

## **LOCUS OF CONTROL AS CORRELATE OF UNDERGRADUATES' ACADEMIC ACHIEVEMENT IN COLLEGES OF EDUCATION IN IMO STATE**

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### **ABSTRACT**

The aim of this study is to examine locus of control as correlate of undergraduates' academic achievement in Colleges of Education in Imo State. In specific terms, the study will examine the type of relationship existing between locus of control and academic achievement of undergraduates in General English in colleges of education in Imo state; the type of relationship existing between locus of control and academic achievement of undergraduates in General Mathematics in colleges of education in Imo state. Correlation Survey research design The study adopted the correlation survey design. The sample for this study comprised 195 NCE undergraduates from Alvan Ikoku College of Education, and 65 NCE undergraduates from Imo State College of Education. The sample size for this study will be selected using the multi-stage sampling procedure. The instruments that were adopted for data collection are locus of control scale of Asthon Trice and self-efficacy scale. Also, the undergraduate students' academic achievement scores in General English Language and General Mathematics for 2021/2022 academic sessions were collected and used. The instruments adopted for data collection in this study were re-validated by different authors to sooth the Nigerian setting. Similarly, the reliability coefficient adopting a test-retest method was 0.75 as reported by other scholars who have adopted the instruments for their studies in the Nigerian setting. The administration of the instrument was done through direct delivery approach. Data collected for this study was analyzed using Pearson Product Moment Correlation Coefficient (r). Similarly, Multiple Regression Analysis was used to analyze research questions 9 and 10, where the R, R<sup>2</sup>, and adjusted R<sup>2</sup> were established for the data collected. The findings further revealed a very low negative relationship between undergraduates' locus of control and their academic achievement in General English language and General Mathematics in Colleges of Education in Imo state. A significant relationship existing between locus of control and academic achievement of undergraduates in General English language in Colleges of Education in Imo State, while no significant relationship exists between locus of control and academic achievement of

undergraduates in General Mathematics in Colleges of Education in Imo State. The conclusion of this study creates an insight on the possible reasons for poor academic achievement among undergraduates in colleges of education in Imo State.

**Keywords:** Locus of control, academic, achievement, undergraduates, Colleges of education, general English language, general Mathematics

## **INTRODUCTION**

Education is the bedrock of survival, growth and development of any society. It is relevant to individual and societal growth and contributes significantly to the economic, social, human society world-wide. Hence, the description of education by Okolocha and Odimmega (2019) as they described education as an instrument per excellence which enhances sustainable national development and global competitiveness. Education can be seen as a basic necessity of life and an important factor which brings about changes both in citizens in the society and the nation in general. Furthermore, education enables people to compete favourably with the best of the world and have a long- standing connection with the economy. In Nigeria, where growth and development are essential for poverty alleviation, education particularly those carried out in tertiary education becomes a critical factor for any meaningful development (Federal Republic of Nigeria, 2014). The federal republic of Nigeria in her National Policy on Education document (FGN, 2014) recorded that the main purpose of education at different level is to transmit wisdom, knowledge and values from one generation to another in order to prepare undergraduates to be active and productive members of the society who contribute to the maintenance and development of the society.

In any education system, students are the major role-players, they occupy important position at different levels and anything that affects the students will have an implication on the general educational system. This is because they are most essential asset for any educational institution. This implies that for any nation to achieve its educational aims and objectives students have a vital role to play. This could be in the areas of learning through acquisition of knowledge, skills and achievement (Yusuf, Okanlawon & Oladayo, 2020). They further stated that the social and economic development of a nation is indirectly related with students' academic achievement. Students' academic achievement plays an important role in producing quality graduates who will

become great leaders and resourceful manpower for the country thus responsible for the country's economic and social development.

In colleges of education environment, success is measured by academic achievement of students based on how well students meet the standards set by the government and the institution itself. As the world has become a global village, and the competition in the world of work requires high competence in all fields of study, therefore the importance of students' academic achievement in core university courses have the attention of parents, legislatures and department of education (Albert and Dahling, 2016). This goes to show that high priority is being placed on how to make the graduates employable and more productive after the completion of their degree programs in tertiary institutions. Therefore, it is pertinent that efforts should be geared towards maintaining high standards in schools and such standards will be reflected in students' academic achievement.

Academic achievement is the attainment obtained by a child in a lesson taught, which may include experience, knowledge, skill and the like. The knowledge and skill are measured by students' cumulative grade point average (CGPA) and the child good or poor achievement does not depend solely on the attribute the child is born with, but his family background, social contacts, teachers and overall climate in his school and assessment procedure (Samson, 2016). Furthermore, academic achievement could be defined as excellence in all academic disciplines, in class as well as co-curricular activities. In agreement with this, Akunne and Anyamene (2021) stated that students' academic achievement is described as the ability to study and remember subject content and be able to communicate such knowledge orally or in written form even in an examination condition. Samson (2016) defined academic achievement as both curricular and co-curricular achievement of students. Academic achievement also indicates the learning outcome of students. Undergraduates in colleges of education performs their potential efficiently, as a result of learning taking place. The learning outcome changes the behaviour pattern of undergraduates of colleges of education through different courses and subjects. Therefore, the achievement of students in the classroom and university takes a central role in the academic development of the students. Hence, parent, teacher and school administrators alike take cognizance of the academic well-being of the student. In the same vein, yardsticks are set by school authority to measure academic achievement of students, the standard set by the university

will determine whether a student has achieved well academically in courses offered or not (Samson, 2016). This goes to show that academic achievement is the culmination of all the activities of the student in the school.

Academic achievement for colleges of education is seen as the extent to which a student has achieved his educational goals. Colleges of education measure academic achievement in several ways which include continuous assessment test (C.A.T.) and a number of standardize test and examination. Through these, areas of strength and weakness towards a child's academic achievement is determined and evaluated in order to improve on the learning process of the student. The trend record of low academic achievement is not limited to only the pre and post primary level of education, but also to other educational levels. It is also rampant among students of tertiary institutions. This has been a subject of major concern to educational planners, administrators, stakeholders in education and the students themselves. Based on these studies have been conducted by Adeyemi and Adeyemi (2014) which revealed that a total number of 39 students of the Niger state owned University, Ibrahim Badamosi Babangida University, Lapai were expelled from the institution over poor academic achievement, while two others have been expelled for examination malpractices. Similarly, related research pointed out many factors that may account for students' academic achievement in university courses. According to Boahene, Fang and Sampong (2019), some of these researchers focused in the Nigerian environment as well as other studies based on foreign countries. Factors affecting students' academic achievement arise from numerous reasons such as; socioeconomic factors, environmental factors, health status, teacher quality, teaching methods, qualities and quantity of learning materials and facilities, peer group influence and many more. These are vital elements and their accessibility have the prospects of nurturing effective locus of control and self-efficacy which subsequently may affect academic achievement.

Basically, the social and economic development of a nation is directly related with students' academic achievement. The students' academic achievement at tertiary level plays an important role in producing the best quality graduates who will become great leaders and resourceful manpower for the country thus responsible for the country's economic and social development (Yusuf, Okanlawon & Oladayo, 2020). In educational institutions, as earlier mentioned, success is measured by the academic achievement or how well students' meet the standards set by the

government and the institution itself. These often times are seen in the courses these students offer in their respective Departments ranging from General Studies Education (GSE) GSE 121- General English 1, GSE 122- General Mathematics, GSE 113 – Use of Library among others courses, to departmental core courses. GSE courses are compulsory entry level course offered in the colleges of education, observations and academic statistics recorded in the 2020/2021, 2021/2022 academic session have revealed a fluctuation in the academic achievement of undergraduates in colleges of education. Nevertheless, Yusuf et al. (2020) further affirmed that, as the world has become a global village, and competition in the world of work requires high competence in all fields of study, therefore, the importance of undergraduates achieving high academically in school has caught the attention of different stakeholders. More so, high priority is being placed on how to make graduates from colleges of education employable and more productive after the completion of their degree programs.

In the learning situation, Olufemi, Adediran and Oyediran (2018) stated that undergraduate students have to put the greatest effort in their study to obtain good grades and to prepare themselves for future opportunities in their career at the same time to fulfill the employer's demand. Hence, academic achievement in Colleges of Education determines whether the students will proceed to university for higher degree or be able to secure and sustain employment (Olufemi et al., 2018). In the opinion of Brew, Nketiah and Koranteng (2021), educational success is a measure based on the academic achievement of students.

Other studies have been conducted in relation to the variable in the present study. Choudhury and Borooah (2017) conducted a study on locus of control and academic achievement of undergraduate college students of Guwahati City. The findings of the study revealed that there was no significant positive correlation between external locus of control and academic achievement of the students. In another study by, Akunne and Anyamene (2021) carried out a study on locus of control and self-esteem as correlates of secondary school student academic achievement in English language in Anambra State. The results revealed that locus of control and self-esteem added statistically to the prediction of secondary school students' academic achievement in English language. Anyanwu, Ogboji, Etonyeaku, and IHEME (2016) carried out a study on influence of self-efficacy on student's academic achievement among secondary school students in Anambra state, Nigeria. The findings of the study among others showed that there is

no significant difference in the influence of self-efficacy on academic achievement mean scores of male and female secondary school students. Another study conducted by, Hammed and Toyin (2015) conducted a study on the influence of self-concept and self-efficacy on academic achievement in English language among senior secondary school students in Oyo and Ogun States. The results show that self-concept and self-efficacy jointly and relatively contributed to academic achievement in English language of the participants among others. Onabamiro, (2014) carried out a study on determinant of students' achievement in senior secondary school Mathematics in South-western, Nigeria. The findings for the study revealed among others that principal's leadership styles and socio-demographic factors significantly influenced teachers job satisfaction, classroom management and ultimately students' achievement in senior secondary schools in Oyo and Ogun states respectively. Also, Omeodu and Fredrick (2019) carried out a study on the effect of game teaching method on students Mathematics achievement in Aboh-Mbaise local government area, Imo state. Two research questions and two hypotheses guided the study. The result of the analyses revealed among others that students taught the concept of quadratic equation using game teaching method achieved better than their counterparts who were taught using expository method.

The College of Education system is one of the tripods and it has the primary role of training teachers who will be awarded the minimum teaching qualification of Nigerian Certificate of Education (NCE). One of the aims of the Nigeria certificate in Education (NCE) is to provide teachers with the intellectual and professional background adequate for teaching and to make them adaptable to any changing situation in educational development, not only in the country, but also in the wider area of the world at large (FRN, 2014). The objectives of colleges of education among others include; study learners appropriately to determine the most effective ways of relating to them to ensure their maximum achievement; examine the main psychological health and social economic factors that may help or hinder a child educational performance; professionally combine use of conventional and ICT or other innovational instructional/learning strategies in generating and imparting knowledge attitudes and skills at basic education level. The courses offered in colleges of education enables the learners to participate meaningfully in discussion covering a wide spectrum of discipline; acquire through independent research the

skills and information for appreciating the basis and nature character of human knowledge, values and actions; appreciate and analyze Nigerian human history and culture

Undergraduates' achievement in colleges of education also determines the quality of education that is being passed to the students by the potential teachers. Hence, poor achievement of undergraduates in Colleges of Education is a worrisome state for parents and stakeholders in the education sector. Nonetheless, students' academic achievement is affected by several factors which include but not limited to students' learning skills, parental background, peer influence, self-esteem, locus of control, self-efficacy, teachers' quality, learning infrastructure among others. In colleges of education in Imo state, these factors have continuously affected the academic achievement of undergraduates in colleges of education. This have prevailed in spite effort made by the government to improve academic achievement through series of interventions like scholarship, training of the lecturers, providing of infrastructure among others. In view of these, the present study will examine locus of control as correlate of academic achievement of undergraduates in colleges of education.

Locus of control is a personality characteristic that determines the degree with which an individual believes they are in control of life events. The concept of locus of control has been originally developed by Julian Rotter, and can be generalized into basic dichotomy which is internal and external locus of control. The term locus of control refers to the site of a cause, that is, whether or not the outcome of an event is attributed to something inside (internal to) or outside (external to) the person involved (Atibuni, Ssenyonga, Olema & Kemeza, 2017). They further affirmed that locus of control relates to people's attitudes, emotions, health, and motivation, as well as behaviour in organizations and educational institutions. The generalized locus of control scale has been adapted to measure attributions in various settings. These settings include work locus of control and health locus of control. In the opinion of Esonwanne, Nduanya, Obichina and Onyebueke (2018) locus of control is defined as a persons' tendency to see events as being controlled internally or externally. It is an individuals' personal belief that event which occur in their life are either as a result of personal control and efforts or outside forces such as fate and luck.

Furthermore, Choudhury and Borooah (2017) stated that an individual's belief regarding the reasons of his or her experiences and the factors to which that person attributes success or failure is referred to as locus of control. In other words, it can be said that locus of control is the generalized expectation regarding where control over events resides of an individual, this can either be internal or external. People with internal locus of control attribute the causes of their successes or failures to their own abilities and skills. They consider themselves to be responsible for their own destiny. Buttressing further, people with an external locus of control believe that external factors or situations are responsible in determining their success or failure (Choudhury & Borooah, 2017). These people will be less likely to be persistent in learning and putting in hard effort, as most of the times they consider luck or fate as responsible for the grades they achieve. Therefore, it can be said that in the context of academic achievement, individuals with internal locus of control have higher tendency to believe that the cause of their achievement are related to their own individual ability and their lack of effort is related to their failures. Based on this and the aforementioned decline in academic achievement in general English language and general Mathematics, the present researchers are motivated to determine the locus of control as correlates of undergraduates' academic achievement in Colleges of Education in Imo State.

### **Research questions**

The following research questions guided the study

1. What is the type of relationship existing between locus of control and academic achievement of undergraduates in General English in colleges of education in Imo state?
2. What is the type of relationship existing between locus of control and academic achievement of undergraduates in General Mathematics in colleges of education in Imo state?

### **Hypotheses**

The following null hypotheses guided the study.

1. There is no significant relationship existing between locus of control and academic achievement of undergraduates in General English language in colleges of education in Imo state.



2. There is no significant relationship existing between locus of control and academic achievement of undergraduates in General Mathematics in colleges of education in Imo state.

## **Methods**

The study adopted the correlation survey design. The study was carried out in Imo state, Nigeria. The population for this study comprised of 845 undergraduate students of NCE 200level for the 2020/2021 academic session from both Alvan Ikoku Federal College of Education, Owerri and Imo State College of Education, Ihitte Uboma. The sample for this study comprised 195 NCE undergraduates from Alvan Ikoku College of Education, and 65 NCE undergraduates from Imo State College of Education. The sample size for this study will be selected using the multi-stage sampling procedure. Firstly, the population of NCE undergraduates in Alvan Ikoku College of Education was stratified based on the school of sciences - 157, school of Early Childhood Care – 100, School of Arts and Social Sciences - 190 and School of Languages – 168, School of education - 165. The proportionate stratified sampling technique was used for this stratification, the elements for each stratum will be selected using a proportion of 0.25 employing the simple random sampling technique (Balloting with replacement). After selecting from each stratum, the sample amounts to 195, and a total sample of 260 NCE undergraduates for both Alvan Ikoku College of Education and Imo State College of Education. The instruments that were adopted for data collection are locus of control scale of Asthon Trice and self-efficacy scale. Also, the undergraduate students' academic achievement scores in General English Language and General Mathematics for 2021/2022 academic sessions were collected and used. The instruments adopted for data collection in this study were re-validated by different authors to sooth the Nigerian setting. Similarly, The reliability coefficient adopting a test-retest method was 0.75 as reported by Animba, Ezema, Chukwu and Nwobodo (2022), Chinedu and Nwizuzu (2021) reported an internal consistency of 0.76 for the Trice's academic locus of control scale. Morgan-Jinks Students' Self-Efficacy Scale (MJSES) has an overall reliability coefficient of .80. The subscales alphas are .78 for talents, .70 for context and .66 for efforts. To sooth the Nigerian population, Onyemere in 2007 revalidated the instrument and obtained a reliability coefficient of .89. The administration of the instrument was done through direct delivery approach. Data collected for this study was analyzed using Pearson Product Moment Correlation Coefficient ( $r$ ). Similarly,

Multiple Regression Analysis was used to analyze research questions 9 and 10, where the R, R<sup>2</sup>, and adjusted R<sup>2</sup> were established for the data collected.

## RESULTS AND DISCUSSION

**Research question 1:** What is the type of relationship existing between locus of control and academic achievement of undergraduates in General English language in colleges of education in Imo state?

**Table 1: Pearson r on locus of control and academic achievement of undergraduates in General English language in colleges of education**

Sources of Variation	Locus of control r	Academic achievement in Gen. English r	Remark
Locus of control	1.00	-0.177	Very low negative relationship
Academic achievement in Gen. English	-0.177	1.00	

In table 1, it was observed that a low negative relationship of -0.177 exists between undergraduates' locus of control and their academic achievement in General English language in colleges of education in Imo state.

**Research question 2:** What is the type of relationship existing between locus of control and academic achievement of undergraduates in General Mathematics in colleges of education in Imo state?

**Table 2: Pearson r on locus of control and academic achievement of undergraduates in General Mathematics in colleges of education**

Sources of Variation	Locus of control r	Academic achievement in Gen. Mathematics r	Remark
Locus of control	1.00	-0.071	Very low negative relationship
Academic achievement in Gen. Mathematics	-0.071	1.00	

Table 2 indicates that a very low negative relationship of -0.071 exists between undergraduates' locus of control and their academic achievement in General mathematics in colleges of education in Imo state.

**Hypothesis 1:** There is no significant relationship existing between locus of control and academic achievement of undergraduates in General English language in colleges of education in Imo state.

**Table 3: t-test on the relationship existing between locus of control and academic achievement of undergraduates in General English Language.**

N	Cal. r	df	Cal. t	Pvalue	Remark
190	-0.177	188	-2.719	0.007	Significant

Table 3 indicates that at 0.05 level of significance and 188df, the calculated t -2.719 with Pvalue 0.007 which is less than 0.05, the first null hypothesis is rejected. There is a significant relationship existing between locus of control and academic achievement of undergraduates in General English language in Colleges of Education in Imo State.

**Hypothesis 2:** There is no significant relationship existing between locus of control and academic achievement of undergraduates in General Mathematics in colleges of education in Imo state.

**Table 4: t-test on the relationship existing between locus of control and academic achievement of undergraduates in General Mathematics.**

N	Cal. r	df	Cal. t	Pvalue	Remark
190	-0.071	188	-1.472	0.143	Not Significant

In table 12, it showed that at 0.05 level of significance and 188df, the calculated t -1.472 with Pvalue 0.143 which is greater than 0.05, the second null hypothesis is accepted. There is no significant relationship existing between locus of control and academic achievement of undergraduates in General Mathematics in Colleges of Education in Imo State.

## **DISCUSSION OF FINDINGS**

The findings revealed a very low negative relationship between undergraduates' locus of control and their academic achievement in General English language and General Mathematics in Colleges of Education in Imo state. This study contradicts with the findings of Majzub, Bataineh, Ishak and Rahman (2016), as they revealed that the internal locus of control was high and positively correlated with academic achievement among the male students and positively correlated with external locus of control. The findings further revealed that the internal locus of control was positively correlated with academic achievement among female students and

negatively correlated with external locus of control. Based on this finding it became evident that male students were more internal and external than females.

Furthermore, the study reports that there is a significant relationship existing between locus of control and academic achievement of undergraduates in General English language in Colleges of Education in Imo State, while no significant relationship exists between locus of control and academic achievement of undergraduates in General Mathematics in Colleges of Education in Imo State. The study of Choudhury and Borooah (2017) conforms with the later findings and disagrees with the former findings as they found that there was no significant positive correlation between external locus of control and academic achievement of the students. The findings further agreed with Akunne and Anyamene (2021) who found that locus of control and self-esteem added statistically to the prediction of secondary school students' academic achievement in English language. The present study further reveals the relationship existing among locus of control, self-efficacy and academic achievement in General English language in colleges of education is significant. This conforms with Chinedu and Nwizuzu (2021) The findings of the study showed significant relationship between locus of control and academic achievement of male students. The findings also showed significant relationship between locus of control and academic achievement of public-school students.

## **CONCLUSION**

Based on the findings of this study summarized above, it was concluded that the type of relationship existing among locus of control, self-efficacy jointly with academic achievement of undergraduates is very low and significant for General English language, but very low and not significant for General Mathematics. The study concluded that majority of the undergraduates in Colleges of Education in Imo state have external locus of control, also most of the undergraduates in Colleges of Education in Imo state have high self-efficacy. This could likely be the resultant outcome of the joint relationship among undergraduates' locus of control, self-efficacy and academic achievement in General English language and General Mathematics

where a higher number of undergraduates had excellent achievement. Owing to the fact that in recent years the quality of education in Nigeria, especially in most tertiary institutions (colleges of education inclusive) has been a subject of public concern. The conclusion of this study creates an insight on the possible reasons for poor academic achievement in accordance with undergraduates' locus of control and self-esteem that justification have been provided for the expressed concerns.

## **REFERENCES**

- Achufusi, N.N., Utaka, N.O. & Okonkwo, O. (2019). Secondary school students' self-efficacy and motivation as correlates of their achievement in physics. *IOSR Journal of Research and Method in Education*, 75-80.
- Ahman-Mahmud, A. (2016). Self-concept, locus of control and school motivation in relation to academic achievement among secondary school students in Northern Nigeria. *An Unpublished Doctoral Thesis Submitted to the University of Leicester, Leicester*.
- Akunne, L.I. & Anyamene, 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.
- Albert, M. & Dahling, J. (2016). Learning goal orientation and locus of control interact to predict academic self-control and academic performance in college students. *Journal of Personality and individual differences: Science Direct, ELSEVIER*, 97, 245-248.
- Anyanwu, J.I., Ogboji, B.A., Etonyeaku, E.A. & IHEME, M.C. (2016). Influence of Self-Efficacy on Students' Academic Achievement among secondary school students in Anambra State, Nigeria. *Australian Journal of Basic and Applied Sciences*, 24-27.
- Atibuni, D.Z., Ssenyonga, J., Olema, D.K. and Kemeza, I. (2017). Locus of control as a predictor of academic attitudes among university students. *International Journal of Educational Policy Research and Review*, 4 (6); 125-137.
- Boahene, K., Fang, J. & Sampong, F. (2019). Social media usage and tertiary students' academic performance: Examining the influences of academic self-efficacy and innovation characteristics. *Sustainably*, 11, 24-31.
- Bodill, K. & Roberts, L.D. (2013). Implicit theories of intelligent and academic locus of control as predictors of studying behaviour. *Learning and Individual Differences*, 27, 163-166.
- Chinedu, O. & Nwizuzu, C. (2021). Relationship between locus of control and academic achievement of secondary school students in Abia State. *Journal of Analytical Sciences, Methods and Instrumentation*, 11, 15-22. Doi: 10.4236/jasmi.2021.112002

- Choudhury, S.A., & Borooah, I.P. (2017). Locus of control and academic achievement of undergraduate college students of Guwahati City. *International Journal of Humanities and Social Science Invention*, 6 (4), 67-70.
- Esonwanne, O.F., Nduanya, U.C., Obichina, K.I. & Onyebueke, G. (2018). Locus of control, self-esteem and depression in a sample of school going adolescents in two Nigerian communities. *The Journal of Medical Research*, 5(3); 67-78.
- Fakeye, D.O. (2011) Locus of control as a correlate of achievement in English as a second language in Ibadan. *Journal of Education and Social Research*. 4(17), 5-9.
- Federal Government of Nigeria (FGN). (2014). *National policy on education*. Lagos: NERDC
- Grantz, M. (2012). *Do you have the power to succeed? Locus of control and its impact on education*. Retrieved on 14th May, 2019. Available at: <http://www.units.muohio.edu/psybersite/control/education.shtml>.
- Halpert, R. & Hill, R. (2011). *28 Measures of Locus of control*. [Online]. Dostupné z: Retrieved from: [http://teachinternalcontrol.com/uploads/LOC\\_Measures\\_1\\_.pdf](http://teachinternalcontrol.com/uploads/LOC_Measures_1_.pdf).
- Hammed, A. & Toyin, F. (2015). Influence of self-efficacy and self-efficacy on academic in English language among senior secondary school students in Oyo and Ogun states. *International Journal of Social Sciences and Humanities Review*, 5 (2), 123-131.
- Higgins, C.N. & Bhatt, G. (2001). Culture moderates the self-serving bias: etic and emic features of causal attributions in India and Canada. *Social Behaviour and Personality*, 29(1), 49-62
- Keith, T.Z., Pottebaum, S.M. & Eberhart, S. (2012). Effects of self-concept and locus of control on academic achievement: A large-sample path analysis. *Journal of Psycho-educational Assessment*. 4(1), 61-72.
- Kormanik, M.B. & Rocco, T.S. (2009). Internal versus external control of reinforcement: A review of the locus of control construct. *Human Resource Development Review*, 8, 463-483. doi:10.1177/1534484309342080
- Majzub, R.M., Bataineh, M.Z.T., Ishak, N.M. & Rahman, S. (2016). *The relationship between locus of control and academic achievement, and gender in a selected higher education institution in Jordan*. *Proceedings form the 8th WSEAS International Conference on Education and Educational Technology*
- Mei-Mei, C. & Chiung-Mei, H. (2014). Effects of locus of control and learner control on web-based language learning. *Computer Assisted Language Learning*. 22(3), 189-206.
- Morgan, V. & Jinks, J. (1999). Children perceived academic self-efficacy: An Inventory Scale. *The Clearing House*, 72(4), 224-230.
- Morris, C. G. & Maisto, A. A. (2016). *Understanding psychology* New Jersey: Pearson Education Inc.

- Njega, S W., Njoka, J.N. & Ndung'u, C.W. (2019). Assessment of self-efficacy on learners' academic performance in secondary schools in Kirinyaga and Murang'a Counties, Kenya. *Journal of Arts and Humanities*, 48-59.
- Nokelainen, P., Tirri, K. & Merenti-Välimäki, H. (2007). Investigating the influence of attribution styles on the development of mathematical talent. *Gifted Child Quarterly*, 5(1), 64-81. doi: 10.1177/0016986206296659
- Nworgu, B. (2015). *Educational research: Basic issues and methodology (6th ed.)*. Ibadan, Nigeria: Wisdom Publishers.
- Okafor, B. I. & Okoli, J. N. (2020). Predicting secondary school students' interest in biology using emotional intelligence, self-efficacy and self-esteem. *International Journal of Innovative Research and Advanced Studies (IJIRAS)*, 7 (3), 41-51. ISSN: 2394-4404
- Omeodu, M.D. & Fredrick, F.C. (2019). Effect of game-teaching method on students Mathematics achievement in Aboh-Mbaise local government area, Imo state. *International Journal of Innovative Social Science Education Research*, 7(3), 18-23
- Onabamiro, A.T. (2014). Determinants of students' achievement in senior secondary school Mathematics in South-western Nigeria. University of Ibadan, Ibadan: *An Unpublished Doctoral Thesis Submitted to the Institutes of Education*.
- Onyemere, L.N. (2007). Students' Self-esteem and self-efficacy as determinants of Academic achievement in senior secondary school students in English Language and Mathematics. *Unpublished Master Thesis, Imo State University, Owerri*.
- 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.
- Rinn, A.N. & Boazman, J. (2014). Locus of control, academic self-concept, and academic dishonesty among high ability college students. *Journal of the Scholarship of Teaching and Learning*, 14(4), 88-114.
- Sambo, A. & Balarabe, M. (2012). Relationships of academic causal attributions and personality among colleges of education students in North-Western Nigeria. *Nigeria Educational Forum*, 20(1), 101-110.
- Sambo, A. & Balarabe, M. (2012). Relationships of academic causal attributions and personality among colleges of education students in North-Western Nigeria. *Nigeria Educational Forum*, 20(1), 101-110.
- Samson, J. (2016). Relationship between social, emotional adjustment with academic achievement of undergraduate students of Ahmadu Bello University, Zaria, Kaduna state Nigeria. *An unpublished Masters dissertation submitted to the department of educational psychology and counselling, faculty of education*.

- Samuel, N.N.C. & Okonkwo, I.G. (). Relationship between metacognition, locus of control, and academic achievement in secondary school Chemistry students in Anambra State, *Nigeria. Education Research International*, <https://doi.org/10.1155/2021/6698808> Article ID 6698808, 1-7.
- Tella, A., Tella, A. & Adeniyi, S.O. (2011). Locus of control, interest in schooling and self-efficacy as predictors of academic achievement among junior secondary school's students in Osun State, Nigeria. *New Horizon in Education*, 59(1), 25-37.