TRANSFORMATION OF CONTINUOUS ASSESSMENT SCORES AMONG SCHOOLS IN NIGERIA

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Abstract

This study investigated Transformation of continuous assessment scores in English Language and Mathematics in Secondary Schools in Nigeria. The study employed survey and cross-sectional design. The sample consisted of 2,520 JSS III students selected from 36 secondary schools in 18 Local Government Areas based on multistage sampling technique. Data were collected directly from the Ministries of Education, continuous assessment Units. The data collected were subjected to inferential analysis using ANOVA. The results showed that there was a significant difference between transformed Continuous Assessment scores in English Language and Mathematics among the selected schools. Based on the findings, it was recommended that secondary school teachers should be sensitized on the need for faithful award of continuous assessment score and teacher should be trained on the procedure to transform continuous assessment scores.

Keywords: Predictive True Score, Derived True Score, True Score

Introduction

Assessment is regarded as any method used to understand the current knowledge that a student possess. At present, there seems to be no uniformity in the conduct of assessment across the schools in terms of testing administration and marking of assessment instruments which might make continuous assessment scores vary among schools. Federal Republic of Nigeria (2004) stated that any existing contradictions, ambiguities, lack of uniformity in educational practice in different parts of the federation should be removed. It seems there is no uniformity in staff strength, quality of teachers across schools. While some schools are well staffed and some are under staffed. The difference in the quality of teachers may give

differences in the quality of instructions and assessment which could result in difference in students' in continuous assessment scores.

According to Ojerinde and Falayajo (1984) and 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. Some teachers may set apparently difficult test items, which students may see as a threat to the class. From experience, some teachers deliberately give tests to students when they are not prepared to teach their lessons. Ipaye (1982) noted that students complained that continuous assessment put them on continuous tension. These types of complaints reflect the students' negative attitude to their studies, which may also have adverse effect on their continuous assessment scores.

Schools are categorized into Federal Government Colleges. Unity Schools, Science Colleges, Public Schools, Private Schools and so on. The assumed best students would be admitted into the Federal Government Colleges or private schools while the better ones go to state/science colleges and good ones then go to old or grade one school while the remaining students go to mushroom schools. This seems to create superiority and inferiority complex among the schools and even among the students. For instance, some schools motivate students to learn because of the physical structures and presence of facilities such as electricity, water supply, equipped science laboratories, well-equipped library and these seem to enhance better performance than other schools that lack these facilities. The effect may be reflected in continuous assessment scores. No wonder while Alonge (2003) said that class teachers or lecturers engaged students in grading and computing their colleagues' results or where continuous assessment scores are awarded arbitrarily like $^{29}/_{30,}{}^{31}/_{30}$ or $^{30}/_{30}$ raises a lot of questions about the credibility of the assessment.

The researcher observed that some schools conduct three periodic tests and end of term examination. Some schools based their periodic test on 10 marks each added together to make 30 marks plus end of term examination mark while some schools also based their on 30 marks each , added together and find the average to be 30 marks plus end of term examination. And some schools based their periodic test on 100 each added together and find the average to be 100 plus end of examination mark which is 100 and then find the average again to be 100 marks. Some teachers may conduct a single test based on 30 marks then divide the score into three say 10, 10, 10 plus end of term examination mark. Some teachers awarded scores on test never administered. Not only that when the school registrars are to submit their schools continuous assessment scores, some seem to manipulate continuous

assessment scores and submit such scores. There may be inconsistency among such schools in the ways the periodic tests were administered.

The problem of non-uniformity in the quality of assessments instruments, consistency in assessment administrative procedure and procedure for scoring and grading which varies from teacher to teacher. Some schools seem to use this advantage to unduly inflate continuous assessment scores of the students to favour their schools. Beside, some uniform grades are attached to scores like A, B, C, D, E, F despite the fact that there are no uniform criteria or parameters by which such conclusions are made. Not only that some school registrars seem to manipulate continuous assessment scores with or without the knowledge of the subject teachers before submitting continuous assessment scores to ministries of Education to be used with JSS examination for the award of JSS certificate.

Today the situation is worse, the ratio of continuous assessment marks and final examination marks according to Okarfor (2001) vary from one school to another ranging from 10:90 through 30:70 to 50:50 respectively. Some schools resorted to the one-short end-of-course examination which have been criticized for having repressive and restricting effects on both the teachers and the students and which in recent time has high degree of examination malpractices (West African Examination Council, 1999).

On the contrary, Kolawole (2005) reported that continuous assessment scores spread across the three years as follows; 5%for JSS I, 12.5%for JSS II1 12.5% for JSS IIIS and 70% for the state test. He added that continuous assessment scores is 30%, theory paper in state examination is 30% and objective is 40% however, which ever is the case, continuous assessment scores take certain percentage of the overall score. Ojerinde (1985) asked these questions; (i) who will convert the scores to whatever weights that are adapted. (ii) How much can we rely on the scores sent by the schools? It is on this bases that the study intends to find solutions to comparability of standard of continuous assessment scores in schools.

Adamolekun (1984) and Omowaye (2002) reported that schools can and do deliberately inflate the grades they give to their students to ensure that the students emerge successful no matter the grades they receive in the final external examination. Abbas (2000) stated that candidates' continuous assessment scores may not be the true reflection of his ability as he might be scored higher than his actual ability. This may be as a result of many reasons such as special interest in such candidate, the candidate may be a teachers' favourite. These teachers may think they are helping these students by inflating the marks not knowing that it put their students at a disadvantage rather than an advantaged position. Also, inflated

grades according to Juola (1976) provide inaccurate feedback, which may represent intellectual dishonesty. A continuous assessment approach can help to rectify the problem of mismatches between test and classroom activities (Chepelle & Douglas, 1993).

Notwithstanding, Ademolekun (1984) noted that there is a gross disparity in the quality of education among secondary schools that would make it difficult to compare the grades given by one school with grades given by another. Despite the fact that these schools operate on the same syllabus and receive the same directives from their State Ministry of Education on the way to operate in schools.

The studies of Bandele (1993) pointed out that something was wrong in the internal assessments as practiced in schools in the country. His analysis showed that internal assessment is more prone to abuses and is less reliable than external assessment. In addition, Obiako (1989) observed that scanty tests and assignments formed the instrument teachers used in collecting scores for their assessments, and that methods of reporting results were bad. Also, it was very difficult to compare scores obtained from one school with another. Garguilo (1987) argued that comparability of standard can be attempted if not totally achieved by standardization of all scores from schools and moderation of school assessed components with the state test as the moderating instrument.

Kolawole (2001) reported that a raw score on any psychological testing is meaningless in the absence of interpretative data. Dockrell (1981) said that there is need for general standard if the marks awarded are to be comparable. In this own contribution, Alonge (2004) argued that before one could compare children's performance across subjects and across schools, there is need to process their raw scores in each subject. The author added that to facilitate meaningful analysis and interpretation, raw scores are usually transformed to other scale.

To this end, the transformation models used are true score, predictive true score, Z-score, T-score and derived true score. Therefore, the study examined whether there is any difference in the transformed continuous assessment scores for the selected school subjects among the sampled schools,

Research Questions

(1) Are transformed continuous assessment scores English Language comparable among the sampled schools?

(2) Are transformed continuous assessment scores Mathematics comparable among the sampled schools?

Research Hypotheses

(1) There is no significant difference between transformed continuous assessment scores English Language among the sampled schools.

(2) There is no significant difference between transformed continuous assessment scores Mathematics among the sampled schools.

Method

This study employed survey and cross-sectional design. The population consisted of all public Junior Secondary School three students in South West Nigeria. These are students who were in JSS 3 in 2005/2006 and 2006/2007 sessions. The sample consisted of 2,520 Junior Secondary Schools three students' that were selected from 36 secondary schools in 18 Local Government Areas in three States based on multi-stage, stratified and simple random sampling techniques. Eight hundred and forty students were selected for the period of two years in each sampled State. Multi-stage and stratified sampling techniques were employed to select the States, Local Government Areas, Schools and Students who continuous assessment scores were used for the study. A Proforma titled "Continuous Assessment Scores Retrieval Format" was used to collect continuous assessment scores of the students selected for the study. These are continuous assessment scores sent to the respective Ministries of Education in the various states for the 2005/2006 and 2006/2007 sessions. Analysis of variance (ANOVA) was used to test hypotheses one and two at 0.05 level of significance..

Results

Ho1: There is no significant difference between transformed continuous assessment scores English Language among the sampled schools.

Table 1: ANOVA Summary of Transformed Continuous Assessment Scores English Language among schools.

	Source of variation	Sum of squares	Df	**MSS**	F cal	F tab
English Language **True Score**	Btw groups	26745.615	35	764.160		
	Within groups	13598.511	2484	5.474	139.587	1.350
	Total	40344.127	2519			

	Pred Btw groups **True** Within groups **Score** Total	12462.125 17142.058 29604.183	35 2484 2519	358.061 6.901	51.596	1.350
	Btw groups **Z-score** Within groups Total	883.528 1632.704 2516.232	35 2484 2519	25.244 0.657	38.406	1.350
	Btw groups **T-sco** Within groups Total	7951.753 14694.332 22646.085	35 2484 2519	227.193 5.916	38.406	1.350
	Derived Btw groups **True** within groups **Score** Total	86499.370 15074.910 101574.280	35 2484 2519	2471.411 6.069	407.232	1.350

$p < 0.05$

The result in table 1 shows that F calculated for true score is 139.587, predictive true score is 51.596, Z-score is 38.406, T-score is 38.406 and derived true score is 407.232 in English language among schools. All were significant at 0.05 alpha levels. Therefore, the hypothesis is not accepted. There was a significant difference between transformed continuous assessment scores English Language among the sampled schools.

Ho2: There is no significant difference between transformed continuous assessment scores Mathematics among the sampled schools.

Table 2: ANOVA Summary Transformed Continuous Assessment Scores Mathematics among schools.

	Source of Variation	Sum of Square	Df	MSS	F cal	F tab
Mathematics	Btw groups True within groups Score Total	6399.603 12339.918 18739.521	35 2484 2519	182.846 4.968	36.806	1.350

	Predi Btw groups	10518.872	35	300.539		
	True Within groups	23678.975	2484	9.533	31.528	1.350
	Score Total	34197.847	2519			
	Btw groups	878.291	35	25.094		
	Z-sco Within groups	1637.478	2484	0.659	38.067	1.350
	Total	2515.768	2519			
	Btw groups	7903.759	35	225.822		
	T-sco Within groups	14738.654	2484	5.933	38.059	1.350
	Total	22642.414	2519			
	Derived Btw groups	23034.647	35	658.133		
	True Within groups	19798.547	2484	7.970	82.572	1.350
	Score Total	42833.194	2519			

$p < 0.05$

Table 2 reveals that F value for true score is 36.806, predictive true score is 31.528, Z-score is 38.067, T-score is 38.059 and derived true score is 82.572 for Mathematics were all significant at 0.05 alpha level. Therefore, the hypothesis is not accepted. There was a significant difference between transformed continuous assessment scores Mathematics among the sampled schools

Discussion

It was discovered through the findings that there was a significant difference between transformed Continuous Assessment scores English Language and Mathematics among the sampled schools. This is an indication that all the transformation models i.e. True score, Predictive true score, Z-score, T-score and Derived true score were functioning well because they gave different values when regressed on Continuous Assessment scores. This is in line with Alonge (2004) who stresses that to facilitate meaningful analysis and interpretation, raw scores are transformed to other scales.

In addition, the results of post hoc indicated that schools mean differed significantly in transformed Continuous Assessment scores English language and Mathematics. The mean significant differences of transformed scores in some schools were clustered while in some schools they were widely spread. It means that subject teachers award Continuous

Assessment scores differently. This is in agreement with Bandele (1993) who stated that something was wrong with the internal assessment as practiced in schools. This is what Knuth (1991) termed as teachers' subjective judgment. The findings also corroborate with Ayodele (2010) that continuous assessment scores were heterogeneous intra subject among schools and there is need to determine which of the transformation models will best predict comparability indices.

Recommendations

Based on the findings, it was recommended that teachers should be sensitized on the need for faithful award of continuous assessment scores, subject teachers should be trained on the procedure to transform continuous assessment scores and Continuous assessment scores should be transformed to allow for comparison scores among schools.

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