### Predictive Validity of Continuous Assessment Scores on Students' Performance of Junior Secondary Certificate Examination in English Language in Gombe State, Nigeria

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# Abstract

The study investigated the predictive validity of continuous assessment scores on students' performance of Junior Secondary Certificate Examination in English Language in Gombe State, Nigeria. Expo facto research design was adopted. The population of the study consisted of 152,124 students from 296 junior secondary schools in Gombe State. A multistage cluster sampling technique was used to select 541 students from 4 private secondary schools in Gombe South. Data collected through inventory method were analysed using correlation coefficient and regression analysis with the aid of statistical package for social science (SPSS) version 23. Two research questions were raised and three hypotheses were formulated and tested at the 5% level of significance. The findings of the study showed that there was weak positive relationship between CA scores and JSCE in English language in 2014/2015 and 2016/2017 while it was very weak positive relationship between CA scores and JSCE in 2015/2016 academic session. The JSCE performance of students in English language could be predicted from CA scores for 2014/2015 and 2016/2017 academic sessions while it could not be predicted for 2015/2016 academic session. For the academic year that the predictive validity of CA could not be ascertained, it could be as a result of over adjustment of the students' CA marks. The study recommended that the CA scores should not be inflated in order to serve the purpose of predicting the final performance of students' achievement. Government should ensure that incompetence in the operation of CA by teachers should be checked through training, and there should be uniformity and standardization in administering CA across secondary schools in the country.

# Keywords: Continuous Assessment, Predictive Validity, Private School, National Examination Council, Junior Secondary Certificate Examination, Motivation, Nigeria.

#### 1. Introduction

The process of trying to gaze into the future has been described by many scholars as to foretell, forecast or to predict. All these processes of foretelling, forecasting or projecting is termed as prediction. Wikipedia described prediction as a statement that someone makes about what they think is going to happen. It is often very helpful to know what is going to happen to help prepare for the future events. Predictions are based on the idea that two beginning positions that are like each other will have similar results.

Predicting student performance in advance can help students and their teacher to keep track of progress of a student. Many institutes have adopted continuous evaluation system today. Such systems are beneficial to the students in improving performance of a student. Continuous assessment could also help to predict what a student is likely to get in the final examination.

Continuous assessment (CA) is often regarded as a comprehensive mechanism for grading students' performance in the cognitive, affective and psychomotor domains of learning (Federal Ministry of Education Science and Technology, 1985). It was first introduced into the Nigerian School System in 1982, alongside the 6 3 3 4 system of education. This is carried out in a manner that is systematic, cumulative, comprehensive and guidance-oriented, thereby ensuring that relevant information, from which far reaching decisions affecting the learner's academic and future life could be taken.

Nwachukwu and Ogudo, (2014) assert that teachers are not assessing the students comprehensively in the three domains of learning rather they resort to the assessment of cognitive domain alone and paying less attention to affective and psychomotor domains. Even at that, problems still exist in the practice of continuous assessment in which the outstanding one being the quality of test used as instrument for continuous assessment process elucidate on the problem of compatibility standard of continuous assessment. According to Ayodele (2010) the differences in the quality of tests and other assessment instruments used in different schools as well as differences in the procedures of scoring and grading the various assessments in the various schools could pose problem of comparability of standard.

According to Ezeugwu and Omeje (2014) the Federal Government of Nigeria, in 1984 introduced the 6-3-3-4 system of education which incorporated continuous assessment of learning outcomes, at all levels of the educational system. This policy was made with the aim of replacing the one-shot, summative evaluation that was then in practice in the system at the end of each school year. But this is known to only encourage memorization or rote learning and create psychological tension that could lead to poor performance by the end of the term or final examinations. In addition, it makes no provision for students who fall sick during examination. This was also amplified by Federal Ministry of Education, Science and Technology 1985 document which adds that the over emphasis on examination grades and paper qualification has encouraged the prevailing large-scale examination leakage and other examination malpractice witnessed even today, to the detriment of actual performance by the learners.

The National Policy of Education (NPE) in Nigeria recommends a two-tier secondary educational system, the Junior Secondary School, (JSS) and the Senior Secondary School, (SSS). The duration for each of the two levels is three years (Federal Republic of Nigeria, 1998). At the end of the duration, the JSS and SSS students write Junior Secondary Certificate Examination (JSCE) and the Senior Secondary Certificate Examination (SSCE) respectively.

Before the introduction of continuous assessment as a basic part of assessing students' achievements, the evaluation of students' performance was solely based on the achievements in a single examination set by some external body. Such examination includes a Primary School Leaving Certificate, Grade II Teacher's Certificate, the West African School Certificate (WASC)

and the Higher School Certificate (HSC) to which students were exposed at the end of their school course. No conscientious effort was taken to assess the students at interval of time but at the end of the year. Promotion from one class to another was based on a child's performance in the end of the year examination for the purpose of certification; children were made to write examinations set by one external agency or the other. Among these agencies was the State Ministry of Education conducting part of the Grade II Teachers, Certificate Examination and the General Certificate of Examination (GCE) at 'O' level and 'A' level. This one short method of assessment had always been criticized by educators. For its inadequacy and subjectivity as an evaluation tool stating some major weaknesses of the method.

Other major criticisms include the delay of educational decisions till the end of the year or course by which time such decisions might have been too late to help the pupils improve on their learning. The way and manner by which students report were being scantily presented in raw scores to parents or guardians formed another point for criticism. It was therefore a general welcomed idea when in the National Policy on Education was printed, reference was severally made into CA and its importance in evaluating students' performances.

According to Faleye and Adefisoye (2016) CA was made mandatory as a key component of school assessment such that all assessments in primary education will only be by continuous assessment. At the junior secondary school, 70% of students' score shall be from CA while at the senior secondary schools and higher institutions, CA shall constitute 40% of the total marks obtainable (100) in every subject. However, although the concept of the use of continuous assessment for formative and summative purposes are laudable, Kolo and Ojo (2005) found out that because of the large classes, many teachers do not regularly mark students work. When called upon to submit continuous assessment and quality of education.

English Language is one of the core subjects recommended for both the junior secondary school students and senior secondary school students in the National Policy of Education. English Language is most essential subjects in any school curriculum for all levels of education. It is official language of the country as well as the instructional language in Nigeria education system and one of the pre-requisites for entry into higher institution. It is in recognition of the power, relevance and universal applicability of English language that the subject is core in our secondary education system.

Despite efforts of the education authority to see that students do well in English Language, statistics from seven schools out of 28 that present students for junior NECO show that for two academic years, the junior secondary school students in Gombe State have not been performing very well in English language at their junior secondary certificate examination NECO version. In 2013/2014 academic session, 23.1% of the students had credit and above in English language. In 2014/2015 academic session, 13.8% of the students had credit and above in English language.

Regrettably, in spite of the functions of the subject in national development, the performance of students in the subject still dwindle. Though academic performance of students in a given subject may be determined by many factors, the study will investigate if performance in CA could predict performance in JSCE English Language. This implies that the performance of students in JSCE English Language may be influenced by the quality of their continuous assessment.

#### 2. Statement of the problem

Gombe state is not an exception in poor performance of students in English Language at the junior secondary school level. The problem of failure in English language at NECO could be seen in 2013/2014 academic session, where 23.1% of the students had credit and above in English

language and in 2014/2015 academic session, only 13.8% of the students had credit and above in English language. This performance is far below expectation in English language as a core subject at both junior and senior level. Regrettably, in spite of the functions of the subject in national development, the performance of students still dwindled. It could be that the performance of students in JSCE English Language is influenced by the quality of their continuous assessment. Base on this, the study will investigate if performance in CA could predict performance in JSCE English Language.

### 3. Objectives of the Study

The aim of the study is to determine the predictive validity of CA in English language for Junior Secondary Certificate Examination specifically the study was to:

- 1. determine whether any relationship exists between continuous assessment scores in English language and the JSCE English language scores.
- 2. determine whether continuous assessment scores could be used to predict the performance in Junior Secondary Certificate Examination English language.

### 4. Research Questions

In order to determine the predictive validity of Junior Secondary Certificate Examination the following research questions were posed.

- 1. What is the relationship between the continuous assessment scores and the Junior Secondary Certificate Examination scores in English language for the period of 2015 to 2017?
- 2. To what extent can the CA scores in English language predict the scores in English language at Junior Secondary Certificate Examination for the period of 2015 to 2017?

# 5. Research Hypotheses

The following hypotheses were formulated in order to guide the conduct of the study: Ho<sub>1</sub>: The students' CA scores in English Language cannot predict their performance in the Junior Secondary Certificate Examination in English Language for the 2014/2015 academic session. Ho<sub>2</sub>: The students' CA scores in English Language cannot predict their performance in the Junior Secondary Certificate Examination in English Language for the 2015/2016 academic session. Ho<sub>3</sub>: The students' CA scores in English Language cannot predict their performance in the Junior Secondary Certificate Examination in English Language for the 2015/2016 academic session. Ho<sub>3</sub>: The students' CA scores in English Language for 2016/2017 academic session.

### 5. Theoretical Framework

A theory is a set of interrelated concepts, definitions, and propositions that explain or predict events or situations by specifying relations among variables. Theories have practical value in many areas of life. A wide range of useful-and-accurate theories, plus the ability to use the theories skillfully, helps in making accurate predictions.

The theoretical framework on which this research work is built is McClelland's Achievement Motivation Theory (McClelland, 1958, 1961). Motivation is generally regarded as the drive to achieve targets and the process to maintain the drive. In a recent study (Acquah, 2017), asserted that motivation provides an important foundation to complete cognitive behaviour, such as planning, organization, decision-making, learning, and assessments. Performances of individuals are often compared against standards or with others for assessments. The differing perspectives of scholars result in various definitions of achievement motivation. The original definition of achievement motivation was from Atkinson (1964), who defined it as the comparison of performances with others and against certain standard activities. Achievement motivation is a

drive to excel in learning tasks combined with the capacity to experience tried in accomplishment McClelland and Atkinson were the first scholars to concentrate on the study of achievement motivation.

"Achievement Motivation Theory attempts to explain and predict behavior and performance based on a person's need for achievement, power, and affiliation" (Lussier & Achua, 2007, p.42). According to Allan (2002) "achievement motivation is conceived as a talent disposition which is manifested in overt striving only individual perceives performance as instrument and sense of personal accomplishment". The achievement of a person is very much related to the extent of motivation he or she has. Motivation as a factor of predicting achievement and that motivation correlated more highly with achievement than other factors. Motivation factors exert a profound influence on children's intelligence, performance and achievement not only in the laboratory but also in the classroom. Adeyemi (2008) defines academic achievement as the scholastic standing of a student at a given moment. According to him, it refers to how individual is able to demonstrate his or her intellectual abilities. (Adeyemi, 2010) therefore argued that a prediction of a future examination result could be made with reasonable success on the basis of the result of an earlier examination and that grades may serve as prediction measures and as criterion measures.

Classroom assessment is a continual activity for teachers to improve the quality of instruction and motivate students to learn (Gronlund, 2006). Therefore, when students are being motivated to learn, they are invariably being motivated to achieve in their academic performance. If a student has a very good CA, he/she tends to be motivated to replicate the same in the final examination. In summary, students' academic performance in English language will depend on whether they are motivated or not with respect to proper continuous assessment implementation and when such continuous assessment is properly handled, they can then be used as a prediction for an end of programme examination.

### **Review of Related Literature**

A number of investigations have been carried out on predictive validity of some variables and academic performance of students. Adeyemi (2008) conducted a study here in Nigeria whose aim was to examine the predictive strength of the Junior Secondary Certificate Examinations (JSCE) in predicting the performance of students in the Senior Secondary Certificate Examination (SSCE) in Ondo State. The population was 257 with 110 urban schools and 147 rural schools. A sample of 218 schools was selected with 94 urban and 124 rural secondary schools from the population using the stratified random sampling technique. Inventory method was used to collect data and analyzed using z-test statistic, correlation analysis and multiple regressions. The result shows that the best predictor of performance of the same students at the SSCE in Ondo State was year 2000 JSCE English language. The general predictive validity of the study was significant but the performance varied noticeably from one subject to another.

Olujide (2006) also carried out a study on Predictability of Continuous Assessment scores on Academic Performance of Students in Junior School Certificate Examination in Ilorin: An Indicator of Purposive Education in Nigeria. The sample for the study was 180 students selected from nine (9) secondary schools in Ilorin, who took J.S.C.E. in the year 2004. The data were analyzed using Pearson's r and the t-test statistical analysis. The study revealed that there is a positive and significant relationship between continuous assessment scores and J.S.C.E scores and hence, continuous assessment scores are good predictors of J.S.C.E. performance. The study further indicates that there is significant difference in continuous assessment scores of students in junior secondary schools in Ilorin. Sylvanus and Okechukwu (2013) also examined Predictive Validity of NECO Junior School Certificate Examination on Students' Achievement in NECO Senior School Certificate Examination. The study employed correlation and regression techniques to correlate the predictor and criterion variables. The sample for the study comprised three hundred and eighty-eight pairs of students scores randomly selected from Federal Unity Schools, University Secondary Schools and Command Secondary Schools in Ebonyi and Enugu States. Results of the findings showed that there is a low, positive but significant correlation between students' achievement in NECO-JSCE and in the SSCE conducted by NECO. The study also reveals that the predictive power of NECO-JSCE in predicting achievement in NECO-SSCE is moderated by gender and that a noticeable difference was

observed on male and female students' achievement in the NECO conducted examinations. Students' achievement in Mathematics in JSCE had more predictive strength on students' achievement in SSCE than other subjects. Social studies had the weakest predictive power in predicting students' achievement in geography

# 6. Methodology

### **Research Design**

The study adopted ex post facto research design. Ex post facto allow the assignment of participants to levels of the independent variable based on events that occurred in the past and dependent variable occurred thereafter the independent variable. The Ex post facto design was used in examining how an independent variable (continuous assessment), present prior to the study affects a dependent variable (Junior Secondary Certificate Examination), since the set of data collected are two, continuous assessment scores and Junior Secondary School Examination scores in English language.

### **Population and Sample**

The population for the study comprised 152,124 Junior Secondary School 3 (JSS 3) students from 296 Junior Secondary schools in Gombe State was used as obtained from Gombe State Ministry of Education.

### **Sampling Techniques**

The sampling method used was multistage cluster sampling technique. There are three senatorial zones in Gombe State namely, Gombe North, Gombe Central and Gombe South. In the first stage of sampling, Gombe South was selected by simple random sampling from the three zones. Gombe South had four Local Government Areas out of which two were selected in the second stage of sampling, by simple random sampling technique. The two Local Government Areas are Kaltungo and Shongom. Kaltungo had 9 and Shongom had 6 private secondary schools, making a total of 15 private secondary schools in the two Local Government Areas. In the third stage of sampling, three private schools in Kaltungo and one in Shongom Local Government Areas were selected because they were the only private secondary schools presenting students for Junior NECO examination in the two Local Government Areas.

All the Junior Secondary Class 3 students in the four schools were used for this study. These Junior Secondary School class 3 students were made up of all students who were admitted into Junior Secondary School one (JS 1) in 2011/2012, 2012/2013 and 2013/2014 respectively, had cumulative continuous assessment for three (3) years and had NECO Junior Secondary Certificate Examination (JSCE) scores in the academic session 2014/2015, 2015/2016 and 2016/2017 respectively.

### **Research Instruments**

The Researcher made use of two instruments for data collection as well as secondary data i.e. inventory in which continuous assessment scores and JSCE scores were accessed. Two instruments were used for data collection in the course of this research and they are; Continuous Assessment Scores in English Language (CASEL) for measuring students' performance in continuous assessment in English Language and the Junior Secondary Certificate Examination scores in English Language. (JSCESEL) for measuring students' performance in Junior Secondary Certificate Examination in English Language.

# **Procedure for Data Collection**

The researcher, after introducing himself to the school authority with the introductory letter requested for the CA score sheets and the JSCE score sheets of the students corresponding to the years on which analysis is to be carried out. From the record sheets, the CA scores sheets and the JSCE score sheets for English language and Mathematics were extracted. Some of the result sheets were photocopied while some were written out as the school concerned would not like to release the documents to be taken outside the school premises.

All the schools used were mixed (co-educational schools). The CA scores and the JSCE scores were extracted in grades i.e. A, C, P and F. The researcher, for convenience sake maintained the grading system as used by NECO for JSCE but converted the letter grades A, C, P, F into grade point 3, 2 1 0 respectively.

# Method of Data Analysis

In analyzing the data collected, the researcher answered research questions 1 and 2 using Correlation Coefficient (R).

The researcher tested hypotheses 1, 2 and 3 using simple linear regression (SLR) analysis with the aid of Statistical Package for Social Science version 23 (SPSS). The two-tailed test hypotheses were tested at .05 level of significance.

Some cut off values for 'r' according to Awotunde and Ugodulunwa (2002. P. 93) are as follows: 0.00 - 0.25 = Weak relationship, 0.26 - 0.50 = Moderately weak relationship, 0.51 - 0.75 = Moderately strong relationship and 0.76 - 1.0 = Strong Perfect relationship

# 7. Study Findings

What is the relationship between the continuous assessment scores in English language and the Junior Secondary Certificate Examination scores in English language for 22014/2015, 2015/2016 and 2016/2017 academic sessions?

Table 1				
Correlation	Coefficient	of CA Sco	res and JSCE Scor	res in English Language for 2014/2015
Model	R	$R^2$	Adjusted R <sup>2</sup>	Std. Error of the Estimate
1				
	.179	.032	.026	.468

Result from Table 1 shows that in 2014/2015 academic session, the Correlation Coefficient of .179 indicates weak positive relationship between CA scores and JSCE scores. The table also shows the coefficient of determination  $R^2 = .032$ . In other words, the model fits the data well. However, a

standard error of estimate (SEE) of .47 indicates that the prediction using the model has moderate accuracy.

What is the relationship between the continuous assessment scores in English language and the Junior Secondary Certificate Examination scores in English language for 2015/2016 academic session?

Table 2 Correlation	Coefficient	of CA Sco	res and JSCE Sc	cores in English Language for 2015/2016
Model	R	$R^2$	Adjusted R <sup>2</sup>	Std. Error of the Estimate
1				
	.069	.005	001	.420

Result from Table 2 shows that in 2015/2016 academic session the Correlation Coefficient of .069 indicates weak positive relationship between CA scores and JSCE scores. The table also shows the coefficient of determination  $R^2 = .005$ . In other words, the model fits the data well. However, a standard error of estimate (SEE) of .42 indicates that the prediction using the model has moderate accuracy.

What is the relationship between the continuous assessment scores in English language and the Junior Secondary Certificate Examination scores in English language for 2016/2017 academic session?

# Table 3

Correlation	Coefficient	t of CA Sco	res and JSCE Sco	res in English Language for 202	16/2017
Model	R	$R^2$	Adjusted R <sup>2</sup>	Std. Error of the Estimate	-
1					
	.21	.044	.039	.576	-

Result from Table 3 shows that in 2016/2017 academic session the Correlation Coefficient of .21 indicates weak positive relationship between CA scores and JSCE scores. The table also shows the coefficient of determination  $R^2 = .044$ . In other words, the model fits the data well. However, a standard error of estimate (SEE) of .58 indicates that the prediction using the model has moderate accuracy.

**Hypothesis one**: The students' Continuous Assessment scores in English Language cannot predict their performance in Junior Secondary Certificate Examination for the 2014/2015 academic session.

Table 4						
<b>Regression ANO</b>	VA of CA	Scores ai	nd JSCE Sco	ores in English l	Language 2014/20	<u>15</u> .
Model	SS	Df	MS	F	p-value	
					_	
Regression	1.218	1	1.218	5.561*	.020	
Residual	36.788	168	.219			
Total	38.006	169				

a. Dependent Variable: Junior Secondary Certificate Examination Scores.  $\alpha = .05$ 

b. Predictors: (Constant), Continuous Assessment Scores

### P < .05

F-Value = 5.561 is significant

The calculated *F* value is 5.561, which is more than the table *F* value (3.92) at  $\alpha = 0.05$  and degrees of freedom (1, 168). The result of the ANOVA, *P* value of 0.02 < 0.05 also proves the fact, the null hypothesis was rejected thus, the students' continuous assessment scores in English Language can predict their performance in Junior Secondary Certificate Examination for 2014/2015 academic session.

**Hypothesis two:** The students' Continuous Assessment scores in English Language cannot predict their performance in Junior Secondary Certificate Examination for the 2015/2016 academic session.

The hypothesis was tested using regression analysis and the result was presented below

Table 5Regression ANOVA of CA Scores and JSCE Scores in English Language 2015/2016

Model	SS	Df	MS	F	p-value	
Regression	1.155	1	1.155	0.878	.350	
Residual	32.781	186	.176			
Total	32.936	187				

a. Dependent Variable: Junior Secondary Certificate Examination Scores.  $\alpha = .05$ 

b. Predictors: (Constant), Continuous Assessment Scores

P > .05

F-Value = .878 is not significant

The calculated *F* value is 0.878, which is less than the table *F* value (3.92) at  $\alpha = 0.05$  and degrees of freedom (1, 186). The result of the ANOVA, *P* value of 0.35 > 0.05 also proves the fact the null hypothesis was not rejected thus, the students' continuous assessment scores in English Language cannot predict their performance in Junior Secondary Certificate Examination for 2015/2016 academic session.

**Hypothesis three:** The students' Continuous Assessment scores in English Language cannot predict their performance in Junior Secondary Certificate Examination for the 2015/2016 academic session.

The hypothesis was tested using regression analysis and the result was presented below.

Table 6							
Regression ANOVA of CA Scores and JSCE scores in English Language 2016/2017							
Model	SS	Df	MS	F	p-value		
Regression	2.778	1	2.778	8.358*	.004		
Residual	60.151	181	.332				
Total	62.929	182					

a. Dependent Variable: Junior Secondary Certificate Examination Scores.  $\alpha = .05$ 

b. Predictors: (Constant), Continuous Assessment Scores

P < .05

F-Value = 8.358 is significant

The calculated *F* value is 8.358, which is more than the table *F* value (3.92) at  $\alpha = 0.05$  and degrees of freedom (1, 181). The result of the ANOVA, *P* value of 0.004 < 0.05 also proves the fact, the null hypothesis was rejected thus, the students' continuous assessment scores in English Language can predict their performance in Junior Secondary Certificate Examination for 2016/2017 academic session.

# 8. Conclusion

In conclusion, it is expected that relationship should exist in performance of students at different intervals of time since they are replicating their ability as in the case of the CA scores and JSCE scores in English language. Likewise, students' performance in Junior Secondary Certificate Examination should ordinarily be predicted from the continuous assessment as students are expected to replicate their ability and performance from the CA in the final examinations if all things being equal. In this study, there was a low positive relationship between the students' continuous assessment scores and Junior Secondary Certificate Examination scores in English language for two academic sessions while the relationship was positive and very low for one academic session.

There is positive relationship between the CA scores and JSCE scores but the relationships are low as the case may be in (2014/2015 and 2016/2017) academic session while it was very low in (2015/ 2016) academic session for English language. The continuous assessment scores were good predictor of students' JSCE performance in English language for two academic sessions 2014/2015 and 2016/2017) while it could not be used as a predictor in one academic session 2015/2016.

From the foregoing, it could be presumed that there was an influence on the CA (such as the inflation of CA marks, lack of standardization in the CA, lack of psychometric properties in the CA and other variables) which must have contributed negatively to the performance of the students in the JSCE especially in 2015/2016 academic session.

### 9. Recommendations

The following recommendations based on the findings of the study are offered for consideration:

The continuous assessment scores should not be inflated so that it could be used for predicting the final performance of the students' achievement in their end of year programme. There should be uniformity and standardization in administering continuous assessment across schools. Incompetence in the operation of continuous assessment by teachers should be checked through training of the teachers on how to administer continuous assessment. The State Ministry of Education should ensure standardization in the conduct of their junior secondary certificate examinations and avoid repetition of questions and omission of correct answers. The National Examination Council (NECO) should maintain standard in conducting Junior Secondary Certificate examination. Some government schools which had earlier been selected for this study could not be used in the study because all their students are scored 'A' grade in continuous assessment over a period of three academic sessions so such conduct of administering continuous assessment should be stopped if continuous assessment must serve its purpose.

#### REFERENCES

- Acquah, A. (2017). Implications of the Achievement Motivation Theory for School Management in Ghana: A Literature Review. *Research on Humanities and Social Science* 7 Retrieved from https:// www.researchgate.net/publication/ 3166724211mplications\_of\_the\_ Achievement\_Motivation\_Theory\_for\_School\_Management\_in\_Ghana\_A\_Literature\_Review
- Adeyemi, T. O. (2008). Predicting students' performance in senior secondary certificate examinations from performance in junior secondary certificate examinations in Ondo State, Nigeria. *Middle-East Journal of Scientific Research*. 3(2), 73-81. Retrieved from https://pdfs.semanticscholar.org/6796/a8e2568c0b9baac6c258d49e1e98ddbd1101.pdf
- Adeyemi, T.O. (2010). Credit in Mathematics in Senior Secondary Certificate Examinations as a Predictor of Success in Educational Management in Universities in Ekiti and Ondo States, Nigeria. *Research Journal of Mathematics and Statistics 2(1): 14-22*. Retrieved From https:// www. google. com/url?sa=t&rct=j&q=&esrc=s&source=web&cd=1&cad =rja&uact=8&ved=2ahUKEwjZxMT96pjkAhXC-KQKHY-LAugQFjAAegQIABAC &url=http %3A%2F%2Fmaxwellsci. com%2Fprint%2Frjms%2Fv2-14-22.pdf&usg =AOvVaw17nZeAvPB9y37Z4x84C7-d
- Andrews A. (2017). Implications of the achievement motivation theory for school management in Ghana: A literature review. *Research on Humanities and Social Sciences* 7(5). Retrieved from http://www.researchgate.netpublication/3166724211mplicationsofthe AchievementMotivationTheoryforSchoolManagementinGhanaaLiteraturereview
- Anikweze, C. M. (2014). *Measurement and evaluation for teacher education*. Ibadan: Constellation Nig.Publishers.
- APA Citation Style: *Journal article with* 3-7 *authors* (6<sup>th</sup>ed). Retrieved from http://guides.himmelfarb.gwu.edu/c.php?g=27779&p=170335
- Atkinson, J. W., & Feather, E. W. (1980). Variables of achievement motivation. Princeton, NJ: Princeton University Press.
- Awotunde, P. O., & Ugodulunwa C. A, (2002). An introduction to statistical methods in education. Jos:Fab Anieh Nig. Ltd.
- Awotunde, P. O., & Ugodulunwa C. A, (2004). *Research methods in education*. Jos: Fab Anieh Nig. Ltd.

- Ayodele, C. S. (2010). Transformation of continuous assessment scores among schools in Nigeria. *European Scientific Journal*, 8(26), Retrieved from https: //eujournal. org/ index. php/esj/article/viewFile/577/646
- Babalola, O. B. (2019). Predictive Validity of Continuous Assessment In English Language And Mathematics for Junior Secondary Certificate Examination in Gombe South of Gombe State (Unpublished M.Ed Dissertation). University of Jos, Plateau State Nigeria.
- Christiana, A. U. (2008). *Fundamentals of educational measurement and evaluation*. Jos, Nigeria: Fab Educational Books.
- Definition of Prediction. (n.d). In *Wikipedia*. Retrieved April 11, 2019, from https://simple.wikipedia.org/wiki/Prediction
- Ezeugwu, J., & Omeje, J. C. (2014). Continuous assessment mode of evaluation in universal basic education programme: issues of teacher quality in assessment and record-keeping.
  *Developing Country Studies*.4(20), Retrieved from https:// iiste.org/Journals/index.php/
  DCS/article/download/16235/16634
- Faleye, B. A., & Afolabi, E. R. I. (2005). The predictive validity of Osun State junior secondary certificate examination. Retrieved from http: //www.investigacion-psicopedagogica. org/revista/articulos/5/english/Art\_5\_67.pdf
- Federal Ministry of Education, Science and Technology (2005): A Handbook on Continuous Assessment. Heinemann Educational Books (Nigeria) Ltd
- Gosego, M. (2015). Comparative analysis of the predictive validity of Botswana 2012 and2013 JCE results using 2009 and 2010 PSLE grades in Mathematics. Unpublished Master's Thesis, University of Botswana. Retrieved from https: //ubrisa.ub. bw/bitstream /handle/ 10311/1454/Mareka\_Unpublished%28MEd%29\_2015.pdf?sequence=3&isAllowed=y
- Gronlund, N. F. (2006). Assessment of student achievement, (8th Edition), Late of University of Illinois at Urbana-Champaign. Retrieved from https:// www.pearson. com/us/highereducation/product/Gronlund-Assessment-of-Student-Achievement-8<sup>th</sup>-Edition/ 9980205457274.html
- Hajia, M. U., Yagana, A. F. & Hauwa, M. A. (2018). Prediction of Academic Performances in Biology Among Public Senior Secondary School Students in Kwara State, Nigeria. *International Journal of Education and Research 6(12)*. Retrieved from https://www.ijern.com/December-2018.php

- Ikeh, N. J. (2004). Predicting WAEC and NECO examination from mock examination in economics in Gombe State. Unpublished master thesis University of Jos, Jos.
- Imo, G. C. (2012). Effects of teaching in test construction on quality of teacher-made tests and students' physics achievement in secondary schools in Plateau State. (Unpublished doctoral dissertation). University of Jos, Jos.
- Kapambwe, W. M. (2010). The implementation of school based continuous assessment (CA) in Zambia. *Educational Research and Reviews* 5(3), 099-107. Retrieved from http: //www. academicjournals.org/ERR
- Kolawole, E. B., & Ala, E. A. O (2013). Predictive validity of continuous assessment scores on students' performance in mathematics in some selected states in the South-West Nigeria. *Journal of Educational Research and Reviews 1*(4), 42-48. Retrieved from https: //www. sciencewebpublishing.net/jerr/archive/2013/.../Kolawole%20and%20Ala.pdf
- Kolo, T.N and Ojo, F.R. (2005). Large classes and assessment: problems encountered by teachers in Nigeria secondary schools. A paper presented at the 31st Annual IAEA Conference held at Nicon Hilton, Hotel. Abuja, Nigeria. 4th – 9th September. Lewis.
- Lussier, R. N., & Achua, C. F. (2007). Leadership: Theory application, skills and development (3<sup>rd</sup> ed.). Mason, OH: Thomson South-Western.
- (n.a), (n.d). Some definitions of achievement motivation. Retrieved from http: //thork. people.uic. edu/fair/definitions\_2016/2017.pdf
- Nwachukwu, P. O., & Ogudo, A. P. (2014). The standard of teachers' assessment practices in three domains of learning in nigerian secondary schools. *Developing Country Studies*. 4(20), Retrieved from https:// www. iiste.org/Journals/index.php/DCS/article/viewFile/ 14076/14384
- Olujide, A. A. (2006). Predictability of continuous assessment scores on academic performance of students in junior school certificate examination in Ilorin: an indicator of purposive education in Nigeria. *Journal of the Counseling Association of Nigeria*, 22 (1), 190-201

Sylvanus, O. U. & Okechukwu, S. A. (2013). Predictive Validity of NECO Junior School Certificate

Examination on Students' Achievement in NECO Senior School Certificate Examination. Retrieved from https://www.Researchgate.net/publication/259761311Predictive\_ Validity School\_Certificate\_Examination\_on\_Students%27\_Achievement\_in\_NECO\_ Senior\_School\_ Certificate\_Examination Umar, Y. U., & Lawal, A. (2017). Predictive validity of junior school certificate examination on students` performance in senior school certificate examination in Mathematics. *Journal of Educational Policy and Entrepreneurial Research*4(2), 53-58. Retrieved from <u>https://www.zeetarz.com/wp-content/uploads/2017/12/</u>Predictive-Validity-of-Junior-School-Certificate-Examination-on-Students-Performance-in-Senior-School-Certificate-Examination -in-Mathematics.pdf

Validity and reliability of secondary data in research(n.d). *In Wikidedia*. Retrieved from <u>https://en</u>.Wikipedia.org/wiki/Secondary\_data#Secondary\_analysis\_or\_re-use\_of\_qualitative\_data

- Wakjissa, S. G. (2016). Effects of portfolio assessment technique on students' attitude and performance in geography in senior secondary schools in Jos Nigeria. (Unpublished doctoral dissertation). University of Jos, Jos, Plateau State Nigeria
- Zambia Ministry of Education, (2007). Review of the Ministry of Education sector plan Zambia. Retrieved from https: //norad.no/en/toolspublications/ publications/2009/ review-of-the-ministry-of-education-sector-plan-zambia/