

# Imperatives of Innovative Assessment Practices for Sustainable Development in Nigeria

Amuche\*<sup>1</sup> Chris Igomu Iyekekpolor\*<sup>2</sup> Solomon, A. O. (PhD)

1. Faculty of Education Taraba state University, Jalingo Taraba state Nigeria

2. Department of Math and Statistic, Federal University, Wukari, Taraba state Nigeria

## Abstract

With less than seven years to the actualization of Nigeria's Vision 20 2020 which represents Nigeria's desire to transform into one of the 20 largest economies in the world, capable of playing leadership role in Africa, and recognized as significant player in the global economic and political arena, its educational sector seems scuttled. Education has been identified as an instrument for planned and systematic intervention into socio-economic development but that is not without some conditions precedent. Such reinvented education should be based on appropriate assessment practices. The paper posits that the type of education that will ensure the transmission of techno-scientific skills, citizenship values and entrepreneurship should be anchored on well articulated teachers that are competent in delivery techniques and knowledgeable in comprehensive approaches to assessment. The current realities portray the teachers of basic education as half-baked in knowledge base and in pedagogical and communication skills. A revolution in assessment practices of teachers and teacher educators is canvassed while continuing professional development is critically important for serving teachers to retain their utility value. The modern model of assessments being advocated entails the use of individual assessment, group assessment, self-assessment, and peer-assessment in addition to the conventional paper-and-pencil tests. Training and retraining of teachers is recommended based on critical participatory assessment of teacher needs in implementing continuous professional development programmes.

**Keywords:** Innovation, Assessment, Practices, Development

## 1. Introduction

Testing was first introduced as a policy mechanism in China 210 B.C. The changes in assessment technology between 1700-1900 AD years were all geared to increasing efficiency and making the assessment system more manageable, standardized, easily adminisable, objective, reliable, comparable and inexpensive as the number of examinees, increased. Regardless of the listed advantages, eminent scholars such as Vergis and Hardy (2010), Fadal *et al.* (2007), Yu (2005), Payla (2000), have raised pertinent issues against the acceptability and universality of common assessment measures in any education system.

The implementation of common educational assessment measures (such as the National Common Entrance Examination, the West African School Certificate Examination, General Certificate in Examination, the Joint Admissions and Matriculation Board Examination and, of course. Internal Joint Admission and Matriculation Board Examination) in the Nigerian education system are essential in the development of the world finest education system. Such policy is believed to motivate learners, lift some students to world class standards, help increase the national productivity and contribute to the restoration of our global competitiveness.

Contrary to the policy statement, the Nigerian educational assessment and measurement processes are largely based on the simplistic stimulus-response view of learning. Most of the public examinations are like evaluating knowledge only on the basis of the candidate's recall of what he/she had previously learnt. Strictly speaking, assessment measures and administrative procedures should be concerned with the evaluation of candidate's abilities to prepare for the mastery of various roles and situations that constitute the professional encounter of what had been previously learnt. The issue of assessment measures and administration procedures has been a concern for the researchers all over the world.

In Nigeria today, it appears to be the case that various testing agencies are failing to consider the dilemma of validity and reliability in the assessment and measurement procedures especially at the secondary level of education. Quite often, validity is sacrificed for reliability and this (mistake) usually results in measures being only concerned with the precision of scores rather than the intellectual value of the challenges. Being concerned only with the precision of candidates' scores, does not or in a very little form, tell us whether such candidates have the capacities to use wisely what knowledge they have acquired or the same knowledge is to short account our educational objectives especially in a pluralistic and diverse society as Nigeria. Common knowledge is not a robust aim of education. If confidence is more like contextual insight and good judgment than inert knowledge, then we need to address the challenges of public assessment, measurement and administrative procedures especially as it concern teachers at the secondary level of education in Nigeria. This situation if not checked could hamper the actualization of the country's national objectives such as the Millennium Development Goals (MDGs) and Vision 20:2020.

The realization of the vision as conceptualized by Nigerian policymakers would on full

implementation, consolidate Nigeria's leadership role in Africa besides establishing itself as a significant player in the global economic and political arena. However, many stakeholders have expressed pessimism about the actualization of the vision as the country is yet to attain the core targets encapsulated in the Vision 20 2020 and the Millennium Development Goals (MDGs) some ten years to the vision target year (Nengia, 2010). Similarly, Bello and Williams (2009) expressed the worry that the vision might be elusive unless Nigeria transformed from commodities consumption to higher value products for sustainable growth and development. They bemoaned the poor level of the social infrastructure in the country especially electricity, roads, railways, water and seaports, which places Nigeria at the 101th dismal position in global competitive index relative to contemporaries such as Singapore 5<sup>th</sup>, Taiwan 13<sup>th</sup>, Malaysia 26<sup>th</sup>, South Africa 45<sup>th</sup>, Mauritius 55<sup>th</sup>, Egypt 63<sup>rd</sup> and Botswana 81<sup>st</sup>. Their prescription, as a way forward, which included empowering universities to develop Research and Development facilities and knowledge centers appears rational and feasible.

Indeed, reference to the universities is perhaps a testimony to the relevance of education for a planned and systematic intervention into socio-economic development. It is through education that the needed high level manpower to drive the economy and for supplying skilled labour to the civil service and to industries are produced. Therefore, Nigeria's philosophy of education might not have been wrong in keeping faith with the belief in the efficacy of education as "an instrument par excellence for national development" (FRN, 2004:5). However, one is tempted to surmise that for education to serve as pedestal for achieving any national objective, steps similar to those taken to achieve a revolutionized American education of the nineteen eighties are necessary conditions precedent. It is recalled that at one time, America was the world leader in technology, service, and industry, but overconfidence based on the historical belief in their superiority had probably caused America to fall behind the rapidly growing competitive market in the world with regard to education. How does contemporary Nigerian education compare with the situation in America of the early eighties? Can the assessment practices of Nigerian teachers yield results that can be relied upon to take proactive decisions concerning national socio-economic development?

## **2. Assessment of Nigerian education based on current assessment practices**

Perspectives in this assessment are based on two assumptions, namely: (a) That students generally learn what their teachers taught them which they expect would be examined; and (b) That the worth of education depends on whether or not the anticipated objectives have been achieved and this worth is manifested in the behaviours of the educational output. Relying on these assumptions, one can easily conclude that most of the products of contemporary Nigerian education as depicted by their level of performance in jobs and by their character manifestations leave much to be desired. Stakeholders have complained about poor communication skills exhibited by fresh university graduates, and adversely criticized their lack of requisite practical skills to qualify them to be of utility value to employers. At the social level, what with the rascally pursuit of millionaire status and reckless adoption of kidnapping and armed robbery for such pursuits, the Nigerian youths have become products of infamy. Apparently, humanistic and character education, and moral instructions have eluded contemporary school graduates.

At the secondary school level, the learning achievements had nothing to write home about. According to Education Sector Analysis (FME, 2004:181), "in virtually all subjects tested, and at both the JS and SS levels, performances were particularly poor". Similarly, the learning achievements of primary school pupils in the tests of literacy and numeracy between 1996 and 2003 have never exceeded a national mean score of 35% (Falayajo et al, 1997; ESA, 2004). On a national level, the literacy rate by 2006 was 71%; unemployment rate of over 3% exceeds the population growth rate of 2.8%; the population per physician is nearly 4,000 because few candidates meet up with the requirements for training as medical doctors; and infant mortality rate by 2008 was 94 per 1,000 (Microsoft Encarta, 2009). There is prevailing poor reading culture despite the opportunities offered by universalized access to education under the Universal Basic Education (UBE) scheme. Students do not prepare properly for examinations, hence the resort to malpractices in order to acquire certificates that have little or no worth to the holders. Indeed, it might not be hyperbolic to say that current Nigerian education is miserably tending towards jeopardy. There is therefore, the need for radical reforms in approaches to teaching and learning as well as in the assessment of learners' acquisitions of knowledge, skills and values. But since the teachers hold trust for any implemented curriculum of education, it becomes imperative that innovative assessment strategies should begin at teacher-producer centres.

## **3. Need for modern assessment practices**

The traditional methods of assessing students' learning and mastery of particular subjects such as geography, history, government, chemistry, biology, and mathematics generally involve assembling a series of teacher-made tests with items or questions relating to the subject matter taught and requiring the student to recollect content knowledge in answer to the questions. Depending on the subject, candidates may be required to provide an explanation or to perform calculations. In the main, such tests are either of a subjective essay type sometimes

with choice options, or are of an objective structured response type, requiring the students to select an answer from a limited number of choice options. These traditional methods of assessment do not readily measure in a consistent manner the students' reasoning and creativity, nor does the assessment go beyond mere regurgitation of the immediately learned materials. Application of acquired knowledge to new factual situations is a rarity. Perhaps with the exception of promotional tests or certificate examinations, the traditional tests are usually not considered as challenging by students.

One other unfortunate implication of the traditional assessment practices is over-concentration of efforts on cognitive knowledge and perhaps few of psycho-motor skills to the utter neglect of values and other affective details that lead to the education of the total person. The effect on the outputs of education has accentuated rather than stemmed the tide of the persistent problems of the Nigerian society such as inequity, injustice, poverty, unemployment, hunger and disease, violence, bloodshed and terrorism, pollution and degradation of the environment. Therefore, there is a need for innovative approaches for assessing the working knowledge level of students in the subjects they have learned employing readily measurable criteria in a way that retains the students' interest and ensures the objectivity as much as possible of the teacher's evaluation of the student responses.

Innovative assessment for the 21st Century according to Shute and Becker (2010) asks practitioners to rethink the way assessment is conducted and competencies are defined, particularly placing the assessment process in the context of lifelong learning across the cognitive, affective and psychomotor domains. Ordinarily, innovative assessment could be any form of assessment which involves the application of a new technique or method. But as argued by Mowl, McDowell and Brown (1996) innovative assessment should be considered in terms of its characteristics and its mission. It encompasses a whole range of different techniques and methods, not all of which are new inventions but with a new thrust to improve the quality of student learning. Assessment is innovative when it becomes not just something which is 'done to' learners but also 'done with' and 'done by' learners (Harris & Bell, 1990). The emphasis shifts from assessment associated with the end-product of the learning process to formative evaluation of learners' range of skills during the learning process. Doubtless, innovative assessment strategies can facilitate learning on several levels. Thus, by developing innovative assessment strategies, teachers can simulate real life situations that combine all three domains while developing critical thinking skills and building confidence. It therefore becomes a challenge for Nigerian teachers of the 21<sup>st</sup> Century to evolve alternative evaluation tools that can, not only alleviate test anxiety and performance anxiety which are instrumental to reliance on examination malpractice, but also produce graduates that are self reliant, productive and worthy citizens. Teacher education in Nigeria faces the challenge of producing teachers that are conversant with creative assessments.

#### **4. Creative assessments**

Creative assessment refers to an assessment system and method for demonstrating a student's creative reasoning and evaluating students' knowledge of a subject in accordance with a predetermined set of assessment criteria (Smith, 1997). The method comprises the following five steps:

- i. Teacher provides each student with an assessment booklet or sheet containing a text to be read, and setting forth a plurality of related facts or observations and an activity portion setting forth a plurality of tasks (questions) and directions to be followed by the student;
- ii. The assessment method provides the teacher with an instruction sheet setting forth the predetermined set of assessment criteria for evaluating the students' responses to the questions and directions;
- iii. A written response by the student to the questions or tasks following the directions;
- iv. Teacher evaluates each student's responses in accordance with the set of predetermined assessment criteria; and
- v. Teacher records on the answer sheet his/her evaluation of the student's responses to the questions and directions. In ideal form of creative assessment, the recording should be in a machine-readable teacher's scoring area.

Reference to machine-readable score area for teacher's evaluation quickly reminds one of the problem of poor technological base of teachers in developing countries including Nigeria. It will amount to daunting challenge preparing teachers for vision 20 2020 to learn and cope with the demands of using modern techniques of assessment. Nworgu (2010) observes that using modern techniques of assessment to enhance the operational efficiency of educational institutions in conducting examinations is challenging. The argument is that in the main, the required technical expertise is not available in most of the colleges of education and faculties of education of the universities that produce teachers. Thus, even when specialized software is available, its non-user friendly status of most teachers poses a major handicap. Therefore, the application of an assessment system that is readily machine-readable for data evaluation and overall assessment of student performance can only be imagined than contemplated. In any case, Harlen et al (1992) had cautioned that although multiple-choice, machine-markable tests may be fast and convenient assessment instruments, yet they provide poor quality information for the

purpose of feedback and little support for the learning process.

With reference to predetermined standards, the outcome of the study by Sato, Wei & Darling-Hammond (2008) suggest that teachers' assessment practices could be improved through professional development. They examined how mathematics and science teachers' classroom assessment practices were affected by the National Board Certification process and found out that the National Board candidates experienced pronounced changes in their assessment practices due to the National Board standards and assessment tasks. Hence, experts involved in the accreditation of teacher education programs should demand accountability from the operators of the institutions by considering their assessment practices as evidence of quality assurance.

### **5. Student-centred learning and assessment**

The innovative assessment practices which will convince learners that teachers are out for a departure from the traditional methods of assessment should be flexible, comprehensive and appealing to students with a variety of learning styles and cultural backgrounds. Such assessments would have the potency to set students up for success, not only in the classroom but also in life. New models of learning may portray traditional assessment systems as inadequate and even damaging to learners due to their inconsistencies with the goals of evaluation (Black, 1994). Success should no longer be determined by excellent performance in paper-and-pencil tests. Success in the technology-driven modern world increasingly depends on new skills and competencies that require new methods to measure and assess accurately. Basically, new approaches to education generally stimulate student involvement in lessons and facilitate their development of proactive attitudes. The new approaches are generally referred to as student centred, hence their assessment should also be student focused. Thus, as students manifest dynamism in interests and aspirations, so shall assessments focus on what they are capable of doing in practicality as well as on what Kennedy (2001) described as 're-education of humanity' in addition to the usual paper-and-pencil tests. Dueck (2008) also argued that in implementing innovative assessment strategies, teachers should not assign zeroes while grading for work not handed in nor is it wise to reduce scores for late submission of work.

In recognition of the role of education as a key factor of change, Kennedy, (2001) asserted that there is undoubtedly a role for the school curriculum as the single most important policy instrument that societies have, to develop civil capacity in young people. This calls for a critical look at the education of the youths, who are the leaders of tomorrow, so as to tailor their education to imbibe the required human rights and citizenship values: – values of dignity in labour, tolerance and compromise in competitive ventures, respect for people of diverse cultures and varied orientation, spirit of adjustment and change, and the option of dialogue in tackling issues in which opinions differ. Only comprehensive assessment can pave the way for such educational thrusts.

William (2009) argued that changes in assessment practices break the cycle of the same students being successful while another segment of the same students fail to taste success each semester and each year. Incidentally, when teachers make learners to experience success they would become more motivated to participate in learning activities. Therefore, students who excel in learning domains other than the cognitive should be credited in those areas. William further argued that where active learning obtains, behaviour is rarely an issue in the classrooms because the learners would be too busy to misbehave or clown around. All that is required is for the teacher to achieve perceived purpose of learning as set induction at the beginning of instruction. Set induction could be achieved by making clear the learning targets or specific objectives of the lesson to students and further discuss with them the avenues to reach 'the kernel of truth' (Anikweze, 2008). Since the specific objectives are expressed as terminal behaviours of learners including the criteria for acceptable performance, every learner knows what the expectation of assessment is on the lesson, or unit of study.

### **6. Innovative assessment practices in teacher-producer centres**

Innovative approaches to assessment in colleges of education and the faculties of education of the universities will signal new emphases to objectives of education including using education for reforms in politico-socio-economic spheres. Teacher educators in colleges of education and faculties of education should spearhead the revolution while continuing professional development (CPD) is critically important for serving teachers to retain their utility value in the education system. As an aspect of formative assessment student-teachers should be introduced to the innovative model of assessments comprising individual assessment, group assessment, self-assessment, and peer-assessment in addition to the conventional paper-and-pencil tests. The goal is to develop new models of assessment geared to fostering lifelong learning skills through which student-teachers would develop their own capacity to self-assess, reflect on, and take an active role in managing their own learning (Nicol et al, 2009). Each of the projected approaches has its own merits to exploit and some demerits to avoid. A careful combination of all is ideal; but the choice depends on the purpose of the teacher.

**Individual assessment** is applied when the teacher designs assessment activities for learners to work individually such as written assignments, presentations, or performance tasks in order to assess individual

progress. Individual assessment is common in most school systems as the basis for reporting student progress. Each learner at each grade level is assessed according to his/her position in achieving the objectives of instruction. The advantages include motivation of learners to accept a greater degree of responsibility for their learning progress, opportunity for the teacher to focus more directly on the learning needs of each student, provision of specific feedback to the individual learner on his/her strengths and weaknesses, and provision of standpoint for remedial assistance to the individual learner, and a more relevant method of reporting progress for learners with special needs. However, adoption of individual assessments poses the challenge of coping with the greater amount of time investment in correcting and scoring assessment activities submitted by individuals relative to group assessment of learners as a unit. There is also the tendency of individual assessments to foster a competitive atmosphere that can sometimes become unhealthy thereby hampering learning progress through cooperative and collaborative efforts while denying teachers essential information for making judgments concerning learners' social development. Teachers in Nigeria are generally familiar with individual assessment strategies. What remains is to make the assessment more creative.

**Group assessment** is recommended when the objective is to evaluate the progress that a group of learners has made in cooperating and collaborating to complete assessment tasks or activities organized by the teacher. It is an assessment technique for collecting information on the learners working in group situations. Group method of teaching and learning is a strategy for coping with large class sizes consequent upon the explosion in student enrolment in most universities and colleges of education. When properly applied in teacher training, the student-teachers would on graduation apply the strategy in dealing with the inevitable large classes consequent upon the liberalized access to education occasioned by the UBE scheme. In some public primary and junior secondary schools in recent times, the average teacher to pupil ratio (TPR) exceeds 1:60.

To apply group assessment judiciously, the teacher must decide in advance about award of marks; whether to evaluate group work by awarding the same mark to all members of the group, or to evaluate individual learner contribution to the progress of the group work, or to award a combination of group and individual marks. Whichever method is adopted, group work has the advantages of fostering the spirit of cooperation among learners, freeing the teacher from disentangling the contributions of individuals since the summative product of a group activity is the product of several students' work, and promoting higher achievement, more positive interpersonal relations among students, and more positive attitudes toward the subject area and the teacher relative to competitive and individualistic learning. A disadvantage of group assessment is that some indolent students might gain unmerited marks hiding under the group without contributing anything. On the other hand, some bright students may feel that it is unfair to award group marks for their greater contribution to group product or achievement.

**Self-assessment** refers to the students' own assessment of their progress in knowledge, skills, processes, or attitudes. It is applied as part of formative assessment. According to Black and William (1998, p. 9), "formative assessment encompasses any activities undertaken by teachers or students that provide feedback that will be used to modify teaching and learning activities". Rolheiser and Ross (2000) argued that when students judge the quality of their work, based on evidence and explicit criteria, they would be encouraged to do better work in the future. The idea is that when students are taught how to assess their own progress, and when they do so against known and challenging quality standards, there would be a lot to gain. Keesing-Styles (2003) believed that students, in engaging in self-assessment which involves objective action and reflection enhance their opportunities to become knowing subjects. Self assessment is one of the strategies for improving teacher competence under the School-based teacher development scheme. In this case, the element of self confrontation helps the practicing teachers to identify their strengths and weaknesses and to consider whether changes are needed. However, Rolheiser and Ross (2000) pointed out that one of the greatest challenges for teachers who practice student self-evaluation is the recalibration of power that occurs when assessment decisions are shared with students. Furthermore, there is reservation over the efficacy of self assessment as research findings suggest that students tend to over-score themselves when given the opportunity for self evaluation (Lovegrove, 1975; Anikweze, 1998).

**Peer-assessment** is a situation in which a teacher is assessed by a colleague or group of colleagues. Thus, peer-assessments can be conducted either individually or collaboratively in groups. Amuche (2010) conducted a survey research on comparative analysis of student, peer and self evaluation of Physics teacher effectiveness in Nasarawa State and found a moderately high positive correlation ( $r = +0.6$ ) between the mean scores of student assessment and those of peer teachers. Ma and Millman (2005) reported that the use of peer-assessment and self-assessment leave student-teachers with a memorable personal experience that illustrates the importance of content knowledge in effective teaching. However, a teacher educator has to be very cautious in using peer-assessment to ensure that it does not become an opportunity for exhibition of biases and prejudices among students. If the feedback from students' peers is to be useful, then the students must have a clear understanding of what they are to look for in their peers' work. Furthermore, students must feel comfortable and trust one another in order to provide honest and constructive feedback

Peer-assessment among teachers originated from peer assistance. As formative assessment practice, peer assistance or mentoring becomes a practice in which experienced teachers, often called consulting teachers, mentor new and inexperienced teachers to improve their knowledge and teaching skills. Participants in peer assistance programs are identified as experiencing pedagogical problems, or problems related to classroom management or curriculum design. Escamilla (2000) noted that peer assistance enjoyed greater popularity among teachers than peer assessment or review which permitted consulting teachers, in conjunction with the local teachers' union, to conduct formal evaluations and make recommendations for dismissal or further assistance.

## 7. Conclusion

Education as a vital instrument of change is a necessary pedestal on which all other efforts would stand in pursuit of Nigeria's vision 20 2020. The challenges of innovative assessment practices in preparing teachers for the year 20 2020 are enormous but not insurmountable if teacher-educators are willing and determined to embrace change. There is the need for teacher producer centres to embark upon, and to strongly advocate, appropriate assessment practices that will support the type of education which ensures the development of techno-scientific skills, citizenship values, entrepreneurship and self-reliance. Student-teachers should be exposed to a variety of assessment activities that give meaning to 'comprehensive' formative evaluation including the use of creative (performance) assessment; classroom observation, peer assessment, and self-assessment. In consequence, new graduate outputs of teacher education would be expected not only to be competent in lesson delivery techniques but also knowledgeable in comprehensive approaches to assessment. They should be typically equipped, through practical experience, with innovative assessment strategies that are truly formative, creative and comprehensive in nature. New emphases of assessments should therefore be directed towards the provision of evidence for who the learners are in the three domains of development, and what they could do, rather than the credits in certificates whose validity might be difficult for the owners to defend.

## 8. Recommendations

1. The provisions in the National Policy on Education regarding national curriculum at various levels of education and their assessments should be enacted as Education Reform Act. This will imply punishable offences for operators that trivialize prescribed assessment practices.
2. National curriculum tests should be encouraged on annual basis as a source of results with which to hold schools accountable for performance standards. Alongside teacher assessment, learners in primary and secondary schools should take statutory tests in the relevant elements of the national curriculum annually "as a key accountability measure" (Isaacs, 2010:323). Such tests are capable of motivating the culture of pursuing ever increasing higher standards.
3. Monitoring the assessment practices of teachers may become imperative to ensure that teachers utilize a variety of activities for 'comprehensive' formative assessment including the use of creative assessment; classroom observation, peer assessment, and self-evaluation. The monitoring is important to ensure that over-reliance on paper-and-pencil testing does not seriously distort instruction or impede important school improvement efforts.
4. Teachers should be encouraged to embark on innovative approaches to assessment practices that include linking standardized outcomes to in-class assessment. Testing and retesting should aspire towards efficiency and effectiveness according to tangible and verifiable data.
5. The assessment practices of teacher-educators could be related to the accountability owed to the stakeholders in teacher education programs. Accountability, in this sense, refers to the various strategies devised in order to improve the quality of education since assessment practices constitute a veritable means by which quality is achieved.
6. External assessors such as educational administrators, professionals, and educational researchers should be formally recognized to pass judgment on the effectiveness of teacher education curriculum through monitoring the activities of the teachers and the quality of their assessment practices including the manifestations of learning achievement of their students in tests and other assessment instruments.

## References

- Amuche, C. I. & Anikweze, C. M. (2010). Comparative analysis of student, peer and self evaluation of Physics teacher effectiveness in Nasarawa State; Unpublished M. Ed. dissertation submitted to the Faculty of Education, Nasarawa State University.
- Anikweze, C. M. (2008) *Essentials of Instructional Technology*; Kaduna: Gofats Ventures and Publishing Limited
- Anikweze, C.M. (1998). The place of self evaluation in teaching practice at the NCE level; *Review of Education*, Vol. XV, No. 1: 66 – 74. Nsukka: Institute of Education, University of Nigeria.
- Bello, A. Y. & Williams, S. (2008). 'Vision 20, 2020: Non-oil sector holds the key'. Retrieved Monday 25<sup>th</sup> May

- 2009 from Daily Trust - The Online Edition, Internet file at [http://www.dailytrust.com/index.php?option=com\\_content&task=view&id=1299&itemid=23](http://www.dailytrust.com/index.php?option=com_content&task=view&id=1299&itemid=23)
- Black, P. & William, D. (1998) Assessment and Classroom Learning; *Assessment in Education: Principles, Policy and Practice* 5 (March 1998): 7–68.
- Black, P. (1994) Performance, assessment and accountability: the experience in England and Wales; *Educational Evaluation and Policy Analysis*, 16 (2), 200 -1.
- Dueck, M. (2008) Implementing Innovative and Effective Assessment Strategies at the Secondary Level; Manitoba: *Leading, Learning, Uncategorized*; Downloaded on 8<sup>th</sup> Oct 2010 from <http://www.tielights.net/?p=487>
- Education News.Org (1983). ‘A NATION AT RISK: The Imperative for Educational Reform’. Downloaded on 28/6/10 from <http://www.ednews.org/articles/a-nation-at-risk-the-imperative-for-educational-reform.html>
- Education Sector Analysis Unit (2004) *Monitoring Learning Assessment of Primary Four pupils in Nigeria: A National Report*. Abuja: FME/UNICEF/UNESCO
- Education Sector Analysis Unit (2004) *Monitoring Learning Assessment of JS II and SS II students in Nigeria: A National Report*. Abuja: FME/UNICEF/UNESCO
- Escamilla, P. (2000) ‘Exploring Teacher Peer Review’; Education Studies Policy Division; Retrieved from <http://www.nga.org/cda/files/000125PEERREVIEW.pdf> on 16<sup>th</sup> Oct. 2010
- Federal Republic of Nigeria (1998 & 2004) *National Policy on Education*; Abuja: NERDC & Federal Ministry of Education.
- Harlen, C. G.; Broadfoot, P. & Nuttall, D. (1992) Assessment and the improvement of education, *Curriculum Journal*, 3 (3), 217 – 23
- Harris, D. & Bell, C. (1990) *Evaluating and Assessing for Learning*, London: Kogan Page.
- Isaacs, T. (2010) Profiles of Education Assessment Systems Worldwide – Educational assessment in England; *Assessment in Education, Principles, Policy & Practice*, 17, 3, August 2010, 315 – 334; Routledge: Taylor & Francis.
- Keesing-Styles, L. (2003). The Relationship between Critical Pedagogy and Assessment in Teacher Education; *Radical Pedagogy*, ISSN: 1524-6345. Downloaded on 20<sup>th</sup> June 2010 from [http://radicalpedagogy.icaap.org/content/issue5\\_1/03\\_keesing-styles.html](http://radicalpedagogy.icaap.org/content/issue5_1/03_keesing-styles.html)
- Kennedy, K.J. (2001). ‘Building Civil Capacity for a New Century: Engaging Young People in Civil Institutions and Civil Society’. Paper presented at the 7<sup>th</sup> UNESCO - ACEID Conference, Bangkok.
- Lovegrove, M.N. (1975). Self Evaluation and Staff Evaluation of Teaching Practice Performance, *African Journal of Educational Research*, 2, (1): 191 – 195.
- Ma, X. & Millman, R. (2005) Using Self Assessment and Peer Assessment; University of Kentucky: *News Bulletin*, November 2005). Downloaded on 16<sup>th</sup> Oct. 2010 from Internet: <http://www.nctm.org/news/content.aspx?id=616>
- Mowl, G.; McDowell, L. & Brown, S. (1996) *Innovative Student Assessment*, Retrieved on 8th Oct. 2010 from [www.londonmet.ac.uk/deliberations/assessment/mowl.cfm](http://www.londonmet.ac.uk/deliberations/assessment/mowl.cfm)
- Nengia, K. (2010). ‘Vision 20:20:20: Nigeria Dreams Big, But Far From Target’ filed under Democracy Day Special. <http://www.thetidenewsonline.com/?p=12574>, retrieved 9<sup>th</sup> Oct 2010.
- Ochiama, C. (2010) ‘Vision 20:2020 is achievable’; in *Daily Sun*, Thursday, October 14, page 44.
- Rolheiser, C. and Ross, J. A. (2000) ‘Student self-evaluation: what research says and what practice shows’. [http://www.cdl.org/resource-library/articles/self\\_eval.php](http://www.cdl.org/resource-library/articles/self_eval.php) downloaded on 17th Oct. 2010
- Sato, M; Wei, R. C. & Darling-Hammond, L. (2008). ‘Improving Teachers’ Assessment Practices through Professional Development: The Case of National Board Certification’. <http://aer.sagepub.com/cgi/content/short/45/3/669> downloaded on 6th Oct 2010.
- Scherer, M. (1983). ‘A Nation at Risk: The imperative for educational reform, 1983’. Downloaded on 29<sup>th</sup> June 2010 from <http://www.nd.edu/~rbarger/www7/nationrs.html>
- Shute, Valerie, J. & Becker, B. J. (Eds.) (2010) ‘Innovative assessment for the 21st century supporting educational needs’; ISBN: 978-1-4419-6529-5; Retrieved on 6<sup>th</sup> Oct. 2010 from [http://www.springer.com/education+%26+language/book/978-1-4419-6529-5?cm\\_mmc=nba-\\_-sep-10\\_east\\_6627321-\\_-product-\\_-978-1-4419-6529-5&uid=17924371](http://www.springer.com/education+%26+language/book/978-1-4419-6529-5?cm_mmc=nba-_-sep-10_east_6627321-_-product-_-978-1-4419-6529-5&uid=17924371)
- Smith, J. A. (1997) ‘Creative assessment method’; Internet file downloaded on 9<sup>th</sup> Oct. 2010 from <http://www.freepatentsonline.com/5658161.html>
- William, D. (2009). ‘Practical Techniques for Keeping Learning on Track’; Internet file downloaded on 8<sup>th</sup> Oct. 2010 from <http://www.tielights.net/?tag=formativeassessment>.

The IISTE is a pioneer in the Open-Access hosting service and academic event management. The aim of the firm is Accelerating Global Knowledge Sharing.

More information about the firm can be found on the homepage:

<http://www.iiste.org>

### CALL FOR JOURNAL PAPERS

There are more than 30 peer-reviewed academic journals hosted under the hosting platform.

**Prospective authors of journals can find the submission instruction on the following page:** <http://www.iiste.org/journals/> All the journals articles are available online to the readers all over the world without financial, legal, or technical barriers other than those inseparable from gaining access to the internet itself. Paper version of the journals is also available upon request of readers and authors.

### MORE RESOURCES

Book publication information: <http://www.iiste.org/book/>

Academic conference: <http://www.iiste.org/conference/upcoming-conferences-call-for-paper/>

### IISTE Knowledge Sharing Partners

EBSCO, Index Copernicus, Ulrich's Periodicals Directory, JournalTOCS, PKP Open Archives Harvester, Bielefeld Academic Search Engine, Elektronische Zeitschriftenbibliothek EZB, Open J-Gate, OCLC WorldCat, Universe Digital Library, NewJour, Google Scholar

