Relationship between Internal and External Assessment Scores in School Subjects among Secondary Schools Students in Ekiti State, Nigeria

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ABSTRACT

This study investigated relationship between school and WAEC based assessment in Mathematics, English Language and Biology among the senior secondary schools in Ekiti State, Nigeria. Cluster sampling was adopted to select ten schools from the three senatorial districts and simple random technique was used to select 500 students per subject which was made up of fifty students per school. Two hypotheses were postulated and tested at $p < 0.05$, using Pearson-Product-Moment Correlation Coefficient. The results show among things that there is significant relationship between internal and external assessment scores in school subject among secondary schools students in Ekiti State, Nigeria. Based on the findings, it was recommended that teachers should be concretized to the practice of continuous assessment faithfully in schools so that, the purpose of schools system of Education which emphasizes on quality assessment of students would not be bastardized.

Keywords: School-based assessment, average of school-based assessment and average of WAEC grades, and Ekiti State.

INTRODUCTION

Assessment is defined as a process of obtaining information that is used for making decisions about curricula, programmes and educational policy (Nitko, 1996 and Alonge 1989, 1996, 2003, 2004 and 2005). Assessment shapes students disposition towards learning and influences their motivation to learn. Assessment involves the system of testing as well as measurement. Assessment is more involving action than either testing or measurement but a less involving term than evaluation. Alinge (1996, 2003 and 2005) argues that classroom assessment and evaluation provide useful information that helps to optimize learning and improve teaching effectiveness. In assessment, the over-all domain has to do with decisions about policies, students and curricular or programmes. Ezewu and Okoye (1982) posit that the word assessment mean placing a value on a thing, while in education, the word mean to determine the extent of the performance of a student in a unit of instruction of the overall progress of a student in school up to a particular point in time. Willis (1993) reiterates that assessment information is designed to tell a teacher something about learning. Crooks (1988), Duze (1989) and Abe (2004) also hold similar views when they argued that assessment forms an integral part of the learning process. The Federal Ministry of Education (1985) defined continuous assessment as a mechanism whereby the final grading of student

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in the cognitive, affective and psychomotor domains of behaviour systematically takes account of all his performances during given period of schooling for the purpose of guiding and improving the learning and performance of the students. From this definition, three areas were clearly spelt out, that assessment in schools should embrace. These are the cognitive, the affective and psychomotor. Assessment in the cognitive domain should cover the six cognitive domains originally indentified by Bloom (1956). These are knowledge, understanding, application, analysis, synthesis and evaluation. However, at the lower level of primary education, this should cover the first two levels only (Federal Government Handbook on continuous assessment 1985). The affective domain has to do with appreciation, interest social relations, emotional adjustments, habits and life style. The psychomotor domain deals with the way pupils manipulate objects and move their hands and bodies. This is observable in such activities as writing, drawing and setting up laboratory equipments. The contention of some scholars is that, since these domains overlap, their accurate assessment would depend largely on teachers stating clearly their instructional objectives and procedures in such a way that it will bring a change in students' learning outcomes in the three domains Duze (1989) and Ezewu and Okoye (1982) and Yoloye (1984). While Ogunniyi (1984) sees continuous assessment as a formative evaluation procedure concerned with finding out in a systematic manner the over-all gains that a student's has made in terms of knowledge, attitudes and skills after a given set of Leaning experiences.

The view of Ezewu and Okoye (1982) on the subject of continuous assessment within the educational context is congruent with the aforementioned. Duze (1984) and Yoloye (1984) reveal a consensus as on the basic characteristics which are that, it is objective, systematic, comprehensive, cumulative, and diagnostic and guidance oriented. It is also formative and psychologically motivating and according to Fakunle (1989) it provides students with feed-back on their performance, thereby relieving their anxieties and so, they strive to do better. Black (1998) looked at the ways in which teachers contribute to the assessment of pupils, for example, he found that they could range from being the sole and entire source. Being the sole source but with their results national calibrated. Being the sole source un-calibrated but with their methods checked. Providing results, which are set alongside external test results but not combine?

Having no role at all except to help their pupils meet the external test.
Adewumi (1985) showed that there was high coefficient or correlation between the performance of student in mock and WASC examination showed high and significant correlation coefficients among the semester scores in Mathematics. The findings of Abe (2002, 2004) show that there were low and positive relationship between CA1 and JSCE in 3 schools, between CA2 and JSCE in five schools, there were high and positive relationship between CA2 and JSCE in only one school, therefore, the conceptual framework of assessment is on the assertion of Abe (2002, 2004) and Alonge (2005) which observe that continuous assessment has been bastardized, these stressed that, we don't know who is assessing who within the classroom? A situation whereby students are engage by class teachers or lecturers in grading and compyting their colleagues result or where CA scores

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are awarded arbitrarily or inflated by principals to bridge the gap that might result from JSS, NECO or WAEC examination e.g 29/30, 31/30, 35/30 or 35/40,45/40. This happens at university, polytechnics and college of education while at JSS1, CA1 70%, JSS2, CA2 80% JSS3, CA3 85% while at state examination, ten students scored 30%. This was in Mathematics Exam. While at SSS level CA1 70%, CA2 80%, in WAEC F9 al these raises a lot of questions about the credibility of our assessment and examination procedures. Hence, based on this, there is need for moderation of internal assessment scores. The problem of this study therefore, is find the relationship between school and WAEC-based assessment in Mathematics, English language and Biology among the senior secondary schools students in Ekiti state, Nigeria. To guide the study two hypotheses were formulated.

$H_0$1 There is no significant relationship between school-based assessment (CA1, CA2 and CA3) and WAEC-based assessment in mathematics, English language and Biology.

$H_0$2 There is no significant relationship between the average scores of school-based assessment and WAEC-based assessment in Mathematics, English language and Biology.

METHOD

There is an ex-post-facto research design in which there was no treatment and manipulation of subjects instead it involved the collection of data from records. The target population consisted of all senior secondary schools students in Ekiti state. While sampling was adopted to select ten schools from the three senatorial district an simple random technique was used to select five hundred students per subject which was made up of fifty students per schools and collected the school copy of WAEC result and school-based assessment scores (SS1, SS2 and SS3) for three consecutive years (2001-2004). The data were analyzed using pearson-product-moment Correlation statistics to test the two hypothesis postulated for the study. Note: CA1, Ca2, CA3 represents school based assessment for SS1, SS2 and SS3, MCA1, MCA2, MCA3 were the mean scores for school-based assessment and MWAEC denotes the mean score of WAEC grades in all the schools sampled for study.

RESULTS AND DISCUSSION

There were low and negative relationship between (CA1 and WAEC), (CA2 and WAEC) and (CA3 and WAEC) in Mathematics, English language and Biology as shown on table 1. From the table 2, there were high and negative relationship existed between the (MCA1 and MWAEC), (MCA2 and MWAEC) in Mathematics, English language and (MCA3 and MWAEC) in Biology very high and negative relationship existed between (MCA1 and MWAEC) in English language moderate and negative relationship occurred in (MCA2 and MWAEC) in Biology and English language is existed between (MCA3 and MWAEC) in Mathematics and Biology. Table 3 shows significant relationship between CA1, CA2, CA3 and WAEC at $p<0.05$, and the critical value of -0.349 (2-tailed test). There was significant relationship between (CA2 and WAEC) in Mathematics through the relationship was negative, hence, the hypothesis was upheld in (CA1 and WAEC), (CA2 and WAEC),

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and (CA3 and WAEC) in English language and Biology. A cursory look at the table 4 shows a significant relationship between average scores in CA1, CA2, CA3 and WAEC in Mathematics, English and Biology at $p<0.05$, and at the critical value of -0.349 (2-tailed test). The hypothesis was only upheld in (MCA3 and MWAEC) in Mathematics and Biology. While the hypothesis was not uphold in (CA1 and WAEC), (MCA2 and MWAEC) in Mathematics, English language and Biology and also between (MCA3 and MWAEC) English language.

The findings of this study revealed that there were low and negative relationship between (CA1 and WAEC), (CA2 and WAEC) and (CA3 and WAEC) grade in Mathematics, English language and Biology while high and negative relationship between (MCA1 and MWAEC), (MCA2 and MWAEC) and (CA3 and MWAEC) in Biology. While very high and negative relationship existed between (MCA1 and MWAEC), (MCA2 and MWAEC) in English language, moderate and negative relationship existed in (CA2 and MWAEC), grades in Biology and English language in (MCA3 and MWAEC). Also, low and negative relationship existed in Mathematics and Biology. This is at variance to the findings of Abe (2002, 2004), Onucha (1988), Adewumi (1985) and Adeusi (1983).

Also, significant difference existed from table 3, between (CA1 and WAEC) in Mathematics which led to rejection of hypothesis one. While the hypothesis was upheld only between MCA3 and MWAEC in Mathematics and Biology. The finding corroborates that of Osucha (1985) but not in line with Adeusi (1983) Adewumi (1985), Abe (1995) Abe and Gbore (2003) and Abe (2002 and 2004). It was also observed that from the table 4, there were significant relationship between (MCA1 and MWAEC), (MCA2 and MWAEC) in Mathematics, English language and Biology ditto to between (MCA3 and MWAEC) in English. These corroborate the findings of Fowokan (1987), Onuch (1988) Abe (2002, 2004) and Abe and Gbore (2003).

Table 1: Correlation coefficients for CA1, CA2, CA3 and WAEC grade in Mathematics, English and Biology.

Subject	**N**	**CA1 and WAEC**	**CA2 and WAEC**	**CA3 and WAEC**
Mathematics	500	-0.345	-0.376	-0.236
		low and Negative	low and Negative	low and Negative
English	500	-0.297	-0.214	-0.147
		low and Negative	low and Negative	very low and Negative
Biology	500	-0.279	-0.296	-0.210
		low and Negative	low and Negative	low and negative

***Source*:** Fieldwork, 2011

Table 2: Correlation Coefficients between means scores of school-based and mean grade of WAEC-based assessment in Mathematics, English language and Biology.

Subject	**N**	**MCA1 and MWAEC**	**MCA2 and MWAEC**	**MCA3 and MWAEC**
Mathematics	500	-0.657	-0.698	-0.342
		high and Negative	high and Negative	low and Negative
English	500	-0.839	-0.696	-0.498
		very high and Negative	high and Negative	moderate and Negative
Biology	500	-0.656	-0.527	-0.211
		high and Negative	moderate and Negative	very low and negative

***Source*:** Fieldwork, 2011

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Table 3: Summary of relationship between CA1, CA2, CA3 and WAEC

Subject	N	MCA1 and MWAEC	MCA2 and MWAEC	MCA3 and MWAEC
Mathematics	500	-0.345	-0.376*	-0.236
English	500	-0.297	-0.264	-0.147
Biology	500	-0.279	-0.297	-0.210

***Source*:** Fieldwork (2011)

Table 4: Summary of relationship between average scores in CA1, CA2, CA3 and WAEC in Mathematics, English and Biology

Subject	N	MCA1 and MWAEC	MCA2 and MWAEC	MCA3 and MWAEC
Mathematics	500	-0.657	-0.698	-0.342
English	500	-0.839	-0.696	-0.498
Biology	500	-0.656	-0.527	-0.291

***Source*:** Fieldwork, 2011

CONCLUSION AND RECOMMENDATIONS

The study expose the surrogates of teacher's assessment in secondary schools in Ekiti state, specialist in test and measurement or evaluation whose interest in statistical moderation or test administrator should be employed in the examination record and statistics section of both state and Federal Ministry of Education and in WAEC, NECO and JAMB offices. The overall findings indicated that the relationship between school-based assessment and that of WAEC based assessment were negative; this shows the non-objectivity of teacher's rating of students in Ekiti State secondary schools. Hence, the paper recommends that teacher should endeavour to do through assessment of students in order to improve positive relationship with the WAEC based assessment. In addition, regular workshop should be organized for secondary school teachers on how to do through assessment of students and the future effects of the arbitrary assessment given to the students. it is also recommended that teachers should be conscientized to the practice of continuous assessment faithfully in schools so that, the purpose of 6-3-3-4 system of education which emphasized on quality assessment of students would not be bastardized.

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