

RELATIONSHIP BETWEEN CONTINUOUS ASSESSMENT AND JUNIOR SCHOOL CERTIFICATE EXAMINATION MATHEMATICS SCORES IN EKITI STATE

ADEBULE SAMUEL OLUFEMI, Ph.D

FACULTY OF EDUCATION,
UNIVERSITY OF ADO-EKITI,
NIGERIA

E-mail: doctorolufemiadebule@yahoo.com

Abstract

The study investigated the relationship between students' continuous assessment scores and Junior School Certificate Examination Mathematics Scores in Ekiti State.

The population consisted of all Junior Secondary School Students for 2005/2006, 2006/2007 and 2007/2008 academic sessions. A sample of 80 students selected through the stratified random sampling technique from eight junior secondary schools was involved in the study. Three null hypotheses were generated and tested at 0.05 level of significance. The findings showed that there was a significant relationship between the junior secondary school continuous assessment scores (JSSCAS) and the overall performance in junior secondary school certificate examination in mathematics (JSSOT). However, there was no significant relationship between JSSCAS and JSS ST for male and female students. It was suggested that teacher made test used for continuous assessment should be made to pass through the processes of standardization and validation.

Keywords: Continuous assessment scores, teacher made tests, gender, correlation matrix, certificate examination.

Introduction

Assessment as an indispensable ingredient, condiment and tool for determining efficiency at work or play, mastery of delivered instructions, decision making about policy, curriculum and programme; placing, classifying, managing selecting promoting and certifying students needs to evolve from the most suitable, equitable and reliable method of assessment. According to Cliff & Imre (1981) and Adebule & Ayodele (2005), the consequences of using invalid or wrong assessment techniques are multifaceted, multidimensional and could be saddening.

The continuous assessment system of education in Nigeria today is expected to be systematic or regular testing of students between terms, sessions or throughout the duration of the course of study for the purposes of measuring or assessing student's progress or lack of it on a continual basis, Alonge (2004). According to Awolusi (1995), the current practice places some insufficiently verified confidence in the

teacher made tests since the scores of students in continuous assessments are considered alongside the Junior and Senior Secondary School Certificate Examinations scores.

Some researchers like Alonge (2004), Cliff & Imre (1981) Thorndike & Hagen(1977), observed that teacher made tests in general are quite defective evaluation devices. The common faults put forward by these researchers include not covering the range of objectives specified by the teachers in terms of contents and educational objectives, ambiguity of question items and test characteristics that are inappropriate for the purpose for which the teacher wants to use the test results. However Alonge (2004) opined that teacher made tests is valuable as a measure of progress in learning while Schofield (1972) was of view that the better the teacher the test will be and the more useful the results obtained especially in continuous assessment.

The National Policy on Education (1998) states that education will be liberalized by basing them in whole or in parts on the continuous assessment of the progress of the individual. It is based on the assumption and expectation that the system will ensure a more justifiable and truthful classification of students based on their abilities. For proper alignment of each end of course test scores and the preceding continuous assessment scores from the teacher made tests, serious attention needs to be given to ensure the validity of the tests and that of the process of conducting the tests.

According to Adebule (2005) most people especially, the parents, guidance counsellors, teachers, researchers, examination bodies like WAEC, NECO, NABTEB, Ministry of Education and the government has interest in knowing the extent to which the raw scores generated could be relied upon for use. Nothing would be too painful for them than to discover that the meticulously processed scores emanated from faulty, unreliable and unjustifiable instrument called the teacher made test or that a brilliant student has been wrongly assessed as weak by using inappropriate or poorly handled teacher made tests.

The study therefore verified the degree of trust or reliance that could be placed on the teacher made test scores, determined how well such tests are doing the job and also helped to find out and checked whether the tests measured what they were designed to measure as accurately as possible.

Research Hypotheses

To guide the study, three null hypotheses were generated and tested at 0.05 level of significance.

Ho1: There is no significant relationship between the Junior Secondary School continuous Assessment scores (JSSCAS) and the overall performance in Junior Secondary School Certificate Examination in Mathematics (JSS OT).

Ho2: There is no significant relationship between the continuous assessment scores and Junior Secondary School Certificate State test scores of male students in Mathematics.

Ho3: There is no significant relationship between the continuous assessment scores and Junior Secondary School Certificate state test scores of female student in Mathematics.

Research Method

The study employed the ex-post-facto research design. Since the data used were collected from the schools and Ministry of Education, no manipulation of any kind took place. The population consisted of all Junior Secondary School students between year 2005 and 2008. The data collected were the scores of 80 student selected through stationary random sampling techniques from Eight Junior Secondary school in Gbonyin, Ilejemeje, Emure, Ijero, Ise/Orun, Efon, Oye, Ido/Osi Local Government areas of Ekiti States of Nigeria.

A proforma was used to collect data for the study. The Pearson Moment Correlation analysis was used to test for the acceptance or rejection of the postulated hypotheses.

Results

Table 1: Correlation Matrix for Mathematics Scores of the Students

	JSSCAS	JSSST	JSS OT	Pearson Critical value
JSS CAS	1.00	0.14	0.34	0.2172
JSS ST	0.14	1.00	0.98	
JSS OT	0.34	0.98	1.00	

n=80 p<0.05

Table1 shows the Pearson's r calculate value of 0.34>0.2172 this shows that the result is significant, hence the hypothesis is rejected. This meant that there is a significant relationship between JSSCAS and JSS OT.

Table 2: Correlation Matrix for Mathematics Scores of Male Students

	JSSCAS	JSSST	JSS OT	Pearson Critical value
JSS CAS	1.00	0.16	0.38	0.2976
JSS ST	0.15	1.00	0.93	
JSS OT	0.38	0.93	1.00	

n=42 p>0.05

From table 2, the correlation coefficient between the JSSCAS and JSS ST is 0.16 but the Pearson's critical value equals 0.2976 at 0.05 level of significance. Since 0.16<0.2976 the hypothesis was not rejected. Though there is a relationship but it is statistically not significant. Hence there is no significant relationship between JSSCAS and JSS ST for male students.

Table 2: Correlation Matrix for Mathematics Scores of Female Students

	JSSCAS	JSSST	JSS OT	Pearson Critical value
JSS CAS	1.00	0.09	0.32	0.3125
JSS ST	0.09	1.00	0.97	
JSS OT	0.32	0.97	1.00	

n=38 p>0.05

Table 3 indicates the Pearson's correlation coefficient of 0.09 and r critical value of 0.3125. Since 0.09 < 0.3125, it shows the result was not significant, hence there is no significant relationship between JSSCAS and JSSS ST for the female students. The coefficient of relationship 0.09 is statistically not significant. It is a very weak relationship.

Discussion

The finding of the study on hypothesis one reveals that there is a significant relationship between Junior Secondary school Continuous Assessment Scores (JSSCAS) and the overall performance of the students in the Junior Secondary School Certificate Examination. The implication is that all the annual continuous assessment scores compiled and sent to the Ministry of Education has a significant bearing on the overall performance of the students at the end of their 3 year programme. The finding disagree with

Awolusi (1995) and Adelusi (1983) whose results showed that of no significant relationship. However Abe (2004) found out that moderate positive relationship exists between CA1, CA2 and EAS of some school investigated in his study.

The results of hypotheses 2 and 3 depict that no significant relationship exist between the JSSCAS and the JSSST for male students and that of female students respectively. The finding agreed with that of Awolusi (1995) and Abe (2004). The quality of scores of CA practices in schools by mathematics teachers is nothing to write home about.

Conclusion and Recommendation

Conclusively, practicing teachers should be conscious of the scores given or awarded to students which were at variance to the external scores so that the relationship between the school based assessment scores and external assessment scores will be high.

It could be suggested that the teacher made tests that were used for continuous assessment should be made to pass through all the processes of standardization and validation. The teachers themselves need training in are of test development and construction so as to be more skillful in test construction marking and grading of students scripts.

The students also need to be counselled and prepared adequately enough to answer examination questions.

REFERENCES

- Abe T.O. (2004): School based assessment in Mathematics and their Relationship with Achievement Test Scores, *Journal of Educational Foundations and Management* 4 (1).
- Adebule S.O. (2005): Functional Assessment for Quality Education in Nigeria, *International Journal of Research in Education* 2 (1&2).
- Adebule S.O. and Ayodele C.S. (2005): Assessment and the future of Schooling and Learning *Journal of Education* 4(1).
- Adelusi A. (1983): Performance in Internal Examination. A case Study of International School, Ibadan. Unpublished M.Ed thesis, University of Ibadan.
- Alonge M.F. (2004): Measurement and Evaluation in Education and Psychology, Ado-Ekiti, Adebayo Printing Ltd.
- Awolusi O. (1995): The validity of Teacher Made Test in Ido/Osi Local Government Area of Ondo State. An Unpublished M.Ed Thesis, Ondo State University.
- Clift J.C and Imre B.W. (1981): *Assessing Students, Appraising Teaching* New York, John Wiley and Sons.
- National Policy on Education (1998).
- Schofield H. (1972): *Assessment and Testing; An Introduction*, London, George Allen and Unwin Ltd.
- Thorndike L.L. and Hagen E. (1977): *Measurement and Evaluation in Psychology and Education*, New York John Wiley and Sons.