Students' Attitudinal Behaviours toward their Academic Assessments in Senior Secondary Schools in South Western Nigeria

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Abstract

Three hundred and twenty-one students were selected from SS III of the three secondary schools at equal number with 27 teachers teaching three compulsory courses: English Language, Mathematics and Economics. Results show that significant difference ($p = 0.0481$ or 0.0224, $p<0.05$) was observed between method of assessment (Continuous assessment, CA or Conventional Method, CM) and the academic performances of the students in all the three subjects. 30.8% of schoolteachers do not always know which method or type of assessment to use. 79% of parents agreed to academic assessments of their children using CA rather than CM. There were stronger relationships between the methods of assessment and academic performances of the students and as shown by R^2 values of 0.996, 0.926 and 0.935. The number of students with high marks in the CM was more than the number of students in CA.

Keywords – Continuous Assessment, Conventional Method, Discrete and Integrative tests

1. Introduction

The teaching-learning process at any point embraces the learning objectives, the inputs, learning materials and methods and the desirable learning outcomes or achievements. These three phases of teaching-learning process are interwoven and interrelated. For outcomes of the teaching-learning process to be verified if achieved or not, assessment of learners must be made. Any good assessment must be systematic in its procedures to be able to have any tangible impact on targeted learning objectives and learners. The teacher must be systematic in his or her procedures, this is significant, implying that the teacher is exposed to many of such procedures, leading to good and effective assessment (Hassan 1998).

1.1 Conventional Method (CM) of Assessment

It is legacy of the colonial education that is based on 'one-time-shot' summative examination conducted at the end of a period; it may be in periodic weeks, 6 weeks, or at the end of the term or at the end of the year. It may be internally by the school or externally by an accredited examination body like State or Federal Ministries of Education, National Examination Council (NECO) or West African Examination Council (WAEC).

1.2 Continuous Assessment (CA) Method

It is a mechanism whereby the final grading of students in the cognitive, affective and psychomotor domains of behaviour systematically takes account in a systematic way of all his performances during given period of schooling. Such an assessment involves the use of a great variety of modes of evaluation for the purpose of guiding and improving the learning and performance of the students {Federal Ministry of Education (FME) 1985} and (Emeke 1995).

1.3 Rationale for Advocating Assessment

For economic growth in any nation, a key ingredient is in the standards of her educational system, and in the methodology of sustaining it (Joshua 2004). Good education, one that meets the standards prescribed for it (including the way and manner of assessing the learners), most inevitably leads to a well-managed and progressive economy. The questions now arise: Are secondary schools in Nigeria meeting the expected or laid down standards to recommend their products for any reasonable or productive ventures after graduation? Does secondary education assess their students according to laid down standards? Is secondary education in Nigeria fulfilling the lofty aims and objectives set for it? What kind of foundation is being laid in our children who are passing through the secondary school system? Can we see the finger of secondary education writing clearly or obliquely in our tertiary education system? These are some of the issues very important. Is the present 40%, CA or 30% CA in our secondary and tertiary educations okay? All attempts to identify where we are now, and

proffer some tips to take us beyond this point, to address the issues of assessment and evaluation of our secondary school system should be done.

1.4 Issues and Controversies - Problems of Assessment of Learners

According to NPE (2004) and FMEST (1985), problems of assessment are the followings: time and energy consuming, record-keeping, problem of comparability of standards, problem of personnel to manage the process, double integrity of teachers, insufficient finance to support test and ignorant and uncaring attitudes of the teachers operating the scheme.

The problems of assessment of students came about as a result of non-broad participation of many relevant stakeholders in the curriculum formulation for the schools. Assessment systems draw on the community's knowledge will ensure support from parents, community members, and students, together with educators and professionals with particular expertise, in the development of the system. Discussion of assessment purposes and methods involves a wide range of people interested in education. Parents, students, and members of the public join a variety of experts, teachers, and other educators in shaping the assessment system (NCFOT 2007).

Again, the fact that there is no federally agreed implementation guide and the fact that there are no collection of test items pool from which teachers can draw items for the different types of tests, gives too much latitude and consequently variation in the way and manner in which classroom assessment is implemented (Afemikhe and Omo-Egbekuse 2011). This in itself should not be a challenge as such if teachers have the necessary assessment skills. Most teachers in the Nigerian primary school system lack adequate skill to develop and validate teacher made tests for use in school based assessment, (Osunde 2008), and this is true for majority of teachers in secondary schools. Omo-Egbekuse *et al*. (2010) in a study on teachers' expressed competency on assessment issues found that many teachers claimed that they are competent on almost all issues raised but experience on the field finds no match between what was claimed and what actually was observed. Thus a case of a blind leading a blind, the methods of assessment and types of tests when not fully understood may not be able to lead to expected outcomes for the learners.

The need for assessing cognitive, affective and psychomotor behavioural domains is also a herculean task; they may be able to assess cognitive outcomes but experience difficulty when the affective and psychomotor domains are considered. Things are made worse as the implementation guidelines in almost all cases do not specifically indicate that they must be combined with the cognitive performance. The situation is compounded by lack of uniformity in standards for implementation across schools and therefore there is a problem of comparability of the scores of students from different schools (Omo-Egbekuse, *et al.* 2010). While 30% is used for CA, some schools use 40%, yet some school use CM based on their discretions. One ugly trend is a situation where tests are not administered but scores awarded because the policy (NPE 2004) states that there must be two tests in a term. Cases like this happen in some tertiary institutions in Nigeria like NCE and Polytechnics where students' number keeps on increasing with fewer lecturers.

The objectives of this research were to find out the attitudes of secondary school students toward their academic assessments in Nigeria; a case study of Ila-Orangun Local Government Area of Osun State and effects of different types of assessment (CA) and (CM) on students' academic performances and to find out students' preference from the two methods of assessment.

2. Methodology

A total sample of 321 students of SS III from three secondary schools with 27 teachers who teach each of the subjects English, Mathematics and Economics in these schools at Ila-Orangun in Ila Local Government Area of Osun State were selected from each of the schools using stratified cluster-sampling method. The reason why the above three subjects were selected among all their subjects was to be sure that they were all given equal opportunities since these three were compulsory. The research was a 2-phase, the first phase was administration of the questionnaire and the second phase was the students' teaching-learning process and evaluation. Chi-square was used for the analysis of the results of responses to the questionnaires and one-way ANOVA used for students' teaching learning process. Questionnaires (with good evaluation by two educationists) were administered to all teachers found in those schools who could respond on that chosen day, school heads of the three schools, the students' parents and some students for responses on some questions raised above.

In the second phase, the research was a 2 × 4 factorial One-way ANOVA design experiment with two factors: method of assessment of two levels, CM and CA; types of tests of two levels, Integrative and Discrete tests. All

were replicated three times, each replicate was for a term, (a whole session of three terms in 2010/2011 was used). Each of the teachers were implored to teach for six weeks and to work within the time of the term, these weeks were part of the weeks in the school term. For the CA, students were tested weekly and the total answered questions with scores after the six weeks were recorded, for the CM, questions were set at once after the end of the whole weeks and the scores were recorded as well for the same set, in all cases of tests.

Reliability of the test was done in all cases, for the tests to be capable of measuring what it purports to measure consistently. Among the parameters tested were teachers' assessment of the students' performance; school heads' response to assessment of students; students' preferences in different method of assessment and types of tests; students' performances in the different types of tests with respect to the behavioural objectives and parents' contributions to the students' behavioural attitude to school work. Types of tests that were used in this research were discrete point tests and integrative tests. All tests used involving fill in blank spaces, matching answers, completion of sentences- phrasal or clause or paragraph etcetera, they are examples of discrete point tests (Ezewu and Okoye 1982). To provide basis for good reliability tests, various items and structures like discourse types, construction types, skills, memorization and understanding patterns, were all used in the test. Essay tests, close tests, comprehension reading tests, mathematical problems solving that need many skills at a time, also construction and designing types that need different skills and competencies were included in the specification tables while drawing the tests (Falayajo 1982).

3. Results and Discussions

3.1 Assessment of the Students' Performances

Significant difference ($p = 0.0481$, $p<0.05$) was observed between method of assessment CA and the academic performances of the students in all the three subjects. Also, significant difference ($p = 0.0224$, $p<0.05$) was observed between method of assessment CM and the academic performances of the students in all subjects. From the Figures 1-3, the scattered diagrams show that the students performed creditably well under the CA than the CM, the reason was that, the tests were in bit by bit, when a student failed to do well in one, he or she may do well in other test. This did not happen in the case of CM. English Language and Mathematics were where the students performed well above average but for Economics, the students' performances were low.

The linear equations, Eq. (1) – (6) show that there were relationships as shown between the independent variable Y (methods of assessment) and academic performances X of the students in all the three subjects. The higher intercept values result in higher gradients linear lines (because all the x-axes have the same horizontal range), that is, increasing marks. CM marks, with more intercept values more than CA marks therefore show higher marks, Table 1. The number of students with high marks in the CM was more than the number of students in CA at above 50% and 60% marks, Figures 1-3 and Table 1.

For English Language,

$$Y_{CA} = 2.618 X + 10 \qquad \text{Intercept} = 10 \qquad (1)$$

$$Y_{CM} = 2.329 X + 10.3 \qquad \text{Intercept} = 10.3 \qquad (2)$$

For Mathematics,

$$Y_{CA} = 2.417 X + 11 \qquad \text{Intercept} = 11 \qquad (3)$$

$$Y_{CM} = 2.337 X + 11.2 \qquad \text{Intercept} = 11.2 \qquad (4)$$

For Economics,

$$Y_{CA} = 2.619 X + 10 \qquad \text{Intercept} = 10 \qquad (5)$$

$$Y_{CM} = 2.418 X + 11 \qquad \text{Intercept} = 11 \qquad (6)$$

Table 1 shows that for the marks greater than 50 and 60%, majority of students passed very well under CM than the CA tests, that is, students' performances with regards to the set behavioural objectives in the types of tests and their preferences in the discrete and integrative approaches to their assessments were better in both methods of assessment.

3.2 Teachers' and School Heads' Responses to students' academic performances

From their responses to the administered questionnaires, all the schools' heads were favourably disposed to CA as their percentages was 91% positive responses. Less than 1.6% were indifferent to the CA administration or not at all thought of it usefulness to the final examination grades either at different class levels or at the end for award of certificate. Others (7%) prefer CM, their reason was that the students may not always be in the class and may miss the CA test but may not miss CM test. On the contrary, 30.8% (24) of the 78 teachers who responded to the questionnaires agreed that they are always confused of the type of test to use for evaluation of their students. This could hinder the educational progress of the students and leading to students not assessed according to the required standards and thereby making the secondary schools not meeting up their objectives and then reaching their high aims outlined (Joshua, 2004).

3.3 Parents' Contribution to Students' Behavioural Attitudes to Schools

Most parents strongly agreed to the academic assessment of their children through classworks, assignments and integrative practical through integrative method and not a single-slot test. 67% of the parents strongly agreed in Igbonnibi High School to CA than CM as good method of assessment, while in Ajagunla Grammar School we had 80% and others not less than 90%. This implies that majority of parents preferred CA as children's academic progress indicator. Though the parents prefer CA to CM, since not all teachers are disposed to the parents' choice, the foundation lay in the students and then what they will become in their tertiary education would be affected. Thus the fingers of the secondary education may not be good in the tertiary education. This will have after effects in the products of the tertiary institutions both in their outlook and academic performances and will further have multiplier effects on their would-be students and thus the trends continue, thus a finger that is once bad continues it multiplier effects on the public.

From the Figures 4-6, the scattered diagrams show that the number of students who scored high mark under the CM was more than the CA, (Table 1), the reason may be because the students read and understand the exact pages where the questions were set and because it was a bit by bit test. The regression equations, Eq. (7) – (12) show that there were stronger relationships as shown by their R^2 values (R^2 = 0.935, 0.864, 0.995, 0.926, 0.416 and 0.863) between the independent variable Y (methods of assessment) and academic performances X of the students in all the three subjects.

The lowest R^2 value of 0.416 and 0.863 in the regression analysis, Figure 6 for Economics shows weak relationship between methods of assessment CA and CM and academic performance in the subject, Economics; the students performed low than in other two subjects.

For English Language,

$$Y_{CA} = -0.666\,X^3 + 4.857\,X^2 - 6.476\,X + 2 \qquad R^2 = 0.935 \qquad (1)$$

$$Y_{CM} = -0.583\,X^3 + 3.321\,X^2 - 2.095\,X + 2 \qquad R^2 = 0.864 \qquad (2)$$

For Mathematics,

$$Y_{CA} = -1.250\,X^3 + 9.46\,X^2 - 17.28\,X + 10 \qquad R^2 = 0.996 \qquad (3)$$

$$Y_{CM} = -1.750\,X^3 + 14.67\,X^2 - 32.57\,X + 12.1 \qquad R^2 = 0.926 \qquad (4)$$

For Economics,

$$Y_{CA} = -X^3 + 8.50\,X^2 - 20.50\,X + 16.6 \qquad R^2 = 0.416 \qquad (5)$$

$$Y_{CM} = -X^3 + 7.285\,X^2 - 11.71\,X + 6 \qquad R^2 = 0.863 \qquad (6)$$

Also, in Figures 4 - 6 the students were more comfortable with the tests as shown by the results which was in favour of the CM than the CA, this did not mean that the students passed under the CM than CA, only that many students passed under the CM than under the CA. But the higher R square values show that the CA were higher than the CM (for all subjects except Economics) showing stronger relationship, the students did better in CM. This was reflected in their number that passed their tests at 50 and 60% and above (>60%) at both discrete and integrative tests, shown in Table I. This means that the attitudinal behaviour of the students to academic assessment was high and pleasing, but CM has more passes than CA. Most (61%) students in response to questionnaire opted for CM. On comparing the two methods of assessment, at the level of significance ($p \leq 0.01$), the values of the CA marks were significant over the CM marks.

4. Conclusion

The following conclusions were arrived at:

30.8% (24) of the 78 teachers who responded to the questionnaires agreed that they are always confused of the type of test to use for evaluation of their students. The schoolteachers do not have positive attitudes towards CA exercises and academic performances of their students may suffer. This is because some of them abhor the culture of marking scripts, and thereby may resolve to marks' fabrication to make up the 100% needed for students in final examinations. This may be due to their salaries that were less compare to their contemporaries in other sector of the economy, especially when some of these teachers see their former students earning what they themselves have never earn in life just because he/she refuses to be a teacher.

Parents responded positively to the academic assessments of their children's academic progress through class work and others school's programmes and they prefer bit-by-bit assessment as one-shot types were not agreed to. The linear equations show that there were relationships as shown between the independent variable Y (methods of assessment) and academic performances X of the students in all the three subjects. The higher R square values show that the CA were better than the CM (for all subjects except Economics), but the number of students with high marks in the CM was more than the number of students in CA.

5. Recommendations

The following recommendations were made:

The current CA marks of the 100% total test and examinations of students may be readjusted from 40 and 30% to 25% marks to give way to more bulky examinations which students will prepare for and the teachers will mark well.

Teachers should be empowered more to be fully competent and equipped for the job to promote academic excellence. Teachers should be advised to conduct tests for their students and mark their scripts and show them their marked scripts. They should also attend workshops to be organized by States where they will be taught and exposed to assessment methods and setting of questions using specification tables.

Students should be helped mentally, morally and academically with other incentives given to stimulate them for progressive work and to expect higher students' performance.

Students in secondary schools should be encouraged to stay in schools rather than eave-dropping the date a test will be conducted by the teachers.

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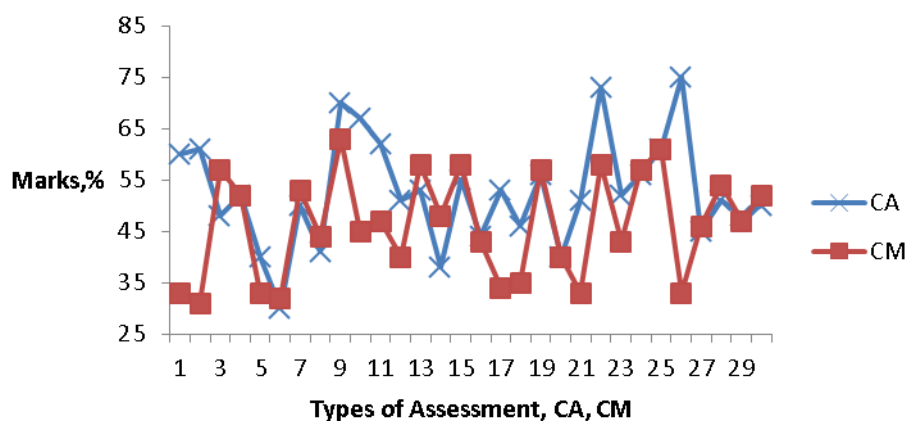
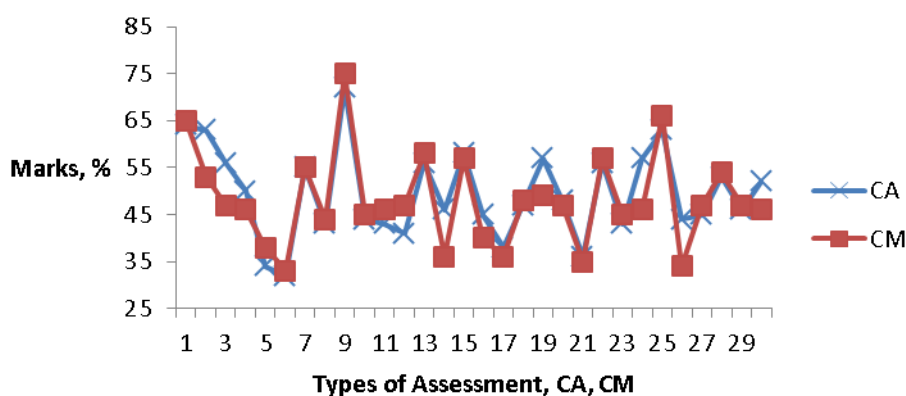Figure 1: Students' performances in English Language- CA and CM marks

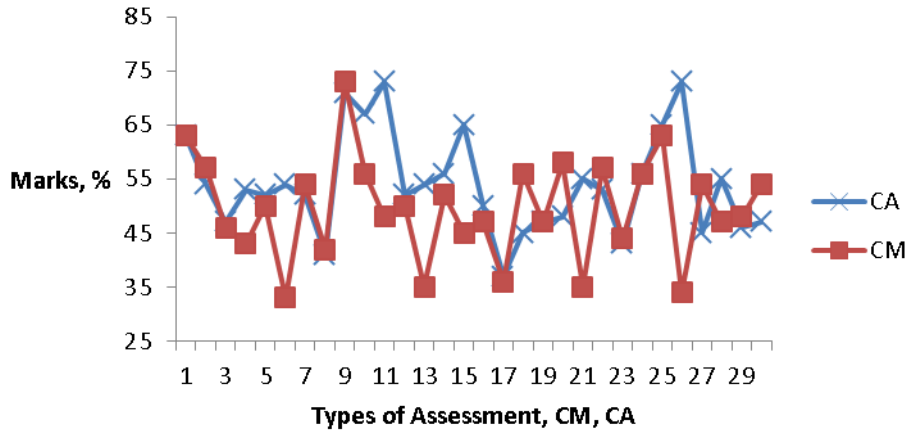Figure 2: Students' performances in Mathematics- CA and CM marks

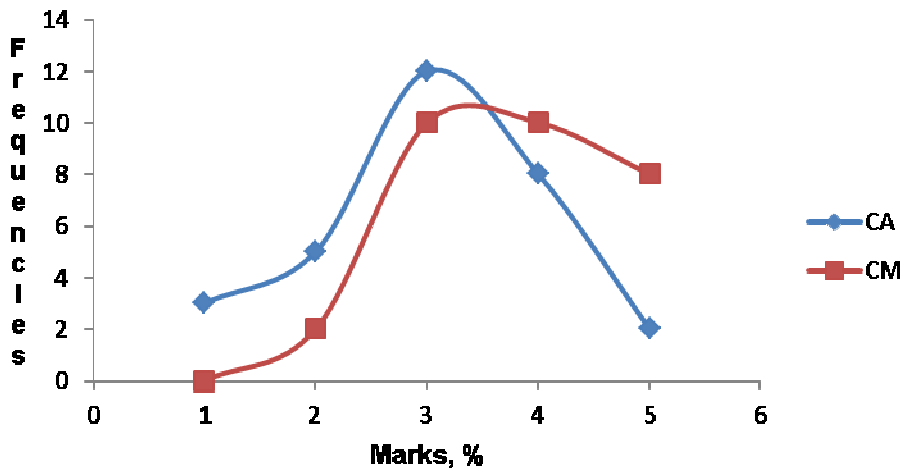Figure 3: Students' performances in Economics- CA and CM marks

Figure 4: Frequencies of students' performances in English Language- CA and CM marks
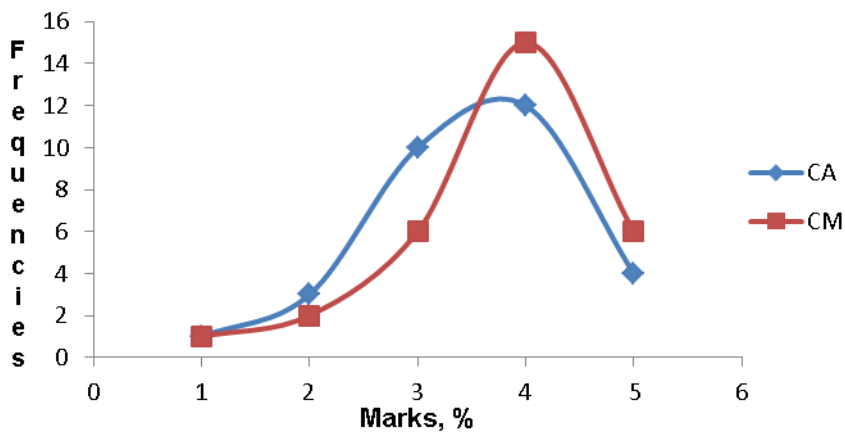

Figure 5: Frequencies of students' performances in Mathematics- CA and CM marks
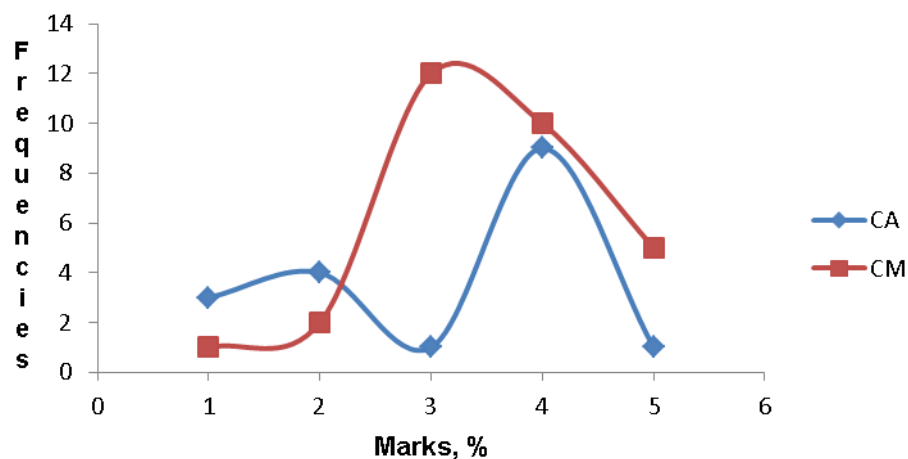
Figure 6: Frequencies of students' performances in Economics- CA and CM marks

Table 1 - Students' Preferences in Different Types of Tests

Marks	Frequency											
%	English Language				Mathematics				Economics			
	Discrete		Integrative		Discrete		Integrative		Discrete		Integrative	
	CA	CM	CA	CM	CA	CM	CA	CM	CA	CM	CA	CM
>70	20	10	30	10	10	20	21	20	20	20	15	20
60-70	40	40	40	50	20	41	50	31	30	50	35	39
50-60	100	120	70	100	130	120	130	120	120	111	116	121
40-50	100	131	110	111	120	100	60	110	91	90	120	111
< 40	61	20	71	50	41	40	60	40	60	50	35	30
Total no. students	321	321	321	321	321	321	321	321	321	321	321	321
Total >60	60	50	70	60	30	61	71	41	60	50	80	59
Total >50	160	170	140	160	160	181	201	191	170	181	166	180

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