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Challenges Facing the Administration of Educational Assessment Measures at the Secondary School Level in Nigeria

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Abstract: This study examined some of the challenges posed to the authentic assessment and measurement procedures as a policy tool in the Nigerian education system, particularly, the acceptability and universality of common assessment of secondary school students. Considering fit diversified educational backgrounds of these students, it appears that our current educational assessment processes do not tally with, the practicability of the test end results. It was therefore, suggested that educational performance in common assessment measures should be based on the principles of crude grasp of the whole. Only in this would our pluralistic complex, society be recognized.

Key words: Educational assessment, education administration, secondary school, challenges, administrative measures, secondary school level, Nigeria

INTRODUCTION

Testing was first introduced as a policy mechanism in China 210 B.C. By the 18th century, written examination was introduced to supplement oral mode of testing, especially in Mathematics (Montgomery, 1967). Later in the same century, assessment of quantitative marks was introduced to reduce the bias of qualitative judgement about an examinee's level of performance across the oral disputation and written portion of the examination. The development of the quantitative marks was the first step in the development of the field of psychometric as we know it today. The advent of the Psychological Testing Movements in the 19th century brought about the belief that testing could be more than assess what people learn because test could be used to assess the mental ability of the examines. In the first 10 years of the 20th century, the short-answer supply mode appeared and high 1914, Kelly invented the multiple choice item (Samelson, 1987). This development was in response to studies which showed that marks assigned to essay questions were highly unreliable and partly in response to the growth of the scientific management movement's application to education.. The movement required that the growing number of children could be tested to measure a district's efficiency (Callaghan, 1962).

In 1955, Lindquist invention of the high speed optical scanner overcame the hand or electromechanical scoring. The technology of the optical scanner coupled with the

multiple choice item, made it economically feasible to mount the large-scale district and state multiple choice testing programme between the 1960's and 1990's (Madaus, 1993). 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 examines, increased.

Regardless of the listed advantages, eminent scholars such as Vergis and Hardy (2010), Fadal *et al.* (2007), Yu (2005), Payla (2000), Huit *et al.* (2001), Tyack (1974), Madaus (1985), McDonagh and Madaus (1979), Charney (1984), Cole (1987), Zessouless and Garden (1990), Darling-Hammond (1991), Jaeger (1991), Shepard (1991) and Nutall (1992) 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 our children, 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 have been a concern for the researchers all over the world. Several studies have therefore been conducted to assess secondary school students involvement in examination such as Abdullahi (1994, 1995a, b, 1996, 1997, 2009) worked on improving the Nigerian Senior Secondary School students' performance in the Joint Admissions and Matriculation Board examinations. Results are as diversified as many authors that have engaged in the research on this topic.

In another attempt to analyse the challenges facing the administration of educational assessment measures in secondary schools, teachers have been encouraged to employ practical demonstration on data collection, collation and analysis for effective decision making in assessment process (Yusuf and Onasanya, 2007; Durosaro and Onasanya, 2008). Effective utilisation of improvised and standard instructional materials and teachers positive attitude towards the use of Information and Communication technology have been identified as relevant tools for instruction and assessment in schools (Onasanya, 2008, 2009; Onasanya and Omosewo, 2010; Onasanya *et al.*, 2008, 2010a-c).

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 judgement than inert knowledge, then we need to address the challenges of public assessment, measurement and administrative procedures especially at the secondary level of education.

PURPOSE OF THE STUDY

The purpose of the study was to examine some of the challenges involved in the administration of educational assessment measures in the Nigerian education system. The researcher also endeavoured to analyse the technology of psychometrics both in quantitative and qualitative terms, with particular reference to standardized tests used as the primary method for determining students' performance and admission into tertiary institutions.

Thus the study examined some of the challenges involved in the administration of education assessment measures in the Nigerian education system, by analysing the technology of the psychometrics both qualitatively and quantitatively. The quantitative aspects concerned the examination of the 1988-1991 Senior Secondary School Certificate Examinations in Mathematics, Biology, Physics and Chemistry to buttress the theoretical views advanced in this study.

The statistics of the entry and results for Senior Secondary School Certificate Examination for 1988-1991 are presented in Table 1.

Results in Table 1 above show that percentages of failures in Biology between 1988 to 1991 ranged from 45.7% in 1991 to 74.4% in 1988. The percentages of failure in Chemistry during the same period ranged from 54.7% in 1988 to 75.1% in 1990. In Physics, the percentages of failure ranged from 47.7% in 1990 to 63.6% in 1989. The percentages of failure in Mathematics ranged from 49.7% in 1991 to 61.2% in 1989.

Important to note about the results presented in Table 1 is that testing simply does not tell us all we need to know namely: whether students have the capacity to use wisely what knowledge they have acquired. These results therefore do not provide a basis for judgement that can be made through tasks that require students to perform in highly contextualized situations that are as faithful and as possible to criterion situations. There is need, therefore, to seek a more robust and authentic, construct of understanding and more valid tests by keeping in mind that the policy statement of education in Nigeria as reported by National Policy on Education in 1981.

Integration of the individual into-a sound and effective citizen and provision of equal education opportunities for all citizen.

On the basis of the difference inherent in our national educational assessment and measurement procedures, the researcher examined the challenges posed to the validity assessment as a policy tool of our education system particularly die acceptability and the universality and suggests ways forward.

Table 1: Summary of results for senior secondary school certificate examination for 1988-1991 in selected subjects

Subject	Year	T. entry	SAT	CRD	Pass	T. pass	T. fail
Mathematics	1988	93,657	93,657 (100)	10,373 (11.07)	26,440 (28.2)	36,813 (139.3)	56,844 (60.7)
	1989	92,734	91,142 (98.3)	7,985 (8.8)	27,342 (30.0)	35,327 (38.8)	55,815 (61.2)
	1990	196,816	195,133 (99.10)	20,614 (10.6)	72,830 (37.3)	93,444 (47.9)	101,689 (52.1)
	1991	299,338	294,079 (99.1)	32,727 (10.6)	115,240 (37.3)	147,967 (50.3)	146,112 (49.7)
	1988	89,342	89,342 (100)	8,319 (9.3)	14,589 (16.3)	22,908 (25.6)	66,434 (74.4)
Biology	1989	89,184	87,100 (98.3)	10,379 (11.8)	19,552 (22.3)	29,931 (34.1)	57,779 (56.9)
	1990	192,061	190,386 (99.1)	29,942 (15.7)	58,674 (30.8)	88,616 (46.6)	101,770 (53.5)
	1991	291,313	285,690 (98.1)	72,988 (25.5)	82,270 (28.8)	155,258 (54.3)	130,432 (45.7)
Chemistry	1988	34,508	34,508 (100)	7,118 (20.7)	8,406 (24.6)	15,624 (45.3)	22,321 (54.7)
	1989	36,381	35,702 (98.1)	3,862 (10.8)	9,522 (26.7)	13,384 (37.5)	60,095 (62.5)
	1990	80,863	80,059 (99)	3,307 (4.1)	16,657 (20.8)	19,964 (24.9)	80,324 (75.1)
	1991	118,906	116,526 (98)	12,117 (10.4)	23,585 (20.2)	35,582 (30.6)	13,995 (69.4)
Physics	1988	26,194	26,297 (100)	2,710 (31.5)	20,323 (15.3)	33,064 (46.8)	13,995 (53.2)
	1989	29,194	28,524 (97)	12,141 (9.5)	28,601 (26.9)	45,638 (36.4)	18,126 (63.6)
	1990	63,680	63,161 (98.9)	17,037 (20.1)	16,250 (32.2)	35,582 (52.3)	30,097 (47.7)
	1991	98,929	96,742 (97.8)	19,332 (30.8)	25,790 (25.9)	38,541 (56.7)	51,104 (43.3)

Source: West African Examination, Council Office, Lagos; Annual Reports (1988-1991). Values in brackets indicate percentage

SIGNIFICANCE OF THE STUDY

A research into the challenges of assessment, measurement and administrative procedures, especially at the secondary level of education in Nigeria will enhance robust constructed understanding of test validity and reliability by keeping in mind that by performance, we mean to execute a task or process and to bring it to completion. The findings may give insight to our testing agencies that the candidates abilities to perform in public examination, should be based only on what we produce as individuals, using a repertoire of knowledge and skills that are responsive to particular task.

Not only this, the findings may lead to reforms necessary to improve upon common assessment measures in the education system. This may have advantage of giving teachers and testing agencies, clear models of acceptable outcomes and make them have positive attitudes towards instruction and learning. In sum, positive change in attitudes may narrow down education gap, either real or imagined, in the national, racial, linguistic and cultural and gender spheres across the nation.

CHALLENGES IN THE ADMINISTRATION OF THE EDUCATIONAL ASSESSMENT MEASURES

The history of the educational development: The first challenge inherent in our national examination system is that when we look at the history of educational development and the diversified educational background, it does not tally with the practicability of our current examination educational assessment policies especially for the large scale use of such educational assessment measures for certifying an individual's successful completion of a given level of education and/or for making decision about individuals' entrance into tertiary

institutions or the occupational opportunities. Considering the wide gap between the poor and rich home, the urban and rural schools, the good and bad schools, the acceptability or practicability of common examination system among Nigerian school pupils is certainly questionable and this should pose a challenge to the administration of the educational assessment measures.

Considering the education gap, performance based assessment should be based on the input variables in terms of equality of teachers, facilities and location of the secondary schools. On the basis of the differences inherent in the Nigerian secondary education system, such national assessment measures should have been better used for formative and diagnostic purposes rather than the traditional standard for certification, admission into further educational places and employment purposes. The suggestion here is that performance based assessment in the hands of the teachers, adequately reflecting the classroom routine equitable input variables should be used for certification, admission and employment. This suggestion does not centre entirely on the classroom teachers but highly decentralized examination bodies that focus exclusively on the differences inherent in the locality, school standard and the resource input in the education system.

In this respect, teachers, resource input at the secondary school level, cultural environment based on historical perspectives and not national common assessment measures should be the cornerstone of certification, admission and employment intakes. Decentralisation of the examination body in Nigeria may be a way forward.

It may be the case that, the deep mistrust in the central national common educational assessment measures, that examination malpractice, has their strongest root. It sounds odd that our public educational

assessment procedures cannot adequately be constructive in nature. How do we explain the fact that students with forged certificates still survive in our higher institutions of learning until they are screened out. Is it possible, for instance, for a non-typist to do equally well in a practical examination with a trained typist? Or is it possible for non-French speaking students to survive in a French class and perform equally well enough, amongst French students? It is simply the fact that our educational assessment procedures at the secondary level lack construct validity and this is a challenge that needs to be addressed in our education system.

Equity issues: Another challenge is the serious error observed on issues concerning equity. The equity issues are even more profound and challenging than those of construct validity. It is a basic fact that no common education procedures can produce truly just measures until policy makers put in place appropriate national delivery standards for social, health, educational resource and other support systems for a family. The demand here is that we need a national system in Nigeria, which implements, social, health, family, educational resources and support system equitably across states and local government areas, we are to use common educational assessment measures for secondary education students. It is an irony of circumstance that it is the creation of national education assessment centres that dominate the education discourse while we only give lip service to the equity of standard in secondary schools.

What justifications are there, for instance, to give common examination to finalists in International School Ibadan, King's College Lagos, Adesoye College, Offa and the finalists in Taraba Secondary School in Taraba State, Talata-Mafara Secondary school in Sokoto State, Dambata Secondary School in Kano State and Otte Secondary School in Kwara State? First, we need an educational playing field that is at least seemingly equitable for all students. Any examination system put in place for common education assessment measures for all the individuals and yet neglects, the concomitant reforms in social, health and educational delivery systems will only produce inherently unjust measures and this is a challenge in that our assessment measures do not consider the issue of equity in the input resource input variables.

Testing as a technology: Our focus here is on the standard and quality of test designers especially at the secondary education level. If we look at the policy rate of authentic assessment from the point of view that testing as a technology and it must be viewed as such, then the

challenge posed by the quality of test designers and administrators in Nigeria can be understood. Assessment is seen as a technical art, a complex of standardised means for attaining a predetermined end in social, economic, administrative and educational institutions (Madaus, 1990). In the early days of our educational history, we could describe the personnel involved in assessment almost as easily as lay people. Even today in Nigeria, the quality of personnel involved in test designs cannot be compared with what obtains in the developed world. In the developed world, the standard of assessment procedures is highly specialized in terms of the entire test development processes, the cultural background, the material chosen for inclusion, the language and idioms used, the validation processes and the groups in their societies.

In Nigeria, a large percentage of the test designers are ignorant of the statistical procedures involved in the educational assessment measures and the advances made with the use of computers. The concern should be centred on how computer can be used in assessment procedures and the vocabularies needed to facilitate the usage. For assessment to produce a set of consequences logically and permanently or temporarily, it requires the training of personnel that are involved in assessment of students' right from primary level. It is pertinent therefore, to note that some measure of technical development has been stocked in computer usage in favour of qualitative assessment measures and we need a measure of interest in these advances.

Screening certain group: The administration of common educational assessment measures also faces the challenge of using test results to screen out certain groups especially ethnic, racial minorities, poor and rural population in the society, their fair chance to receive certain social benefits. This is true when test scores are used mechanically as selection and placement devices in educational and job opportunities. The challenge here is to inquire whether these groups of people have been justifiably or unjustifiably screened out and further more to ask what constitutes a fair and equitable use of test scores in personnel selection, placement and classification. This challenge becomes more involving when we inquire further the relationship among test scores, education inputs and job performance especially in the context, in which test scores are used. The philosophical and political implications of this challenge lie more in the values a society accepts as desirable goals for a system of personnel allocation and utilization. We need to ask, therefore, how much weight should the Nigerian society give to maximising productivity of her

educational or industrial establishment (in whatever terms productivity is defined). How much weight should be given to balancing equal opportunities among different ethnic groups in Nigeria to eliminate the inherently existing educational and occupational inequalities?

Psychometric research results may be able to provide some measure of answers, but the cost of forcing numerical equality amongst groups of unequal access and opportunity for selection and placement decisions through test processes pose a great challenge. In this challenge lie the political issue of Quota system and the federal character policies in Nigeria.

Psychological issues: Another area of challenge is the domain of invasion of the right of the individuals by subjecting the children tested to Psychological risks. To non-psychologists, it may be hard to see how ability test, may be damaging to children's self-esteem. Poor performance on ability test, in terms of common examination at the national level, evokes extra-anxiety, worry and self-derogation and other psychological hazards and quite often parents are not excluded. The challenge involved is to evaluate such severity of the hazards and to ameliorate the countervailing benefits both to the children and their parents. Closely related to this is the categorising of the individuals in the region as Educationally Backward States (BBS) or Educationally Disadvantaged States (EDS) and this is applicable in Nigeria. Hebb (1975) explained that such labels carry with them a Cluster of implications to what the individual is like, can do and can be expected to become.

Instances of mislabelling are evident in Nigeria. The prospects for the future treatment of the people in such states should be a matter of concern to our education administrators. They must educate the public that any ability test score is a mere descriptive fact about a person and that this fact can only be fully understood in terms of the total past and present history of educational development. Ability test scores are really meant to assist teachers, counsellors and social workers in helping pupils thoroughly enough and not for, mere categorisation or filling the available educational opportunities.

Right of script: When an individual stands accused in a court, he/she has the right to face his accuser, hear the evidence against him or her and offer evidence to refute the accusation. In administration of education assessment measurement, candidates do not know how their tests are being interpreted and are very little aware of how decisions have been arrived at. In a less than perfect reliability of test scores and the human error in handling test results, it is necessary that candidates should be

given the privilege to see their scripts if they feel strongly cheated by the final results communicated to them. This apart from benefiting the testee, it may improve the reliability of scoring, handling of scores and improve upon the assessment procedures. This demand appears necessary when we consider the secrecy and privilege test administrators enjoy in Nigeria. The secrecy of academic records has brought about considerable harm to the process of administration of education assessment. Secrecy of academic records has brought damage to test self-esteem. This demand is aimed at reducing the severity of the hazards candidates adjudged to be failure do face.

It is worthy of note that assessment measures are sometimes quite misleading. Assessment results need be a true descriptive fact about an individual and it must be based on full understanding of individual past and present context in terms of economic, cultural and social background assessment measures should therefore, be thorough enough to put all information together wisely so that the tests are understood and helped meaningfully rather than test results being used merely for labelling.

CONCLUSIONS

To overcome or reduce the dangers inherent in the challenges identified above, test administrators especially in Nigeria, are advised to continuously re-examine and become clear about all the values involved in common assessment measures. Using test scores to categorise failures and success group involves a complex process of interacting and competing variables. They, (test administrators) should recognise that test scores are only indicators or signs of the underlying reality; thus scores on mental ability are only indicators of mental ability and not the real mental ability, itself. Mere educational assessment measures are quite often imperfect representations, of the realities. Categorisation, by using test scores should be considered against historical and philosophical past (i.e., physical, cultural, social, economic and political factors) that play on the individual or groups.

We have to take cognisance of the possibilities of error in all types of test scores and interpretation of test scores and classification of the test, have to be done with constant references to measurement error. In the final analysis, we must know the limits of human wisdom and that the extent of our results lies only in human capacity and thus tentative in all decisions taken. Decisions taken, therefore, are based only on partial fallible data and such decisions need be constantly monitored through empirical research and evaluation processes. The tentative nature

of such decision if recognised will readily guide our future evidence. In this reversal, it will be easy to accommodate future occurrences and discoveries.

The idea that the current assessment techniques in Nigeria can reform our schools and restore our national inequalities is the height of sociological arrogance that conceals many of the negative possibilities of such a move under the guise of educational injustice. Instead of seeking solution of our educational assessment through the administration of common education assessment measures, we should seek solution in systematic problems related to delivery system such as instructional delivery, quality of textbooks, length of the school day and year, the gross inequalities in the extra school resources, social and health delivery system. Even when all these receive serious attention, it is the teacher and not the assessment measures that must be the cornerstone of the educational challenges.

Thus, as it is practiced in Japan, where entrance examinations are set by the individual Universities and Colleges, in Nigeria each State or at least each geographical area (i.e., Educational Advanced Areas and Educationally Disadvantaged Areas) would be allowed to have her Examination Board. At least the junior secondary school final year III Examinations are conducted largely by the individual states. This claim is based on the assumption that educational performance in common assessment measure should be based on the principles of crude grasp of the whole to a sophisticated grasp of the whole. Only in this, would our pluralistic complex society be recognised and given pride of place.

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