consequent academic achievement. It consists of forty-five items in question forms requiring the respondent to provide an answer to each. It comprises eight sessions: homework and assignment, time allocation, reading and note-taking, study period procedure, concentration, written work, examinations, and teacher consultation.

The reliability of the inventory was established through a test-retest reliability procedure. The test was first administered to 58 students (30 boys, 28 girls); age X 14.5 years) with a time interval of three weeks, the test was administered again to the same set of students, and the reliability coefficient was 0.83. The instrument's construct validity was established by determining if it discriminated between two main groups, i.e., the passing and the failing students. The test result revealed that (SHI) discriminated well between the passing groups, comprising 91 students, and the failing group, comprising 87 students (Bakare, 2007). The inventory was scored on a five-point Likert-type rating scale. In the same way, it was divided into two dimensions, i.e., positive and negative. Any positive answer attracts 5 – 1, while a negative answer receives from 1 – 5. The total score obtained by each student was added up to represent their score on the scale. The highest score obtainable is 225.

Academic Achievement

A proforma was designed to collect students' results in English and Mathematics at the Junior Secondary Certificate Examination (JSCE) conducted by the National Examination Council (NECO). The students' results in these subjects represented their academic achievement. This is because the JSCE conducted by NECO is a standardised test that is confirmed valid and reliable. Also, the JSCE is a significant landmark in the student's academic pursuit. In contrast, the subjects selected (English and Mathematics) are compulsory ones that students must pass before proceeding to senior secondary school.

Procedure for Data Collection

In administering the instrument, each of the 54 selected secondary schools was visited to seek permission from the schools' authorities through a letter of introduction collected from the author's institution. A few research assistants were employed to give necessary support throughout the respondents' administration and completion of the instruments. The instructions and questions were read to the respondents carefully, providing explanations where essential and stressing the anonymity

of respondents' responses. The copies of the questionnaire were collected immediately after completion to reduce the chances of loss or misplacement.

Ethical Consideration

The research ethics committee of the authors' institution provided ethics approval. Respondents had the option to leave the research at any time and were entirely told about the possible implications of the study in advance (Strydom, 2021). All necessary safety measures were taken to ensure that research participants would not suffer harm. These measures included, but were not restricted to, getting written informed consent before the study. The informed consent letter addressed voluntary participation, research site, study purpose, and confidentiality.

Data Analysis

The statistical techniques used to analyse the data were the mean, standard deviation, and variance. The data was further analysed using inferential statistics such as Pearson Product Moment Correlation and multiple regression. Finding the relationship between a single independent variable or criterion variable and a group of other variables known as predictors or dependents is possible through various regressions. The predictive value of multiple measures is combined into a single formula via the multiple regression equation. Each variable is weighed according to its significance in producing the intended prediction in various regressions. The hypotheses were tested using analyses of multiple regressions.

Results

The data was generated from respondents' attribution patterns, study habits, and academic achievement in Mathematics and English Language. This session presents the results of data analysis and interpretation.

Table 1

Frequency Distribution of the Research Instrument

Variables	Public school	Private school	Total	Male	Female	% Public school	% Private school	% Male	% Female
Internal Attribution	110	280	390	277	113	28	72	71	29
External Attribution	226	56	282	59	223	80	20	21	79
Desirable study habit	100	256	356	249	107	28	72	70	30
Undesirable study habit	236	80	316	87	229	75	25	28	72
High academic	120	260	380	256	124	32	68	67	33
Low academic	216	76	292	80	212	74	26	27	73

Results in Table 1 showed that, from 672 sampled students, 336 (50%) were males, and 336 (50%) were females selected from private and public secondary schools. 390 (58%) were internals, and 282 (42%) were externals. Of the 390 internals, 110 (28%) were from public secondary schools, while

280 (72%) were from private secondary schools. 277 (71%) internals out of 390 are males, while 113 (29%) are females. Of the 282 externals, 226 (80%) were from public schools, while 56 (20%) were from private schools. 59 externals (21%) of the 282 externals are males, while 223 (79%) are females.

It was also revealed that 356 (53%) and 316 (47%) out of the 672 respondents had desirable and undesirable study habits, respectively. Further breakdown of the results showed that out of the 356 students with desirable study habits, 100 (28%) were from public schools, while 256 (72%) were from private schools. 249 (70%) and 107 (30%) of the respondents with desirable study habits are male and female, respectively. Out of the 316 students who had undesirable study habits, 236 (75%) were from public schools, while 80 (25%) were from private schools. 87(28%) and 229 (72%) of the respondents with undesirable study habits are male and female, respectively.

Furthermore, 380 students, representing (57%) of the total 672 students sampled, had high academic achievement scores, of which 120 (32%) were from public secondary schools, while 260 students (68%) were from private schools. This figure comprises 256 (67%) males and 124 (33%) females. By inspection from Table 1 above, 292 (43%) of the total respondents had low academic achievement scores, of which 216 (74%) students and 76 (26%) students were from public and private schools, respectively. 80 (27%) male students had low academic achievement scores, while the remaining 212 (73%) students with low academic achievement scores were female.

Hypotheses Testing

The data results were used to examine the hypotheses generated for the study.

Ho₁: There is no significant relationship among attribution pattern, study habit and academic achievement of senior secondary school students in Nigeria.

Table 2a

Model Summary

Model	R	R square	Adjusted R square	Std. error of estimate
1	.637	.406	.404	15.04080

Note. Predictors (constant) Attribution Pattern, Study habit.

Table 2b

ANOVA

Model	Sum of square	Df	Mean square	F	sig
Regression	103515.2	2	51757.611	228.787	.000a
Residual	1513345.0	669	226.226		
Total	254860.2	671			

Note. Significant $P \leq 0.05$; Predictors (constant), Attribution Pattern Study habit; Dependent variable: Academic Achievement.

Results in Table 2a show a multiple regression coefficient of .637 and an adjusted R^2 value of .404, with an F value of 228.787 (see Table 2b) and a degree of freedom of 2/669 that are significant at the 0.05 alpha level. The attribution pattern and study habits have a statistically significant relationship

with the academic achievement of senior secondary school students. This is further established in Table 2c.

Table 2c

Result of Multiple Regression Coefficients of Attribution Pattern, Study Habit and Academic Achievement of Senior Secondary School Students

	B	Std. Error	Beta	t-value	Sig
Constant	29.104	1.374		21.188	.000
Attribution Pattern	.439	.410	.185	1.073	.284
Study Habit	.111	.042	.454	2.635	.009

Note. Dependent variable: Students' Academic Achievement.

Results in Table 2c show that .439 and .111 coefficients for attribution pattern and study habit, respectively, indicate an increase of .439 in academic achievement for every one-unit increase in attribution pattern and an increase of .111 in the academic achievement also for every one-unit increase in study habit. The Beta weights of attribution pattern and study habit are .185 and .454, respectively. These show that a one standard deviation increase in attribution pattern leads to a .185 standard deviation increase in academic achievement, and a one standard deviation increase in study habit, in turn, leads to a .454 standard deviation increase in academic achievements.

This signifies that study habit is the most significant variable that might have enhanced academic achievement. The results indicate a positive relationship among these variables. Therefore, the hypotheses that there is no significant relationship between attribution pattern, study habit, and academic achievement of secondary school students in Nigeria are rejected.

Ho₂: There is no significant relationship between attribution pattern and academic achievement of senior secondary school students in Nigeria.

Table 3

Result of Pearson 'r' Showing Relationship Between Attribution Pattern and Academic Achievement of Senior Secondary School Students

Variables	No	Mean	Std deviation	df	Calculated r value	Critical r value
Attribution pattern	672	12.5714	8.20495	670	0.632	0.062
Academic achievement	672	50.2842	19.48901			

Results in Table 3 show that the calculated r-value is 0.632, with 670 degrees of freedom, which is significant at the 0.05 alpha level. Since the computed r-value is greater than the critical r-value, the null hypothesis is therefore rejected, and the alternate hypothesis is upheld: 'There is a significant positive relationship between attribution pattern and academic achievement of senior secondary school students in Nigeria'.

Ho₃: There is no significant relationship between study habits and academic achievement of senior secondary school students in Nigeria.

Table 4

Results of Pearson 'r' Showing the Relationship Between Study Habit and Academic Achievement of Senior Secondary School Students

Variables	No	Mean	Std deviation	df	Calculated r value	Critical r value
Study habit	672	140.753	79.5969	670	0.637	0.062
Academic achievement	672	50.2842	19.48901			

Results in Table 4 show that the calculated r-value is 0.637 with 670 degrees of freedom, significant at 0.05 alpha levels. Since the computed r value is greater than the critical r-value, the null hypothesis is rejected, and the alternate hypothesis is upheld: 'There is a significant positive relationship between study habit and academic achievement of senior secondary school students in Nigeria.

HO₄: There is no significant relationship between attribution pattern, study habit, and academic achievement of senior secondary school students in Nigeria based on gender.

Table 5a

Model Summary

Model	R	R square	Adjusted R square	Std. error of estimate
1	.640	.410	.406	14.84366
2	.820	.672	.670	11.33707

Note. Predictors (constant) male and female students Attribution Pattern and Study habit; Dependent variable male and female students' academic achievements.

Table 5b

ANOVA

Model	Sum of square	Df	Mean square	F	sig
Regression	50980.793	2	25490.396	115.690	.000
Residual	73371.350	333	220.334		
Total	124352.1	335			
Regression	87704.281	2	43852.140	341.184	.000
Residual	42800.261	333	128.529		
Total	1305004.5	335			

Note. Significant, $P \leq 0.05$; Predictors (constant), male and female students' attribution pattern and study habit; Dependent variable: Male and female academic achievement.

Results in Table 5a show a multiple regression coefficient of .640 and .820 and an adjusted R² value of .406 and .670 for both male and female secondary school students, respectively. This was tested with F (see Table) values of 115.690 and 341.184 for male and female secondary school students, respectively, with a degree of freedom 2/333, which are significant at 0.05 alpha level. This signifies a considerable relationship between attribution patterns, study habits, and academic achievement of senior secondary school students based on gender. This is further established, as shown in Table 5c.

Table 5c

Result of Multiple Regression Showing the Relationship among Attribution Pattern, Study Habit and Academic Achievement of Senior Secondary School Students

	B	Std. Error	Beta	t-value	Sig
1Constant	18.950	2.638	7.183	115.690	.000
Male students' attribution pattern	1.945	.546	.658	3.560	.000
Male students study habit	.006	.057	.018	.099	.921
1Constant	28.122	1.289	21.822		.000
Female students' attribution pattern	.231	.466	.090	.497	.620
Female students' study habit	.237	.057	.908	5.028	.000

Note. Dependent variable: Male and female secondary school students' academic achievement.

Results in Table 5c show that the 1.945 and .006 coefficients for attribution pattern and study habit, respectively, of senior secondary school male students indicate an increase of 1.945 in academic achievement for every one-unit increase in attribution pattern and an increase of .006 in academic achievement for every one-unit increase in study habit.

The Beta weight of attribution pattern and study habits of senior secondary male students are .658 and .018, respectively. These show that a one standard deviation increase in the attribution pattern of senior secondary school male students leads to a .658 standard deviation increase in academic achievement, and a one standard deviation increase in study habits of male students, in turn, leads to a .018 standard deviation increase in academic achievement. Therefore, it can be said that the attribution patterns contributed more significantly than study habits to the educational attainment of senior secondary school male students.

Furthermore, results in Table 5c also revealed that .231 and .237 coefficients for attribution pattern and study habit, respectively, of senior secondary female students, indicate an increase of .231 in the academic achievement for every one-unit increase in attribution pattern of female students and an increase of .237 in the academic achievement also for every one-unit increase in study habit of female students. The Beta weight of attribution pattern and study habits of senior secondary school female students are .090 and .908, respectively. These show that a one standard deviation increase in the attribution pattern of senior secondary school female students leads to a .090 standard deviation increase in academic achievement, and a one standard increase in study habits of female students, in turn, leads to a .908 standard deviation increase in academic achievement. Therefore, it can also be said, by inspection, that study habits contributed more significantly than attribution patterns to the educational attainment of female students.

The results indicate a significant positive relationship among these variables. Therefore, the null hypothesis, which states that there is no significant relationship among attribution pattern, study habit, and academic achievement of senior secondary school students in Nigeria on the basis of gender, is rejected.

Discussion

This study's first finding revealed a significant positive relationship between attribution patterns, study habits, and academic achievement among senior secondary school students in Nigeria. Study habits contributed more than attribution patterns to the respondents' educational attainment. This finding could result from the fact that students understand that working hard (rather than chance or luck) is responsible for the success or failure they achieve in life. Bearing this notion in their minds, they were motivated to improve their study habits, resulting in good academic achievement. This finding conforms with the report of Hojjati (2022) that internals are superior to externals in educational attainment. This finding also supports the findings of Gahir et al. (2022) and Abid et al. (2023) that study habit predicts academic achievement.

The second finding in this study revealed a significant positive relationship between attribution pattern and academic achievement of senior secondary school students in Nigeria. Unsurprisingly, the internals performed better than the externals, who characteristically feel they cannot change events in their life and that success and failure depend on the whims and desires of other people or circumstances. It was discovered that students who attributed failure to a difficult task and a belief that they could not have done better gave up sooner and lowered their goals. Still, those who interpreted failure as contingent on a lack of effort had higher motivation to try again for success. This accounted for their high academic achievement.

This finding supports the report by Villa and Sebastian (2021) and Oguzie et al. (2019). Their result indicated a significant positive correlation between internally oriented students and high academic achievement in Mathematics. On the other hand, the scores of externally controlled students in this educational area were found to be low. Personal orientation is critical, for if a student fails to see the relationship between the teachers' remarks or comments as a response to their effort, that student may be less disposed to striving for success.

The hypothesis that there is no significant relationship between study habits and academic achievement of senior secondary school students in Nigeria was rejected and restated, as there is a significant positive relationship between study habits and academic achievement of senior secondary school students in Nigeria. This finding can be attributed to the fact that information is transferred from short-term to long-term memory through constant rehearsal, which can be likened to good study habits. Once information gets into the long-term memory, recall becomes easy. The students might have realised this fact, which may also be brought about due to the existing stiff competition faced by students who aspire to further their education and hence improve their study habits, which resulted in high academic achievement. This finding supports the findings of Robres et al. (2021) and Asha and Anju (2020), whose studies also revealed a positive significant relationship between study habits and academic achievement of secondary school students.

Considering the recent call for gender equality in Nigeria. The issue of gender difference at the secondary school was considered in this study. The result revealed that gender significantly influences attribution patterns, study habits and academic achievement of secondary school students in Nigeria. Attribution patterns contributed more than study habits to the educational attainment of male students, while study habits contributed more than attribution patterns to the academic achievements of female students. 67% representing 256 students of the total 380 students with high academic achievement are males, while the rest 33% (124 students) are females. In the same direction, 71% (277) of the internals are males, while 79% (223) of the externals are females with desirable and undesirable study habits, respectively.

Unlike boys, most girls who participated in this study are not yet ready to accept responsibility for whatever happens to them since a more significant percentage of the externals were found to be females. Likely, the ever-increasing campaigns on female education, woman liberation, and Education for all (EFA) have not fully affected academic achievement, study habits and attributions patterns of secondary school female students in Nigeria. This is an indication that sex is a decisive factor in attributing patterns. Because Nigerian culture encourages female to be more submissive to external forces than their male counterparts, this finding may not be a surprise. Moreover, male students are influenced by social pressure from society, which expects them to acquire material wealth as early as possible to meet the finances and burden of their own family. Parents, therefore, emphasise the need for male students to aspire to high academic achievement.

Limitations of the Research

Considering the time limitation for conducting this study, surveying all the in-school adolescents in Nigeria was impossible. The study, therefore, covered only the senior secondary school students. Hence, the findings may not apply to junior secondary school students in Nigeria. Secondly, multistage sampling was used, and the data was gathered using a cross-sectional survey; therefore, the results may not apply to a randomised experiment. Thus, using longitudinal, observation, and interview data would enrich the study. Furthermore, respondents for this study were drawn from schools in urban areas. Consequently, the findings should be cautiously generalised to the entire student population. Therefore, future studies should be conducted to replicate the research and include samples from rural areas to increase the generalizability of results.

Conclusion

This study sought to determine the relationship between attribution patterns, study habits, and academic achievement among senior secondary school students in Nigeria. This study led to some conclusions which apply to secondary school students. The result of this study firmly established that the two independent variables (attribution pattern and study habit) and the moderator variables (gender) significantly predicted the academic achievement of secondary school students. The study confirmed that internal locus of control and desirable study habits indicate academic success. In contrast, external locus of control coupled with poor study habits is a pointer to low academic achievement. Therefore, of interest to note in the study is that the current level of academic achievement of secondary school students in Nigeria can further be improved by encouraging the students to develop sound and efficient reading habits and to believe in internal locus of control. Educational psychologists, social psychologists, and counsellors need to assist secondary school students in this regard if a meaningful academic achievement level is to be attained.

Implication for Education

The result of this study indicated that attribution patterns and study habits are significantly related to academic achievement. Internally controlled students who equally had a desirable study habit performed better than their externally controlled counterparts. Since the students' perception of causality is essential, counsellors and teachers must try to assist externally oriented students in influencing outcomes and exerting themselves more in their academic activities. It is also critical that teachers, counsellors, and parents should re-orientate female students to stop perceiving themselves as inferior sex who cannot do anything better than their male counterparts. Therefore, female students should be helped to imbibe positive beliefs and acquire more effective study habits. The government must equip public schools with adequate facilities to improve students' study habits, attribution patterns and academic achievements.

Recommendations

The following recommendations are made in light of the analysis and discussion of the findings, the conclusions arrived at, and the implications deduced from this study.

Counsellors and teachers should try to assist externally oriented students and those with undesirable study habits. This can be done by communicating positive expectations, attitudes, and feedback to the students. Teachers should recognise and express genuine pleasure in the student's effort; this would help to enhance the students' optimistic estimate of themselves and their abilities.

The environment in which students live and study should be constantly improved by providing the necessary facilities, infrastructures and equipment to make the environment more conducive to learning. In addition, the school needs to provide appropriate motivation, which could enhance the development of internal locus of control; this will help students achieve high academic performance. Schools should also provide an opportunity for success and ensure that tasks and demands placed on students are suitable to bring out their potential.

Lastly, counsellors should design programs to assist students with study habits and effectively utilising available resources. Government should intensify effort to cover more ground in their campaign for quality education in line with Sustainable Development Goal 4 (SDGs), female education, and woman liberation to bridge the gap between male and females' academic achievement level.

Suggestions for Future Research

Future research should expand the scope of this study by increasing the sample size and geographical coverage. Comparative studies could also be carried out between northern and southern students, using similar variables, and among senior and junior school students. Based on the findings of this study, it is suggested that further studies be conducted to examine the effects of other mediating variables, such as students' personality traits, that could account for their academic performance. This would help in expanding the frontiers of knowledge in the field. Lastly, future researchers may explore the role of parental influence in developing their children's reading habits, study skills and attribution patterns by selecting participants from diverse populations.

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Conflict of Interest

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References

- Abid, N., Aslam, S., Alghamdi, A. A., & Kumar, T. (2023). Relationships among students' reading habits, study skills, and academic achievement in English at the secondary level. *Frontiers in Psychology*, 14, 1020269. <https://doi.org/10.3389/fpsyg.2023.1020269>
- Ajai, J. T., Shiaki, B. O., & Bulus, T. C. (2020). Study Habits and Academic Achievement: A Case Study of Secondary School Science Students in the Jalingo Metropolis, Taraba State, Nigeria. *American*

- Alade, O. M., & Kuku, O. O. (2017). Impact of frequency of testing on study habits and achievement in mathematics among secondary school students in Ogun State, Nigeria. *Journal of Educational Research and Practice*, 7(1), 1–18. <https://doi.org/10.5590/JERAP.2017.07.1.01>
- Akanaeme, I. N., Kalu, C. O., & Onyishi, C. N. (2022). Attribution Styles As Correlates Of Social Competence And Self- Esteem Of In-School Adolescents. *Webology*, 19(3), 674–684. <https://www.webology.org/abstract.php?id=2776>
- Akunne, L. I., & Anyanmene, A. N. (2021). Relationship among Locus of Control, Academic Interest and Secondary School Students Academic Achievement in Anambra State, Nigeria. *Asian Journal of Education and Social Studies*, 16(1), 9–15. <https://doi.org/10.9734/ajess/2021/v16i130390>
- Asha, S., & Anju, A.R (2020). (2020). The Correlation between Study Habits and the Academic Achievement of High School Pupils. *Universal Journal of Educational Research*, 8(12A), 7359–7366. <https://doi.org/10.13189/ujer.2020.082520>
- Atetwe, A. T., Aloka, J. P, & Gudo, C. O. (2018). Influence of internal locus of control on mathematics achievement among students in secondary schools in Kenya. *International Journal of Education and Research*, 6(8), 153–162. <http://www.ijern.com/journal/2018/August-2018/13.pdf>
- Apau, S. K. (2021). Teachers’ concerns about the implementation of the standard-based curriculum in Ghana: A case study of Effutu Municipality. *Educational Research and Reviews*, 16(5), 202–211. <https://digitalcommons.unl.edu/libphilprac/5624>
- Bentil, J. (2020). Study habits and academic performance among public junior high school students in the Ekumfi district: Investigating the controlling effect of learning styles. *European Journal of Social Sciences Studies*, 8(6), 22–42. <https://oapub.org/soc/index.php/EJSSS/article/view/1505>
- Bantilan, J. C., Sombilon, E. J. J., & Regidor. (2024). Impact of transformational leadership and school environment on organizational commitment of teachers. *Journal of Social, Humanity, and Education*, 4(2), 99–116. <https://doi.org/10.35912/jshe.v4i2.1584>
- Baffoe, G. A., & Okae-Anti, A. (2020). Reading habits of selected communication educators in Ghana. *Journal of Education and Practice*, 11(3), 45–51. <https://www.iiste.org/Journals/index.php/JEP/article/view/51248>
- Bakare, C. G. M. (2007). *Study habits inventory*. Ibadan: Psychoeducational Research Productions.
- Cobarrera, E. R., & Torres, J. A. (2021). Learning styles and study habits as predictors of academic performance of SDCA senior High School students. *Psychology and Education Journal*, 58(4), 1622–1626. <https://psychologyandeducation.net/pae/index.php/pae/article/view/4907>
- Choudhury, S. A., & Borooah, I. P. (2017). Character strengths and academic achievements of undergraduate college students of Guwahati, Assam. *Space and Culture, India*, 5(1), 49–64. <https://spaceandculture.in/index.php/spaceandculture/article/view/242>
- Cuadro, A., Leibovici, G., & Costa-Ball, C. D. (2023). Diferencias en las atribuciones causales del rendimiento académico en alumnos de secundaria con dificultades de aprendizaje en función del tipo de dificultad y de su participación en otras actividades gratificantes. *Ciencias Psicológicas*, 17(1), 30–44. <https://doi.org/10.22235/cp.v17i1.3004>

- Ebele, U. F., & Olofu, P. A. (2017). Study habit and its impact on secondary school students' academic performance in biology in the Federal Capital Territory, Abuja. *Educational Research and Reviews*, 12(10), 583–588. <https://eric.ed.gov/?Id=EJ1143649>
- Fabunmi, F. A., & Awoyemi, O. O. (2017). Computer Efficacy as Determinant of Undergraduates' Information Communication Technology Competence in State-Owned Universities in the South-West, Nigeria. *International Journal of Library Science*, 6(2), 29–36. <https://www.academia.edu/download/106333112/showpaperpdf.pdf>
- Gahir, S., Sahu, S., & Sahoo, S. (2022). Relationship between Study Habits and Academic Achievement of Secondary School Students. *Contemporary Research in Education and English Language Teaching*, 4(1), 1–9. <https://doi.org/10.55214/26410230.v4i1.187>
- Galle, S. A., Sabo E. S., & Akawu, G. A. (2023). Trend Analysis of Economics Students' Performance in NECO 2015-2022 In North-East Geopolitical Zone of Nigeria. *International Journal of African Sustainable Development Research*, 12(2), 1–12.
- Haliru, R. A., Abdulkarim, M., Mohammed, A. D., & Dangani, B. U. (2015). An assessment of reading habit among secondary school students in Kaduna metropolis. *IOSR Journal Of Humanities And Social Science (IOSR-JHSS)*, 20(10), 12–17. <https://www.academia.edu/download/77808643/B0201021217.pdf>
- Hassan, I., Nazri Latiff Azmi, M., Normala Muhamad, S., & Taufik Hidayah Abdullah, A. (2021). Reading Habits and their Correlation with Reading Achievement among ESL Learners in Selected Malaysian Secondary Schools. *Arab World English Journal*, 12(3), 385–399. <https://doi.org/10.24093/awej/vol12no3.27>
- Hojjati, M. (2022). Investigating the Relationship between Attribution Style and Academic Achievement of High School Students in Ilam with the Moderating Role of Emotional Intelligence and Socio-Economic Class. *International Journal of Advanced Studies in Humanities and Social Science, Online First*, 11(3), 154–167. <https://doi.org/10.22034/ijashss.2022.327327.1088>
- Islam, M. N. (2021). Study Habits, Self-Esteem, and Academic Achievement Among Public and Private Secondary School Students in Bangladesh. *International Journal of Psychology and Educational Studies*, 8(3), 39–50. <https://dergipark.org.tr/en/pub/pes/issue/64305/976268>
- Jafari, H., Aghaei, A., & Khatony, A. (2019). Relationship between study habits and academic achievement in students of medical sciences in Kermanshah-Iran. *Advances in Medical Education and Practice*, 10, 637–643. <https://doi.org/10.2147/AMEP.S208874>
- Kaur, A., & Pathania, R. (2015). Study Habits and Academic Performance among Late Adolescents. *Studies on Home and Community Science*, 9(1), 33–35. <https://doi.org/10.1080/09737189.2015.11885430>
- Kumar, J., & Asha, M. (2017). A study of relationship between academic achievement and locus of control of male and female senior secondary school students. *Scholarly Research Journal for Humanity Science and English Language*, 4(21), 4979–4986. https://www.academia.edu/download/53432280/16_asha_dua_2.pdf
- Kirori, M., & Dickinson, D. (2020). Not a panacea, but vital for improvement? Leadership development programmes in South African schools. *South African Journal of Education*, 40(1), 1–11. <https://doi.org/10.15700/saje.v40n1a1625>

- Looyeh, H., Fazelpour, S., Masoule, S., Chehrzad, M., & Leili, E. (2017). The Relationship between the Study Habits and the Academic Performance of Medical Sciences Students. *Journal of Holistic Nursing and Midwifery*, 27(2), 65–73. <https://doi.org/10.18869/acadpub.hnmj.27.2.65>
- Magulod, G. (2019). Learning styles, study habits and academic performance of Filipino University students in applied science courses: Implications for instruction. *Journal of Technology and Science Education*, 9(2), 184–198. <https://doi.org/10.3926/jotse.504>
- Merkine, B., Zebdewos, Z. & Woldeyesus E. (2019). The Relationship between locus of control and students' University Academic Achievement in case of Wolaita Sodo University. *Global Journal of Human Social Science*, 19(12). <https://www.academia.edu/download/84155752/2893.pdf>
- Mirghani, T. (2020). The growing demand for education in Saudi Arabia: how effective is borrowing educational models from the west?. *Journal of Education and Learning*, 9(6), 59–70. <https://doi.org/10.5539/jel.v9n6p59>
- Ogbada, F. E., Nkomo, N. N., & Efretuei, I. E. (2022). Locus of Control and Academic Achievement among Student Nurses in Cross River State, Nigeria. *American Journal of Education and Practice*, 6(4), 26–33. <https://ajpojournals.org/journals/index.php/AJEP/article/download/1307/1421>
- Oguzie, A. E., Nwokolo, C. N., Mokwelu, O. B., & Ezunu, E. N. (2019). Relationship between secondary school students' study behaviour and their academic achievement in Imo State, Nigeria. *Journal of Guidance and Counselling Studies*, 3(2), 133–140. https://www.academia.edu/download/63792040/Oguzie_et_al._120200630-128067-1t8xfsw.pdf
- Okeke, U., & Ukoh, E. (2020). The influence of locus of control, study habits and gender on the academic achievement of senior secondary school physics students in Ibadan Metropolis. *African Journal of Teacher Education*, 9, 21–48. <https://doi.org/10.21083/ajote.v9i0.5815>
- Oladebinu, T. O., Amos, A. A., & Oyediran, W. O. (2018). Factors affecting students' academic performance in colleges of education in southwest, Nigeria. *British Journal of Education*, 6(10), 43–56. <https://www.eajournals.org/wp-content/uploads/Factors-Affecting-Students-Academic-Performance-in-Colleges-of-Education-in-Southwest-Nigeria.pdf>
- Oyewole, O. (2017). Impact of poor reading culture among selected secondary school students in Owo local government area of Ondo state, Nigeria. *Developing Country Studies*, 7(10), 89–101. <https://www.iiste.org/Journals/index.php/DCS/article/view/39094>
- Ozuome, C. C., Oguzie, A. E., Mokwelu, O. B., & Anyamene, A. (2020). Locus of Control as a Correlate of Secondary School Students' Academic Achievement in Imo State, Nigeria. *Journal of Guidance and Counselling Studies*, 4(2), 374–385. <https://doi.org/10.5281/ZENODO.4055844>
- Ranju, T. N., & Kulkarni, U. K. (2020). Study habits and its impact on academic performance in English of secondary school students in Kalaburgi region. *Palarch's Journal Of Archaeology Of Egyptology PJAE*, 17(12), 13–26.
- Robres, A. Q., Andraze, A. G., Ortega, Z., & Ramajo, S. S. (2021). Intelligence quotient, short term memory and study habits as academic achievement predictors of elementary school: A follow up study. *Studies in Educational Evaluation*, 70(10), Article 101020. <https://doi.org/10.1016/j.stueduc.2021.101020>

- Sharma, G., & Vyas, C. (2016). A review on study habits of school going children in relation to their academic achievement. *International Journal of Scientific Research in Science and Technology*, 2(5), 166–171. <https://www.academia.edu/download/84191299/591.pdf>
- Singh, Y. G. (2011). Academic achievement and study habits of higher secondary students. *International Refereed Research Journal*, 3(27), 27–42.
- Strydom, H. (2021). Ethical aspects of research in the social science and human service profession. In A. S. De Vos, H. Strydom, C. B. Fouché, & C. S. L. Delport (Eds.), *Research at Grass Roots for the Social Sciences and Human Service Professions* (4th ed., pp. 62–75). Pretoria: Van Schaik.
- Tus, J. (2020). The influence of study attitudes and study habits on the academic performance of the students. *International Journal of all Research Writings*, 2(4), 11–32. <https://ssrn.com/abstract=3717274>
- Udegbe, S. I., & Okoli, J. N. (2022). Self-Efficacy, Study Habit and Attribution Style as Predictors of Senior Secondary School Students' Achievement in Biology in Ogidi Education Zone. *AJSTME*, 8(1), 91–98. https://www.ajstme.com.ng/admin/img/paper/91-98%20AJSTME8_1-009..pdf
- UNESCO. (2020). *The Sustainable Development Goals Report 2020* (1st ed). United Nations Publications. <https://unstats.un.org/sdgs/report/2020/>
- Villa, E. A., & Sebastian, M. A. (2021). Achievement Motivation, Locus of Control and Study Habits as Predictors of Mathematics Achievement of New College Students. *International Electronic Journal of mathematics Education*, 16(3), Article em0661. <https://doi.org/10.29333/iejme/11297>
- Wang, J. (2021). Poverty caused by education: Educational issues in China in the new era. *Science Insights Education Frontiers*, 8(1), 943–958. <https://doi.org/10.15354/sief.21.or012>