

Assessment for Learning Capacity of Secondary School Teachers in Ogun State, Nigeria

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Abstract

Assessment is an educational tool required for quality assurance and accountability on the part of teachers and school administrators amongst others. The public outcry with respect to dwindling performance of secondary school students in external examinations suggests a systemic failure and assessment is one significant component. Thus, this study examined the assessment for learning capacity of secondary school teachers in Ogun State, Nigeria. Survey research design was adopted for the study. The sample was 600 teachers from 24 selected junior and senior secondary schools that co-exist together in the same premises. Multistage sampling technique was used in selecting the sample from 6 Local Government Areas (LGAs) across the 3 Senatorial districts in the state. The only instrument used for data collection was “Teachers Need Assessment Questionnaire on Evaluation” (TNAQE) and it was developed and trial tested by the researcher and found to have .75 coefficient of internal consistency. The results show that secondary school teachers are grossly deficient in assessment practice with particular reference to use of assessment instruments and assessment report and record keeping. Inadequacies were also noticed in test construction capacities of these teachers. Results indicate further that a significant difference (t -value = -5.624; $p < .05$) exists between assessment practices of male and female teachers, but non-significant differences were recorded for educational qualifications and years of teaching experience. Difference between expected mean and observed mean for test construction guidelines was significant (t -value = 20.084; $p < .05$), but insignificant for use of assessment instruments (t -value = -1.728; $p > .05$) and assessment report and record keeping practice (t -value = 1.85; $p > .05$) by the teachers. Appropriate recommendations were made to reverse the ugly situation.

Key Words: Assessment, Learning, Teachers, Capacity, Instruments

Introduction

Education is a veritable tool required to keep human society at equilibrium for sustainable development. Much more important is formal education in which learning is structured for social emancipation, egalitarian society and technological development. The imperative significance of education is sustained on a tripod consisting of content, method of instruction and assessment. The content and instructional method components are not relevant until need assessment of recipients and by extension the society is determined. While, the teaching and learning process is on, assessment is also required to keep track of events, activities and performance benchmarks. Information about the overall effectiveness of the entire teaching and learning process and impact in terms of outcomes and output can also only be made available using assessment. To that extent, assessment is a powerful educational tool for national development.

Assessment according to Nenty, Adedoyin, Odili and Major (2007) is an important tool in the hands of the teacher through which quality of education could be assured. But, it appears teachers are not aware of this and do not know how to use it effectively consequent upon apparent inadequacies noticed in our educational system.. According to UNESCO (2005), assessment is the bedrock of an effective teaching and learning environment, and regular and timely assessment is key to improving learning and enhancing quality of education. Except assessment is valid, reliable and credible the intention of the teacher behind it will not be realized. Until recently, assessment of learning outcomes was contrary to assessment for learning. Whereas the former assesses for the sake of it, the latter uses assessment scores to identify inadequacies in the measuring instrument, teaching, learning, language and method of instruction and student attitudes (Joshua, 2009). It is suggested (Bassey, Akpan, Ayang & Obeten, 2012) that minimum competency testing (MCT) be adopted as a strategy in testing in order to ensure that a certain minimum level of competency is attained by learners before they are adjudged to have learnt a particular content or skill.

Another assessment reform being recommended is Integrated Domain Benchmarking Assessment (IDBA) (Bassey & Idaka, 2008). The prescription of which is that minimum attainment levels should be set in all cognitive, affective and psychomotor domains as prerequisite for judging a learner's achievement. The

implication is that a learner should not be certified successful until he or she has attained minimum acceptable standard in each domain of learning. These assessment reforms as suggested underscore the demands in current educational initiatives.

Arguably, these assessment initiatives place some challenges on teachers. The question is how adequate are the teachers to do the needful? A highly skilled workforce with specialist knowledge of effective teaching methods, literacy and numeracy, assessment, data collection and analysis is critical to improvement in schools.

Research reports (Bello & Tijani, 2010) indicate that teachers lack the proficiency in substantial areas of assessment procedure. Specific empirical evidence (Onjewu, 2007; WAEC, 1990) reveals that teachers arbitrarily award marks. According to Alade, (2007) teachers never revisit the topics covered irrespective of whether the students passed or failed in the periodic tests. Students are therefore denied the opportunity for prompt feedback on the progress they have made in learning. Research evidence (Bello & Tijani, 2010) revealed that a large number of junior and senior secondary school teachers in Nigeria, Ghana and Gambia have difficulty in developing and scoring assessment tools such as project, practical skills assessment, interview and formative test. The above assertion is corroborated by the work of Nneji, Fatade, Awofala and Awofala (2012) which indicated that Science, Technology and Mathematics (STM) teachers have negative attitudes toward such assessment practices as testing students before teaching a new topic, students assessing their own STM progress, informing students at the beginning of the term about topics on which examination and tests should be based, using projects and structured quizzes to gather students' assessment data on STM and making students' performances in tests and examinations known to auxiliary personnel in the school.

In contrast however, Nneji *et al.* (2012) revealed that STM teachers apparently hold positive attitudes toward such assessment practices as testing students after a new topic, returning examination and test scripts back to students after scoring, making test results a fractional part of terminal and end of session grading of students' performances, using students' individual activities as templates for assessing students' STM progress and gathering students' assessment data on STM using multiple choice test, essay test and laboratory practical.

In spite of the utility of assessment, the effort becomes futile and wasteful if not done to meet the required standards (Bassy *et al.*, 2012). For quality assurance and accreditation in school learning, Bassey *et al.* (2012) posited further that standard procedures involving the use of test construction principles, table of specification, careful administration and scoring, testing the test through item analysis, trial testing and other validation strategies must be employed for assessing credibility and maximum confidence. Assessment devoid of best practices is likened to a torn filter with holes capable of allowing the residue and filtrate to pass through.

The deficit in assessment recorded for teachers must be as a result of lack of professional training of teachers in assessment techniques (Nenty *et al.*, 2007). This situation of inadequacies among teachers in terms of assessment according to UNESCO (2005) also reflects the pressure of external summative assessment on teaching and learning. Moreover, Nenty *et al.* (2007) were of the opinion that effective assessment requires adequate resources, teachers grounded in assessment techniques and relatively small class size which of course do not fit the realities in many African countries.

The imperatives of assessment for learning can only be promoted and enhanced when the teachers who are implementers of educational policies are found to be adequate in their professional training. Quite a number of decisions such as placement, selection, promotion, career counseling, maximizing performance in learners' certification and accountability are attached to assessment information, and so the implications for not doing the right thing might be enormous and devastating both in the immediate and nearest future. Thus the way the teacher conducts assessment of learning outcomes among his/her learners should be viewed with all seriousness it deserves.

Statement of Problem

The apparent performance of students in public examinations leaves much to be desired. By extension, a large proportion of school leavers exhibit deficit in knowledge they claim they have acquired. This makes the entire process of learning a suspect. The foremost aspect in this regard is assessment practice. Thus, this study sought to examine the teachers capacity whether adequate or not for the enormous requirements of doing assessment for learning. The purpose of the study was to determine whether secondary school teachers do the needful in terms of best assessment practice in relation to

assessment instruments they employ, observing test construction guidelines, reporting assessment information and appropriate record keeping. It also sought to determine group differences in assessment practice of the teachers using gender, highest educational qualification and years of teaching experience. It was hypothesized that there is no significant mean difference between observed and expected pattern of teachers' assessment practice.

Materials and Methods

The survey research design was adopted in this study. It is considered appropriate because it facilitates the collection of factual information describing the existing phenomena without any opportunity to control or manipulate the variable of study. The population for the study comprised all teachers in both junior and senior secondary schools in Ogun State, Nigeria.

A sample of six hundred ($n=600$) teachers out of a total of 13,761 was used for the study. The selection process was by multistage sampling technique. Six Local Government Areas (LGA) out of twenty existing in the state were selected across the three senatorial districts using simple random sampling technique. The distribution involves Abeokuta South and Odeda from Ogun Central, Ijebu-Ode and Sagamu from Ogun East and Ado Odo- Ota and Yewa South from Ogun West. From each LGA, two schools with a characteristic of joint existence of junior and senior secondary in the same premises were purposively selected giving a total of twelve schools (which translates to 24 on account of independent existence of the junior and the senior secondary schools) out of 474 junior and senior schools. A simple random sampling technique was used in selecting fifty teachers from each school.

A 26-item three point Likert type instrument tagged —Teachers' Need Assessment Questionnaire on Evaluation (TNAQE) was developed by the author and used for data collection. Section A of the instrument required the respondents to provide personal demographic information namely sex, highest educational qualification and years of teaching experience. Section B of TNAQE captures teachers' assessment practices in three parts of use of assessment instruments, test construction guidelines and assessment report and record keeping practice. The items were coded 1 for Never, 2 for occasionally and 3 for Regular. The instrument was reviewed by three experts in

educational evaluation for suitability in content, grammar and structure. TNAQE was trial tested using a sample of 30 respondents considered parallel to the intended sample. The reliability coefficients obtained were .64 for use of assessment instruments, .74 for test construction and .72 for assessment report and record keeping practice. The composite reliability coefficient for the instrument is .75.

Results

Pattern of Teachers' Assessment Practice

Table 1. Frequency Counts and Percentages for Teachers' Assessment Practices

S/N	Items	Never	Occasional	Regular
1	Essay test	12 (2.0)	150 (25.0)	438 (73.0)
2	Objective test	8 (1.3)	196 (32.7)	396 (66.0)
3	Assignment	10 (1.7)	184 (30.7)	406 (67.7)
4	Project	194 (32.3)	306 (51.0)	100 (16.7)
5	Interview	232 (38.7)	250 (41.7)	118 (19.7)
6	Anecdotal record	229 (38.2)	270 (45.0)	101 (16.8)
7	Rating scale	177 (29.5)	261 (43.5)	162 (27.0)
8	Questionnaire	364 (60.7)	177 (29.5)	59 (9.8)
9	Sociometric test	459 (76.5)	125 (20.8)	16 (2.7)
10	Observation schedule	335 (55.8)	164 (27.3)	101 (16.8)
11	Specifies content topic by topic	14 (2.3)	117 (19.5)	469 (78.2)
12	Itemizes instructional objectives as test objectives	40 (6.7)	204 (34.0)	356 (59.3)
13	Prepares test blueprint	173 (28.8)	215 (35.8)	212 (35.3)
14	Reviews test items after writing	46 (7.7)	196 (32.7)	358 (59.7)
15	Prepares marking guide for scoring	21 (3.5)	125 (20.8)	454 (75.7)
16	Determines reliability coefficient of test	359 (59.8)	149 (24.8)	92 (15.3)
17	Takes specific decision on the type of interpretation desired	224 (37.3)	191 (31.8)	185 (30.8)
18	Converts raw scores to standard	486 (81.0)	77 (12.8)	37 (6.2)

	scores			
19	Determines percentile ranks of students' scores	505 (84.2)	53 (8.8)	42 (7.0)
20	Determines students' position using standard scores	516 (86.0)	57 (9.5)	27 (4.5)
21	Put scores in stannine ranks	508 (84.7)	61 (10.2)	31 (5.2)
22	Keeps continuous assessment register	33 (5.5)	85 (14.2)	482 (80.3)
23	Keeps broad sheet of scores	19 (3.2)	84 (14.0)	497 (82.8)
24	Keeps students' portfolio	323 (53.8)	97 (16.2)	180 (30.0)
25	Keeps diaries of teachers' observation of students	158 (26.3)	181 30.2)	261 (43.5)
26	Keeps electronic grade book	534 89.0)	38 (6.3)	28 (4.7)

- Figures in parentheses are percentages

Results from Table 1 indicate that more than 55% of the teachers never or occasionally put project (84%), interview (80.4), anecdotal records (83.2%), rating scale (73.5%), questionnaire (90.2%), sociometric test (97.3%) and observation schedule (83.1%) to use in assessment of learning outcomes in their students. It was only in three items: essay test, objective test and assignment as indicated in Table 1 that the teachers recorded higher percentages (73%, 66% and 67.7%) of regularity of usage respectively.

Result analysis in the area of how the teachers observe test construction guidelines as revealed in Table 1 show that it is only in items 11 (78.2%), 12 (59.3%) and 15 (75.7%) that the teachers recorded higher percentages of regularity in usage. Specifically, the items are as follow: specifies content topic by topic, itemizes instructional objectives as test objectives, reviews test items after writing and prepares marking guide for scoring respectively. In contrast, higher percentages above 55 were recorded for teachers who never or occasionally observe preparation of test blueprint (64.6%), determining reliability coefficient of test (84.6%) and taking specific decision on the type of interpretation desired (69.1%).

For reporting and record keeping practices of the teachers, results in Table 1 indicate 80.3%, and 82.8% for regularity in keeping continuous assessment register and

keeping broad sheet of scores respectively. Higher percentages of 93%, 93%, 95.5%, 94.9%, 70% and 95.3% were recorded for teachers who never or occasionally convert raw scores to standard scores, determine percentile ranks of students' scores, determine students' position using standard scores, put scores in stannine ranks, keeps students' portfolio and electronic grade book respectively.

Group Differences in Teachers Assessment Practices

Table 2. Teachers Assessment Practice based on Gender

Group	N	Mean	SD	df	t-value	Significance
Male	214	58.87	7.54	596	-5.624	.000*
Female	384	62.09	6.20			

Table 3. Teachers Assessment Practice based on Highest Educational Qualification

	Sum of squares	Df	Mean square	F	Significance
Between Groups	101.082	2	50.541	1.070	.344
Within Groups	28187.116	597	47.215		
Total	28288.198	599			

Table 4. Teachers Assessment Practice based on Years of Teaching Experience

	Sum of squares	Df	Mean square	F	Significance
Between Groups	326.72	5	65.344	1.388	.227
Within Groups	27961.478	594	47.073		
Total	28288.198	599			

Table 2 reveals that there is a significant group difference in teachers assessment practices based on gender consisting of t-value of -5.624 at $P < .05$. The difference is in favour of females (Mean= 62.09; SD= 6.2).

As for group difference in teachers assessment practices based on highest educational qualification, Table 3 reveals a no significant difference. The $F_{2,599}$ –ratio of 1.07 at P-value of .344 ($P > .05$ alpha level of significance) confirms the above.

Similarly, there is no significant difference in assessment practices of teachers based on years of teaching experience. Table 4 indicates an $F_{5,599}$ –ratio of 1.388 at P-value (.227) that is greater than .05 alpha level of significance.

Difference between Observed Mean and Expected Mean of Teachers Assessment Practices

Table 5. Population T-Test Analysis of Observed and Expected Assessment Practice of Teachers

Variables	Mean (Observed)	SD	Mean (Expected)	df	t-value	Sig.
Use of assessment instruments	19.79	2.90	20	599	-1.728	.085
Test construction guidelines	16.08	2.35	14	599	20.084	.000*
Assessment report and record keeping practice	18.24	3.22	18	599	1.85	.065
Total	60.93	6.87	52	599	31.84	.000*

From Table 5, the results of the analysis show that there is a significant difference between Observed Mean (60.93) with a Standard deviation of 6.87 and Expected Mean (52) of teachers' assessment practices. Therefore, the null hypothesis is rejected while the alternative hypothesis is accepted. The decomposition of the composite Mean into sub groups of the variable reveals that observation of test construction guidelines by teachers is significantly higher than expected ($Mean_{observed} = 16.08$; $Mean_{expected} = 14$; $t\text{-value} = 20.084$) at significance value of less than .05.

Other statistical information from the Table indicate that teachers assessment practice is poor for use of assessment instruments though the difference between $Mean_{observed}$ (19.79) and $Mean_{expected}$ (20) at t-value of -1.728 is not significant. On the

other hand teachers assessment report and record keeping is higher ($\text{Mean}_{\text{observed}} = 18.24$) than $\text{Mean}_{\text{expected}}$ (18) at t-value of 1.85, though not significant using $P < .05$.

It should be noted that $\text{Mean}_{\text{expected}}$ was computed by finding the product of an item Mean (mid mark) and the number of items in each sub category of the variable. For instance $(1+2+3) \div 3 = 2$ (item mean) multiplied by 10 items gave 20 as the $\text{Mean}_{\text{expected}}$ for use of assessment instruments.

Discussion

The higher percentages of poor use of project, interview, anecdotal record, rating scale, questionnaire, sociometric test and observation schedule by teachers probably suggest that they are deficient in knowledge about these assessment tools or and in addition they have non challant attitude towards their assignment in the classroom. This finding agrees with the one of Bello and Tijani (2010) and Bassey *et al.* (2012).

Assessment practices of these teachers also reflect inadequacies in the area of test construction with particular reference to preparation of test blueprint, determining reliability coefficient of test and taking specific decision on the type of interpretation so desired. The implication is that most tests being developed and administered by teachers could not be said to be valid, reliable and credible. To that extent, such test is not useful and so any measures generated by it are misleading. The finding agree with Iwu *et al.* (2012) and Bassey *et al.*'s (2012) findings.

The results further reveal that the teachers performed poorly in assessment report and record keeping practice. Except for keeping of continuous assessment register and broad sheet of scores, they performed below average in relation to conversion of raw scores to standard scores, determining percentile ranks of students' scores, putting scores in stannine ranks, keeping students' portfolio, diaries of teachers' observation of students and electronic grade book. This finding further confirms knowledge deficit in the area of assessment in a large proportion of our teachers. This finding underscores the kinds of interpretation and decisions made of students' scores.

Apparently, the teachers performed well in their traditional areas of strength which include use of essay test, objective test and assignment. Other areas where they performed better in test construction include specifying content topic by topic, itemizing

instructional objectives as test objectives, reviewing test items after writing and preparation of marking guide for scoring.

The results from Table 5 further confirm the findings of this study. Using Mean (expected) as a point of reference, the use of assessment instruments by the teachers were below average. The implication is that the assessment made of learning outcomes in students is not comprehensive with particular reference to cognitive, affective and psychomotor domains. Thus, assessment scores and grades for students are highly limited in use and interpretation. The teachers' above average performance in assessment report, record keeping practice, and test construction, should be taken with caution.

The influence of gender is found to be significant in assessment practices of teachers in favour of females. This might not be unconnected with the meticulous nature of doing things in women. They tend to operate in strict adherence to rules and regulations. No significant group differences were recorded in assessment practices of teachers for highest educational qualification and years of teaching experience. This suggests that the two factors are not functions of assessment but rather, it suggests the tradition and convention in schools with respect to assessment process. This means that poor assessment practice in schools in Nigeria is a systemic failure, and so, should be addressed with all seriousness and without delay if we hope to make any remarkable improvement in knowledge gain by our students.

Conclusion and Recommendations

To stem the tide of poor performances of learners in both school and external examinations, school based assessment as the bedrock of teaching and learning process should be viewed with all the seriousness it deserves. Considering the enormous use of assessment information, it is imperative that assessment procedure and practice be valid, reliable and credible. More often than not, learners' demonstrable performances fall short of the good grades they earn in school based assessment. Aggressive commitment is required from the teachers, policy makers and government to make a positive change.

Policy makers should review school based assessment policy with a view to making it more functional. Specific outline of actions and activities expected of teachers

should be clearly spelt out for adoption wholesomely. Once the standard for practice of assessment is set, it becomes difficult for any teacher to deviate.

On its own part, government should expedite action in meeting the financial challenges in relation to adequate provision of computer facilities in schools, as well as training and retraining of teachers for proficiency in assessment practice.

In addition, it is expedient of teachers to develop positive attitudinal disposition toward best assessment practice. The situation whereby marks are arbitrarily awarded to students without considering its negative consequences should stop.

Finally, the government should enhance the welfare and conditions of service for teachers.

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