

TEACHERS' CLASSROOM ASSESSMENT PRACTICE AS AN IMPERATIVE TOOL FOR SUSTAINABLE DEVELOPMENT

Dr. Opatye, Johnson Ayodele

Department of Educational Foundations

National Open University of Nigeria

14/16 Ahmadu Bello Way, Victoria Island, Lagos.

Abstract

The study examined the nature of classroom assessment practice of secondary school teachers and how this could sustain national development. A survey research was carried out on senior secondary three class (SS3) students in Southwest Nigeria. Two senior secondary schools were selected from schools in each of the six state capitals in Southwest and 50 SS3 students were selected from each of the selected schools through simple random sampling technique. Total student sample used was 600. Three research questions were answered and one hypothesis was tested at $P < 0.05$. One instrument titled Teachers' Classroom Assessment Practice Questionnaire (TCAQ) with reliability coefficient of 0.89 using Cronbach Alpha was used to gather data for the study. Frequency, percentages, mean and Pearson Product Moment Correlation statistics were employed to analyse data collected. Results showed that secondary school teachers concentrated mostly on using essay, practical and homework for assessment at the expense of new forms of assessment like computer-based, portfolio and self-assessment. It was also discovered that teacher assessment practice was moderately based on clear purposes and targets with low involvement of students and ineffective communication of assessment reports. There was significant positive and moderate relationship between teachers' classroom assessment practices and sustainable development. It is therefore recommended that classroom assessment practice should be tailored towards developing skills in students. Also, use of self-assessment, portfolio, performance and observations should be used as assessment methods in the classroom. Assessment should be purpose-driven with effective students' involvement for it to bring about quality education for sustainable development.

Key Words: Assessment Practice, Assessment types, Secondary school, Teachers, Sustainable development

Introduction

Recent years have seen increased research on classroom assessment as an essential aspect of effective teaching and learning (McMillan, Myran & Workman, 2002; Stiggins, 2002). It is becoming more and more evident that classroom assessment is an integral component of the teaching and learning process (Black & Wiliam, 1998). The National Council of Teachers of Mathematics [NCTM] (2000) regard assessment as a tool for learning. The NCTM contends that effective mathematics teaching requires understanding of what students know and need to know. According to Shepard (2000), assessment informs the teacher about what students think and how they think. Classroom assessment helps teachers to establish what students already know and what they need to learn. Ampiah, Hart, Nkhata and Nyirenda (2003) contend that teachers need to know what children are able to do if they are to plan effectively.

Any planned method or strategy used in the classroom is to establish the level of students' difficulties or understanding of a particular concept or idea with the purpose of helping students to succeed in learning (Popham, 2008). Lissitz & Schafer (2002) also emphasised that schools assessment mainly refers to tests, examinations and grading. School leaders have reached a point of believing that one cannot assess without assigning grades (Lissitz & Schafer, 2002). Although tests seem to be popular in schools, teachers seem to have different skills and views about tests. A study by Morgan and Watson (2002) revealed that different teachers interpreted similar students' work differently. McMillan (2001) studied the actual classroom assessment and grading practices of secondary school teachers in relation to specific class and determined whether meaningful relationships existed between teacher's assessment practices, grade level, subject matter, and ability levels of students. McMillan found that there was no meaningful relationship between teacher's assessment practices, grade level, subject matter and ability level. It therefore means that teachers irrespective of their grade level and type of subjects they teach need to demonstrate effective assessment practice.

Classroom assessment refers to formative assessment conducted with the aim of enhancing both teaching and learning (Gronlund, 2003; Stiggins & Chappius, 2005). It enables teachers to realize areas that students demonstrate mastery and those that they experience difficulties. Teachers use various methods of assessment to determine students' progress in learning and difficulties encountered (Popham, 2008). Classroom assessment encompasses a range of activities from construction of assessment tasks, administration, marking and grading the tasks to interpreting the results. Information generated through assessment can help teachers to evaluate the effectiveness of their teaching strategies. It is essential to use assessment feedback to make decisions about

teaching and learning so as to ensure that meaningful learning takes place. In a synthesis of over 250 studies, Black and William (1998) concluded that improvement of learning occurs when teachers use classroom assessment information to establish knowledge, skills and attitudes possessed by their students and incorporate that information in planning for lessons. The major purpose of conducting classroom assessment is to obtain information about student's progress in learning and the achievement attained (Airasian, 2001).

Research evidence shows that classroom assessment is an essential ingredient for effective teaching and learning (Shephard, 2000; Stiggins, 2002). Crooks (1998) reviewed the impact of classroom assessment practices on students and observed that the choice of classroom assessment approach has a vital effect on the extent to which teaching and learning can be enhanced. Proper choice of classroom assessment method allows teachers to diagnose problems faced by students in attaining desirable learning outcomes and in devising appropriate remedial measures to redress the situation. In a nutshell, classroom assessment can be viewed as a totality of all the processes and procedures used to gather useful information about the progress in teaching and learning which helps in regulating the pace and strategies of teaching.

Frequency of assessment is also considered important in facilitating retention of material learnt. Shirvani (2009) observed that the frequency of assessment has a mediating effect on student engagement in learning. Research by Marcell (2008) showed that when the frequency of testing is increased, there is increased student involvement in responding to questions and in discussing the subject matter. Other scholars maintained that frequent testing helps students to monitor their learning and reinforces their engagement with the course as a result of immediate feedback provided (Haigh, 2007; Leeming, 2002). It has also been established that frequent testing has positive impact on future retention of material learnt (Roediger & Karpicke, 2006). Since retention of material is one of the important components of master learning (Wolf, 2007), it can be inferred that frequent testing contributes to mastery learning.

Assessment practice is the manner of conducting assessment, for instance observation and diagnostic interviews. Stiggins, Arter, Chappius and Chappius (2006) identified five indicators of classroom assessment practice (CAP) which are clear purposes, clear target sound design, effective communication and student involvement. Clear purpose of assessment practice involves the assessment processes and results that serve clear and appropriate purposes. Clear target depicts assessment practices that reflect clear and valued student learning targets. Sound design includes expectations that are translated into assessment that yields accurate results. Effective communication implies that assessment results are managed well and communicated effectively. Assessment practice that focuses on student involvement in their own assessment is called student involvement.

In order to gather information about teaching and learning, teachers use a variety of assessment instruments such as written tests, performance assessment, observation and portfolio assessment (Airasian, 2001; Popham, 2008). Ndalichako (2004) observed that most primary school teachers in Tanzania prefer to use tests and examinations to evaluate students' learning. However, the use of multiple methods of assessment is recommended due to its potentiality in yielding valuable information regarding students' strengths and weaknesses in their learning (Gonzales & Fuggan, 2012). There are various methods that can be used to assess students learning such as portfolios, projects, performance assessment such methods offer rich information about teaching and learning.

Portfolio is generally defined as a collection of student work with a common theme or purpose (Damian, 2004). The key characteristic of portfolio assessment is that it highlights student effort, development, and achievement over a period of time and emphasizes application of knowledge rather than simply recall of information (Price, Pierson, & Light, 2011). The main advantage of using portfolio is the engagement of students in assessing their own progress and achievement and in strengthening collaboration with their teachers through establishing on-going learning goals (Popham, 2008). Portfolios encourage self-reflection and awareness among students as they review their previous assignments and assess strengths and weaknesses of both the processes as well as the final products. The main challenges associated with the use of portfolios are the reliability of scoring, time required to produce the product and to develop a credible scoring system.

Classroom observation enables teachers to conduct assessment in a natural environment. Observation can be conducted through formal or informal means, for example, through observing students' behaviours in the classroom or while they are performing a certain activity. Angelo & Cross (1993) maintained that through close observation of students in the process of learning, classroom teachers can acquire important information about how students learn. The interactions between teacher and students and among the students provide a wealth of information about the functioning of the classroom.

Sustainable development is development that meets the needs of the present, without compromising the ability of future generations to meet their own needs (United Nations Organisation [UNO], 2015). The satisfaction of human needs and aspirations is the major objective of development. The essential needs of vast numbers of people in developing countries for food, clothing, shelter, jobs - are not being met, and beyond their basic needs these people have legitimate aspirations for an improved quality of life. A world in which poverty and inequity are endemic will always be prone to ecological and other crises. Sustainable development requires meeting the basic needs of all and extending to all the opportunity to satisfy their aspirations for a better life. Living standards that go

beyond the basic minimum are sustainable only if consumption standards everywhere have regard for long-term sustainability. Yet many live beyond the world's ecological means, for instance in our patterns of energy use. Perceived needs are socially and culturally determined, and sustainable development requires the promotion of values that encourage consumption standards that are within the bounds of the ecological possible and to which all can reasonably aspire. Specifically, 17 sustainable goals were set. These include no poverty, zero hunger, good health, quality education, gender equality, clean water and sanitation, affordable and clean energy and decent work and economic growth. Others are industry, innovation and infrastructure; reduced inequality, sustainable cities and communities; responsible consumption and production; climate action; life below water; life on water; peace justice and strong institution and partnership for the goals.

According to the UNO (2003), the pursuit of sustainable development require a political system that secures effective citizen participation in decision making; an economic system that is able to generate surpluses and technical knowledge on a self-reliant and sustained basis; a social system that provides for solutions for the tensions arising from disharmonious development and a production system that respects the obligation to preserve the ecological base for development. Other requirements for sustainable development include a technological system that can search continuously for new solutions; an international system that fosters sustainable patterns of global trade and finance, and an administrative system that is flexible and has the capacity for self-correction. Therefore, it is essential to examine secondary school teachers' classroom assessment practices as an indispensable tool for sustainable development.

The Problem

After the establishment of the millennium development goals which all nations of the world strived to achieve, the United Nations Organisation examined and decided to put in place sustainable development indicators which would foster the continuity of such developments in the future. Quality education was seen as a wheel on which every development rolls and plays a vital role in sustaining development. Such education that would bring about the desired development is based on effective assessment and evaluation to ensure its attainment. Classroom assessment is anchored by teachers in various schools and teachers need to put in place assessment practices that give results on which decisions are made. Looking at secondary schools in Nigeria, teachers give assessment in order to score and grade learners rather than relate what have been learnt to the development of society. The study therefore investigated teachers' classroom assessment practice (TCAP) and how it could serve as a tool for sustainable development.

Research Questions

1. Which methods of assessment are frequently used by secondary school teachers?
2. To what extent do teachers have clear purposes and objectives when assessing learners' achievement?
3. To what extent do secondary school teachers design assessment, communicate results and ensure students' involvement in assessing learning outcomes?

Hypothesis

1. There is no significant relationship between teachers' classroom assessment practices and sustainable development.

Methodology

A survey research was carried out on senior secondary class three (SS3) students in Southwest Nigeria. Two senior secondary schools were selected from each of the six states in Southwest Nigeria. The two schools were randomly selected from the list of schools in the state capitals. 50 SS3 students were selected from each of the selected schools through simple random sampling technique. Total students sample used was 600. Three research questions were answered and one hypothesis was tested in the study. Teachers' Classroom Assessment Practice Questionnaire (TCAQ) was constructed by the researcher based on the sound assessment practices indicators of Stiggins, Arter, Chappuis and Chappuis (2006). Tests and measurement experts in the Department of Educational Foundations, National Open University of Nigeria were asked to go through the 25 items of the questionnaire for construct and content validity and their comments led to rejection of three items. The remaining twenty-two items were pilot tested on 35 SSS3 students in one of the secondary schools in Lagos State which were not part of the sample. The questionnaire contained three sections in which section A had the biodata information of the respondents. Section B consists of 22 assessment practices and divided into five scales clear purpose, clear target, sound design, effective communication and student involvement. Students were asked to respond on four-point modified Likert scale of Strongly agree, Agree, Disagree and Strongly disagree. Section C had fifteen different assessment types and how they influence sustainable development with responses of Very Often, Often and Not at all. After the pilot testing, a reliability coefficient of 0.89 was realised using Cronbach Alpha statistic. The researcher and assigned assistants visited the twelve selected schools in each of the Southwestern states for the administration of the questionnaire on students and interview of teachers. Permission was sought from the school administrators who directed the researcher to the Vice Principals for assistance. Three weeks were used to collect the data.

The completed questionnaires were scored and data collated for analysis. Frequency, percentages, mean were used to answer research questions while Pearson Product Moment Correlation statistics was employed to test the hypothesis. In answering the research questions two and three, a benchmark of 2.5 was established. Any weighted mean below the benchmark implied low assessment practice while any figure above the benchmark showed a high assessment of teachers. The responses of strongly agree and agree were collapsed to agree while strongly disagree and disagree were merged to disagree.

Results and Discussion of Findings

Research Question One: Which methods of assessment are frequently used by secondary school teachers?

Table 1: Description of Assessment Type Used by Secondary School Teachers

| Types of Assessment | Mean | Std. Dev'n | Std. Error | Rank |
|---------------------|------|---------------|---------------|------|
| Essay | 2.63 | .661 | .047 | 1 |
| Multiple Choice | 2.10 | .654 | .046 | 6 |
| Project | 2.42 | .690 | .049 | 4 |
| Self-Assessment | 1.91 | .734 | .052 | 8 |
| Portfolio | 1.59 | .628 | .044 | 9 |
| Quizzes | 2.19 | .751 | .053 | 5 |
| Observation | 2.03 | .733 | .052 | 7 |
| Practical | 2.50 | .642 | .045 | 2 |
| Homework | 2.48 | .672 | .048 | 3 |
| Computer-based test | 1.59 | .644 | .046 | 9 |

Table 1 shows the types of assessment that are used by secondary school teachers in South Western States. It is revealed that teachers mostly used essay type of assessment with a mean of 2.63, followed by practical assessment having a mean of 2.50 and home work with a mean of 2.48. The least utilised types of assessment were portfolio (\bar{X} =1.59, computer-based test (\bar{X} =1.59), self-assessment (\bar{X} =1.91) and observation (\bar{X} =2.03). It is revealed that secondary school teachers assess students using traditional assessment like essay, practical and homework while portfolio, computer-based assessment, self-assessment and observation which are innovative ways of assessing students were least utilised.

This finding agrees with Ndalichako (2004) which revealed that the predominant forms of assessment that were used frequently by school teachers in Malawi included class exercises, tests and quizzes and homework. The continued use of these traditional methods of assessment might be due to the fact that secondary school teachers lack the requisite knowledge of new ones such as portfolio, observation and self-assessment. Computer-based test is costly in providing enough computer facilities for teachers' use and lack of adequate computer skills by teachers could also hinder the use of such a method to assess learners.

Research Question Two: To what extent do teachers have clear purposes and objectives when assessing learners' achievement?

Table 2: Descriptions of Teachers' Assessment Practices by Clear Purposes and Targets

| S/ n | Statements on Assessment Practices | A(%) | D(%) | Mea n | S D | Err or |
|-----------------------|------------------------------------------------------------------------------------------------------------------------------------------------|-----------|-----------|--------------|--------|-----------|
| Clear Purposes | | | | | | |
| 1. | Teachers understand who the users and uses of classroom assessment information are and know their information needs. | 567(80.5) | 63(10.5) | 3.38 | .817 | .058 |
| 2. | Teachers understand the relationship between assessment and student motivation and craft assessment experiences to maximize motivation. | 240(40.0) | 360(60.0) | 1.85 | .967 | .068 |
| 3. | Teachers use classroom assessment processes and results for learning. | 528(88.0) | 72(12.0) | 3.41 | .840 | .058 |
| 4. | Teachers use classroom assessment results to inform someone beyond the classroom about students' achievement as of a particular point in time. | 240(40.0) | 360(60.0) | 2.36 | .566 | .040 |
| 5. | Teachers have a comprehensive plan over time for integrating assessment for and of learning in the classroom. | 79(11.55) | 53(8.5) | 1.89 | .947 | .067 |
| Weighted Mean | | | | 2.578 | | |

Clear Targets

| | | | | | |
|----------------------------------------------------------------------------------------------------------------------------------------|------------|------------|-----|----|-----|
| Teachers have clear expectations for students and know how to turn broad statements of content standards into classroom-level targets. | 492(82.0%) | 108(18.0%) | 3.2 | .8 | .06 |
| 6. Teachers understand the various types of expectations they hold for students. | 72(36.0%) | 528(64.0%) | 1.8 | .9 | .06 |
| 8. Teachers select learning targets focused on the most important things students need to know and be able to do. | 56(28.0%) | 544(72.0%) | 1.6 | .8 | .06 |
| 9. Teachers have a comprehensive plan over time for assessing expectations. | 477(79.5%) | 123(20.5%) | 3.1 | .8 | .06 |

Weighted Mean

2.448

Key: A= Strongly Agree and Agree responses; D=Disagree and Strongly Disagree responses

Table 2 reveals students' responses on teachers' classroom assessment practice based on clear purposes and targets. From the table, 537(89.5%) agreed that teachers understand who the users and uses of classroom assessment information are and know their information needs while 63(10.5%) disagreed. To a statement that teacher understand the relationship between the students motivation and use assessment to maximise motivation 240(40.0%) agreed while 360(60.0%) disagreed. Two hundred and forty (40.0%) agreed that teachers use classroom assessment results to inform someone beyond the classroom about students' achievement as of a particular point in time as 360 (60.0%) disagreed. In all the weighted mean was 2.578. Also, on clear targets, 492 (82.0%) agreed that teachers have clear expectations for students and they know how to turn broad statements of content standards into classroom-level targets but 108 (18.0%) disagreed.

Seventy two (36.0%) of the students observed that teachers understand various types of expectation they hold for students but 528 (64.0%) did not agree. To a statement that teachers have a comprehensive plan over time for assessing expectations, 477 (79.5%) agreed while 123 (20.5%) disagreed. The weighted mean score of students' responses to clear targets in teachers' classroom assessment practice was 2.448 which shows that teachers' assessment practice of setting clear targets was moderate since this value is almost 2.50 cut-off mark. Therefore, teachers moderately demonstrated clear purposes and targets classroom assessment practices.

The finding of moderate clear purpose and targets of teachers' assessment practice is contrary to what Gonzales and Fuggan (2012) asserted that teachers hardly set any other purposes for assessment except to grade learners. Teacher assessment purposes could be in the form of assessment for learning which is to diagnose learners' difficulties and problems. Such would enhance more learning in order to attain the objectives set for each instructional delivery.

Research Question Three: To what extent do secondary teachers design assessment, communicate results and ensure students' involvement in assessing learning outcomes?

Table 3: Description of Teachers' Assessment Practice by Sound Design, Effective Communication and Students' Involvement

| Effective Communication and Students' Involvement | | | | | | | |
|---------------------------------------------------|------------------------------------|-------------------------------------------------------------------------------------------|-----------|-----------|------|------|-------|
| S/n | Statements on Assessment Practices | | A(%) | D(%) | Mean | SD | Error |
| Sound Design | | | | | | | |
| 10. | Teachers | choose assessment methods that match intended expectations. | 465(75.5) | 135(24.5) | 3.11 | .899 | .064 |
| 11. | Teachers | design assessments that serve intended purposes. | 261(43.5) | 339(56.5) | 2.03 | .918 | .065 |
| 12. | Teachers | sample learning appropriately in their assessments. | 456(76.0) | 144(24.0) | 3.09 | .898 | .063 |
| 13. | Teachers | write assessment questions of all types well. | 369(61.5) | 231(38.5) | 1.91 | .928 | .066 |
| 14. | Teachers | avoid sources of mis-measurement that bias results. | 165(27.5) | 2.95 | .998 | 071 | .998 |
| Weighted Average | | | | 2.618 | | | |
| Effective Communication | | | | | | | |
| 15. | Teachers | record assessment information accurately, keep it confidential, and appropriately combine | 168(28.0) | 432(72.0) | 2.24 | .514 | .036 |

| | | | | | | | |
|----------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------|-----------|--------------|-------|------|--|
| | and summarize it for reporting (including grades). | | | | | | |
| 16. | Teachers select the best reporting option (grades, narratives, portfolios, conferences) for each context (learning targets and users) | 258(43.0) | 342(57.0) | 2.00 | .932 | .066 | |
| 17. | Teachers interpret and use standardized test results correctly. | 213(35.5) | 387(64.5) | 2.29 | .588 | .042 | |
| 18. | Teachers effectively communicate assessment results to students. | 423(70.5) | 177(29.5) | 2.99 | .948 | .063 | |
| 19. | Teachers effectively communicate assessment results to a variety of audiences outside the classroom, including parents, colleagues, and other stakeholders. | 192(32.0) | 408(68.0) | 1.87 | .872 | .062 | |
| Weighted Average | | | | 2.278 | | | |
| Student Involvement | | | | | | | |
| 20. | Teachers make expectations clear to students. | 186(31.0) | 414(69.0) | 1.75 | .901 | .064 | |
| 21. | Teachers involve students in assessing, tracking, and setting goals for their own learning. | 435(72.5) | 165(27.3) | 1.69 | .877 | .062 | |
| 22. | Teachers involve students in communicating about their own learning. | 411(68.5) | 189(31.5) | 3.01 | 1.070 | .076 | |
| Weighted Average | | | | 2.150 | | | |

Key: A= Strongly Agree and Agree responses; D=Disagree and Strongly Disagree responses

Table 3 reveals students assessment of teachers assessment practices based on sound design, effective communication and students involvement. On sound design, 465(75.5%) of students agreed that teachers choose assessment methods that match intended expectations as 135(24.5%) disagreed. To a statement that teachers design assessments that serve intended purposes, 261 (43.5%) agreed as 339 (56.5%) did not agree. For teachers sample learning appropriately in their assessments, 456 (76.0%) agreed while 144 (24.0%) disagreed. 435 (72.5%) of the students were of the opinion that teachers avoid sources of mis-measurement that bias results and 165 (27.5%) had opposite opinion. The weighted mean of 2.618 shows that students found sound design of assessment practices high since this value is above 2.50 benchmark.

Examining effective communication assessment practice, 168 (28.0%) of the students agreed that teachers record assessment information accurately, keep it confidential, and appropriately combine and summarize it for reporting (including grades) as 432 (72.0%) disagreed. Two hundred and fifty eight (43.0%) agreed that teachers select the best reporting option (grades, narratives, portfolios, conferences) for each context (learning targets and users) as 347 (57.0%) disagreed. The number of students that agreed and disagreed that teachers effectively communicate assessment results to students were 423 (70.5%) and 177 (29.5%) respectively. Teachers effectively communicate assessment results to a variety of stakeholders e.g. parents and colleagues , 192(32.0%) agreed while 408(68.0%) disagreed. The weighted mean of effective communication TCAP was 2.278 which implies that TCAP on effective communication of results low since the value is less than 2.50 cut-off.

On students involvement TCAP, 186 (31.0%) of the students opined that teachers make assessment expectations clear to students as 414 (69.0%) disagreed. Also, 435 (72.5%) agreed that teachers involve students in assessing, tracking, and setting goals for their own learning while 165 (27.3%) disagreed. The last statement that teachers involve students in communicating about their own learning 411(68.5%) of the students agreed as 189 (31.5%) disagreed. The weighted mean of the student involvement TCAP was 2.150. This means that student involvement in classroom assessment practice was low. TCAP on effective communication of results was low. Communication of assessment results is more than just pass or fail information given to learners. It involves giving comprehensive report on the overall academic challenges of the learner and characters developed during the course of instruction. Student involvement of classroom assessment practices was low. The purpose of the communication is to support learning—not merely to report it—then mere summaries (grades, scores or ratings) will not do the job. In those cases, students need access to

descriptive feedback focused on specific attributes of their work revealing how they can do better the next time (Pearson AssessmentLab, 2016). In other words, numbers and grades are not the only—or in certain contexts even the best—way to communicate about achievement; words, pictures, illustrations, examples, and many other means can be used to convey this information. So effective communication of assessment results turn on the purpose for the communication. Teachers must understand how to balance their use of feedback to support learning with communication about the sufficiency of student learning at accountability time.

Hypothesis One: There is no significant relationship between teachers' classroom assessment practices and sustainable development.

Table 4: Correlation Between Teachers' Classroom Assessment Practices and Sustainable Development

| Variables | N | Mean | Std. Devn. | df | r | P | Remark |
|-----------|-----|-------|---------------|-----|------|------|-------------|
| TCAP | 200 | 50.09 | 9.313 | | | | |
| SD | 200 | 30.55 | 5.941 | 198 | .632 | .000 | Significant |

Correlation significant at $P < 0.05$

Key: TCAP-Teachers' Classroom Assessment Practices; SD=Sustainable Development

Table 4 reveals that the mean teachers' classroom assessment practices score was 50.09 while mean students' responses to sustainable development was 30.55. The r value of .632 at the degrees of freedom of 198 was significant at 0.05 level of significant. This implied that there was a significant positive and moderate relationship between teachers classroom assessment practices and sustainable development. It means that when teachers assessment practices is improved it would lead greater possibility for sustainable development and vice versa.

Based on the findings, classroom assessment practice could be linked to sustainable development since knowledge and skills acquired from this process are translated to social, technological, economic and educational enhancement. Therefore, CAP could be an effective tool for sustaining development when it is reengineered in the following ways based on the findings. Anticipation of needs of those instructional decision makers who will use the assessment results has to be considered and assessments must be designed specifically to meet those needs. Educational policies are based on the results of evaluation carried out in the classroom. Educational decision makers would be able to determine the effectiveness of existing curriculum through teachers' implementation and assessment. Teachers are to furnish assessment information on which relevant decisions are made. Where there is a weakness, a better instructional and assessment methods are sought so as to foster sustainable development.

Teachers' identification of the achievement targets (goals, objectives, expectations, standards) that students are expected to hit. These must be the focus of assessment exercises and scoring procedures. As indicated, the results of this study revealed that TCAP moderately had clear achievement target which implies that teachers do not set appropriate goals when assessing students in the classroom. Objectives and expectations should be specific and observable in line with skills secondary students are expected to attain. There are many different kinds of valued achievement expectations within our educational system, from mastering content knowledge to complex problem solving. The age-long assessment practices for the purpose of grading learners are not only obsolete but also detrimental to national development. If students at the secondary school level fail to attain such skills for development a big vacuum is created in getting new development and even maintaining the already existing ones.

Selection of proper assessment methods that accurately reflect achievement expectations is to be put in place. In advanced countries, assessment of learner are driven by technology in which test items are generated from electronic test item banks and also administered electronically. TCAP in Nigerian secondary schools is still based on traditional essay and objectives test items and conducted manually. Such items are not been tested on Computer-based test which is been used by the Joint Admissions and Matriculation Board (JAMB) to admit students to tertiary institutions. Majority of students fail this examination because they are not used to testing on computer. If this medium is used to assess secondary school learners from the classroom, students will be admitted to courses that are relevant to their abilities which would be utilised in the right direction to sustainable development. Adequate assessment methods in the form of observation, self-assessment, and portfolio and performance assessment would also lead to sustainable development since these types of assessment focus on skill development in learners.

High-quality assessment could be designed and built into classroom instructional delivery that can lead to confident conclusions about student achievement. High quality assessment cannot be compromised. Classroom assessment practices is of good quality if the test items are of appropriate difficulty and discrimination levels which meet with the standard of external examinations such as West African Examination Council (WAEC), National Examinations Council (NECO) and JAMB. Success in such examinations is a pathway for students in the higher studies to choose that will enable them contribute appropriately to sustainable development. Secondary school teachers often hastily generate test items that are not reliable and valid. To be of high quality (that is, to consistently produce accurate results), assessments need to satisfy four specific quality standards. They must rely on a proper assessment method (a method capable of reflecting the target); sample student achievement

appropriately (provide enough evidence); be built with high-quality ingredients (good test items and scoring schemes and minimize distortion of results due to bias.

Communication of assessment results in a timely and understandable manner into the hands of their intended user(s) is also an imperative tool for sustainable development. When assessment results are communicated promptly, it would engender putting immediate remedies in place to reduce educational problems. Actions are also taken at the appropriate time to find solutions in form of giving of training to teachers, provision of assessment facilities, curriculum revisions and also tasking national examination bodies to be dutiful in order to bring about sustainable development.

Conclusion

Teachers who are prepared to meet the challenges of classroom assessment understand that they need to do their assessment homework and be ready to think clearly and to communicate effectively at assessment time. They understand why it is critical to be able to share their expectations with students and their families and why it is essential that they conduct high-quality assessments that accurately reflect achievement expectations. Well-prepared teachers realize that they themselves lie at the heart of the assessment process in schools and take that responsibility very seriously. Competent teachers understand the complexities of aligning a range of valued achievement targets with appropriate assessment methods so as to produce information on students' achievement that both they and their students can count on to be accurate. Teachers understand the meaning of valid assessment *and* know how to use all of the assessment tools at their disposal to produce valid information to serve the intended purposes. Effective classroom assessors/teachers understand the interpersonal dynamics of classroom assessment and know how to set students up for success, in part through using the appropriate assessment as a teaching tool for sustainable development. Sustainable development could be ascertained when assessment focuses on skills acquisition and teachers utilise appropriate type of skill-testing items and current modes of test administration.

Recommendations

From the results and finding of the study, the following recommendations are made:

1. Secondary school teachers should be made to involve students in the assessment process by making the purposes and targets clear to them.
2. Teachers' communication of assessment results should be more comprehensive in giving feedback that will enhance more learning instead of mere award of grades.

3. School administrators should ensure that teachers give assessment which would develop skills in students to make them contribute meaningfully to sustainable development in the society.
4. Teachers should employ current ways of assessing students in the classroom using self-assessment, portfolio, observation, performance assessment and computer-based test.

References

- Airasian, P. W. (2001). *Classroom assessment: Concepts and applications*. New York: McGraw-Hill.
- Alberta Assessment Consortium (2009). *Refocus: Looking at assessment for learning*. Canada: Alberta Education.
- Ampiah, J.G., Hart, K., Nkhata, B., & Nyirenda, D.M.C.(2003). Teachers' guide to numeracy assessment instrument (DfID-funded research project report). Nottingham: University of Nottingham.
- Angelo, T. A. & Cross, K. P. (1993). *Classroom Assessment Techniques*. San Francisco: Jossey-Bass Publishers.
- Arter, J. A. & Spandel, V. (1992). Using Portfolios of student work in Instruction and Assessment. *Educational Measurement: Issues and Practice*, 26 - 44.
- Black, P., & William, D. (1998). Inside the black box. *Phi Delta Kappan* 90(2), 139 – 148.
- Black, Paul and Dylan Wiliam (2006). Assessment for Learning in the Classroom. In John Gardner, ed. *Assessment and Learning: An Introduction*. London: SAGE Publications.
- Crooks, T. J. (1998). The impact of classroom evaluation practices on students. Review of *Educational Research* 58(4), 438-481.
- Damian, V. B. (2004). Portfolio assessment in the classroom. *Helping children at home and school II: Handout for families and educators*, 129 – 139.
- Gonzales, R. & Fuggan, F. G. (2012). Exploring the conceptual and psychometric properties of classroom assessment. *The International Journal of Educational and Psychological Assessment*, 9(2), 45-60.
- Gronlund, N. E. (2003). *Assessment of student achievement (7th ed.)*. Needham Heights, MA: Allyn & Bacon
- Haigh, M. (2007). Sustaining learning through assessment: An evaluation of the value of weekly class quiz. *Assessment and Education in Higher Education*, 32(4), 192-194.
- Leeming F. C., (2002). The Exam-A-Day Procedure improves performance in psychology. *Teaching of Psychology*, 29(3), 212.
- Lissitz, R. & Schafer, W.(2002). *Assessment in educational reform: Both means and ends*. Boston: Allyn and Bacon.

- Marcell, M. (2008). Effectiveness of regular online quizzing in increasing class participation and preparation. *International Journal for the Scholarship of Teaching and Learning* 2(1), Article7. Available at: <http://digitalcommons.georgiasouthern.edu/ij-sotl/vol2/iss1/7>.
- McMillan, J.H. (2001). Secondary teachers' classroom assessment and grading practices. *Educational Measurement Issues and Practice*, 20(1). 20-32.
- McMillan, J. H. (2008). *Assessment essentials for student-based education* (2nd ed.). Thousand Oaks: Crown Press.
- McMillan, J.H., Myran, S., & Workman, D. (2002). Elementary teachers' classroom assessment and grading practices. *Journal of Educational Research*, 95(4), 203-213.
- Morgan, C. & Watson, A. (2002). The interpretative nature of teachers' assessment of students' mathematics: Issues for Equity. *Journal for Research in mathematics Education*, 33(2), 78-110.
- Ndalichako, J. L. (2004). Towards an understanding of assessment practices of primary school teachers in Tanzania. *Zimbabwe Journal of Education Research*, 16(3), 168-177. Available on <http://dx.doi.org/10.4314/zjer.v16i3.26046>.
- National Council of Teachers of Mathematics (2000). *Principles and standards for school mathematics*, Reston: Virginia.
- Pearson EducationLab (2016). *Keys to Assessment Practice*. Retrieved for www.myeducationlab.com.
- Popham, W.J. (2008). *Classroom assessment: What teachers need to know?* 5th Ed. Boston: Ally and Bacon.
- Price, J. K, Pierson, E. & Light D. (2011). *Using Classroom Assessment to Promote 21st Century Learning in Emerging Market Countries*. Paper presented at Global Learn Asia Pacific 2011, Melbourne Australia
- Roediger, H. L., & Karpicke, J. D. (2006). Basic research and implications for educational practices. *Perspectives on Psychological Science*, 1(3), 181-196.
- Shepard, L. A. (2000). The role of classroom assessment in a learning culture. *Educational Research*, 29(7), 4- 14.
- Schafer (Eds.). *Assessment in educational reform: Both means and ends* (112-125). Boston: Allyn and Bacon.
- Shirvani, H. (2009). Examining an assessment strategy on high school mathematics achievement: Daily quizzes Vs weekly tests. *American Secondary Education* 38(1), 34-45.
- Shirvani, H (2007). Effects of teacher communication on parents' attitude and their children's behaviors at schools. *Education*, 128(1), 34-37.
- Stiggins, R. & Chappius J. (2005). Using student-involved classroom assessment to close achievement gaps. *Theory into Practice*, 44(1), 11-18.

- Stiggins, R.J. (2002). Where is our assessment future and how can we get there from here? In R. W. Lissitz & W.D. Stiggins, R. J., & Bridgeford, N. J. (1985). The ecology of classroom assessment. *Journal of Educational Measurement*, 22(4), 271–286.
- Stiggins, R. Arter, J., Chappuis, J. & Chappuis, S. (2006). Classroom Assessment for Student Learning: Doing It Right—Using It Well. Portland: Educational Testing Service.
- Wolf, P. (2007). Academic improvement through regular assessment. *Peabody Journal of Education*, 82(4), 690-702.
- United Nations Organisation (2003). Our Common Future- Towards Sustainable Development. Report of the World Commission on Environment and Development. Retrieved from <http://www.un-documents.net/ocf-02.htm>
- United Nations Organisation (2015). Transforming our world: the 2030 Agenda for Sustainable Development. United Nations - Sustainable Development knowledge platform.