

EVALUATION

In AFRICA

In
Honour of E. A. Yoloye

Edited by

Joseph O. Obemeata

Sam O. Ayodele

M. A. Araromi

UNIVERSITY OF IBADAN LIBRARY

Stirling-Horden Publishers (Nig.) Ltd.
University of Ibadan Post Office
Box 20984
Ibadan
Oyo State, Nigeria.

7 Ikioda Street,
Jattu-Uzairue
Edo State, Nigeria

© Institute of Education
University of Ibadan

ISBN 978-2063-43-6

First Published 1999

All Rights Reserved

Stirling-Horden Publishers (Nig.) Ltd.
Lagos, Ibadan, Benin City, Jattu-Uzairue

Printed by Sam-Adex Printers, Imalefalafia, Ibadan.

UNIVERSITY OF IBADAN LIBRARY

Dedication

To all those who have grown; are growing;
and would grow under the influence of
Professor E. A. Yoloje's enormous
contributions to learning and
human development.

UNIVERSITY OF IBADAN LIBRARY

Contents

Dedication	iii
Foreword	iv
Preface	v

Chapters

1. The Contribution of Emmanuel Ayotunde Yoloje to The Development of Education — <i>Joseph O. Obemeata</i>	1
2. Patterns of Consumption of Educational Evaluation in Nigeria — <i>Pai Obanya</i>	12
3. Observation in Evaluation — <i>I. Chacko</i>	22
4. Evaluation of Social Studies — <i>O. M. Onibokun</i>	40
5. Techniques of Setting Examination Questions and of Objectively Scoring of Examination Scripts — <i>Sam. O. Ayodele</i>	60
6. Evaluation of Teaching Effectiveness — <i>P. N. Okpala</i>	72
7. Psychological Dimensions of Continuous Assessment Implementation on Teachers and Students in Secondary Schools in Oyo State — <i>E. Adenike Emeke</i>	83

- 8. Lecturer's and Administrators' Perception of the Determinants of Teaching Effectiveness**
— *Charles O. Onocha* 104
- 9. Mastery Learning: Research and Findings in Nigeria**
— *E. Jonathan-Ibeagha* 111
- 10. Educational Evaluation and Quality Control in Secondary Education in Nigeria.**
— *Charles V. Abe* 122
- 11. Selection Mechanism for Admission to University Education in Nigeria**
— *E. A. Okwilagwe* 129
- 12. Issues in The Cost-Benefit Analysis of Private Sector Investment in Education**
— *Innocent A. Elekwachi* 139
- 13. Perceptions of Classroom Environment of Sub-Degree Adult Learners in Ibadan: Some Empirical Findings**
— *Bayo Akinola* 147
- 14. Methodological Issues in The Use of Rationalistic and Naturalistic-Oriented Observational Techniques in Education Evaluation**
— *Ifeoma M. Isiugo-Abanihe* 153
- 15. Managing Records for Effective School Administration in Nigeria**
— *S. O. Popoola* 166
- 16. Factors Inhibiting the Learning of Mathematics**
— *M. K. Akinsola* 175

- 17. Students' Achievement in Integrated Science As a Predictor of Achievement in Biology Chemistry and Physics**
— *M. M. Osokoya* 183
- 18. Assessing The Attitude, Study Habit and Performance in Science of Some Students After A Counselling Programme**
— *T. W. Yoloye* 193
- 19. Curriculum Recycle Theory: A New Dimension in Curriculum Development**
— *Ebo Ubahakwe* 212
- 20. Code Switching and Code Mixing Among Nigerian University – A Case Study of Some Nigerian French Speaking Students**
— *M. A. Araromi* 224
- 21. Socio-Psychological Factors As Correlates of Senior Secondary Students' Attitude Towards English Language**
— *M. N. Odinko & D. A. Adeyemo* 233
- 22. The Relative Uses of English Language and Mother Tongue in Classroom Interaction at the Senior Secondary Level**
— *Francis O. Ezeokoli* 240
- 23. Resources for Effective Communication of Mathematics in Nigerian Secondary Schools**
— *Onwakpa F. I. Williams* 253
- 24. Languages in the Curriculum: A Case for Total Vernacular Media of Instruction Policy for Nigerian Schools**
— *Isaac N. Ohia* 260

- 25. The Place of Sequence in the Teaching of English Language in Nigeria**
— *Kolawole, Clement Olusegun Olaniran* 268
- 26. The Relative Effects of Textual and Audio-Visual Adjunct Aids on Affective and Cognitive Learning Outcomes in Science Problem Solving: Implications for Distance Education**
— *T. O. Iroegbu* 276
- 27. Demographic Variables in Psycho-Educational Experimental Studies: Is it true that they are Nonsense?**
— *Osiki Jonathan Ohiorenuan* 286
- 28. Teaching Population Concepts Through Self-Learning: An Experiment in Programming Population Education**
— *J. O. Ajiboye* 298
- 29. Training, Value and Adjustment Among Primary and Post Primary Teachers**
— *C. A. Adeyoju* 310
- 30. Patterns of Information Utilization in the Book Industry in Nigeria**
— *Oshiotse Andrew Okwilagwe* 318
- 31. Health Education in Schools: A Call for Proper Recognition and Professional Preparation of Health Education Teachers**
— *O. A. Moronkola* 332
- 32. Drug Abuse Among Undergraduates of a Nigerian University**
— *Francis A. Adesoji* 340

- 33. Adult Literacy_ ‘A Key to the 21st Century’**
— *Abidoeye Sarumi* 351
- 34. The Gender Gap in Basic Education: Evolving Strategies to Increase Girls’ Access**
— *Benedict O. Emumemu* 360
- 35. Attributing Responses of Athletes in Sports: Consequences and Implications**
— *Micheal Adeniyi Ajayi* 370
- 36. Influence of Job Marital Status on Working Experience on Withdrawal Trainee Teachers**
— *S. O. Salami* 377
- 37. Psychological Testing in Personnel Selection**
— *J. O. Akinboye* 389
- 38. School Supervision, A Predictor of Students’ Achievement in Secondary School Physics in Oyo State**
— *Farombi, J. Gbenga* 399
- 39. Comparative Education Through Educational Evaluation**
— *E. Ayotunde Yoloye* 406

Selection Mechanisms for Admission to University Education in Nigeria

E. A. Okwilagwe

Background and Introduction

Admission into higher education in Nigeria as is done in many parts of the world has always been through some form of selection mechanism. The use of a selection process according to Sawyerr (1963) dates back to 1948 when the first University established in the country – the University College of Ibadan, introduced some form of selection. Various universities in Nigeria had followed suit by adopting some forms of selection procedure to admit prospective students to higher education in the country. The forms of selection included an entrance examination, interviews (written or oral), this is in addition to basic education qualifications such as secondary school leaving certificate and/or advance school leaving certificate or their equivalents.

This was the scenario when the Federal Government instituted the Joint Admission and Matriculation Board (JAMB) in 1978 by a Decree No. 2 which empowered it to centrally conduct matriculation examinations for entry into Nigerian Universities. The decree was amended in 1988 and codified in 1989, to incorporate the Polytechnics and Colleges of Education (PCE) into the examination (JAMB, 1995/96). According to a JAMB Publication, *Knowing more about JAMB*, the board was instituted to relieve the universities of the burden of conducting entrance examinations and the rigors of coping with admission processes. It was also, to reduce wastages emanating from duplication of efforts by various university authorities, in addition to reducing multiple admission of students to the barest minimum.

Over the years, the introduction of policies such as “mass education” and “education for all by the year 2000” by Government, led to rapid expansion of the education system. Specifically is the rapid expansion in secondary schools between 1979 and 1983, which substantially increased the demand for university education and the subsequent increase in the number of university places (Obemeata, 1986). This period alone witnessed the establishment of eight (third generation) universities and seven Federal Universities of Technology in various parts of the country. It must be noted that the expansion in tertiary institutions was not peculiar to Nigeria alone,

but, as identified by Herman (1995) the whole sub-saharan Africa was involved as compared to other parts of the world. As Nigerian universities cannot conveniently cope with the increasing demand for university places nor operate "open access" to universities, some form of selection had to be introduced since not all candidates can be guaranteed places in the universities.

The introduction of the aforementioned policies by Government seems to have generated a lot of bottlenecks in the smooth implementation of the admission policies in the country. Such admission bottlenecks are evident in student's malpractices in public examinations (Uwadiae, 1997); outright cancellation of examinations by JAMB (Guardian of Friday, 16th July 1999); expulsion of students due to fake or falsified results and/or examination misconduct (University of Ibadan Official Bulletin Special Release No. 1447 of 22 January 1999) and No. 1449 of 29 January 1999). These problems among others have undermined the continued use of the selection criteria used for admitting prospective students into university education in Nigeria. The purpose of this paper is to address key issues of selection procedures based on the instituted selection criteria and government policies and the consequent practical problems; on the basis of these make a case for the need to adopt other measures of admission in Nigeria.

The Role of University Education in the Society

The university and other institutions of learning are expected to perform several functions in any given society. As observed by Hinzen (1979) education and society can not be separated but are dialectically related to each other. Education is therefore viewed as a key variable in the growth of human potential as it influences the process of societal development in accordance with the needs and aspirations of the people living in it. Thus, through education, attitudes, political, social and economic life of the people is altered. Among other things, the university is expected to serve these functions:

- i. as a selection agency;
- ii. as a certification agency;
- iii. training individuals to be competent members of the society; and
- iv. contributing to the overall development of the society by investing in the lives of individuals.

These functions are clearly spelt out in the National policy on Education (1981, page 22). Because of the importance of the role of university education in the society, it is pertinent to ensure that proper admission processes are observed and the universities made to carry out their functions unhindered.

The Place of Preparatory Courses in University Admission and Education

In the early 1950's, the place of Preparatory courses such as the introduction of Sixth Form known as Higher School Colleges (HSC) came into the Nigerian education scene. These schools were to award the Higher School Certificate (HSC) or Advance Level General Certificate of Education (A/L). The primary objective of such innovation (the introduction of HSC) was to upgrade the existing 5th Form by injecting new ideas into its curricular contents such that basic depth of knowledge would be provided to prospective students seeking admission to first year university education (Sawyer, 1963). Thus, the Sixth Form basically prepared prospective university students to enter institutions of higher learning.

However, the capacity of the Sixth Form in discharging this function in terms of producing adequate number of candidates for the universities was seriously attacked and criticised (Gentle, 1965; Ojo, 1983). As a result of the serious handicap of the Sixth Form to produce adequate candidates, the universities had to meet their required enrollments by offering concessional entries to applicants from the 5th Form or holders of SSCE certificates to pursue one year preliminary study which was equivalent to the Sixth Form. Series of other criticisms such as issues bordering on the cost effectiveness of the two preparatory programmes came into sharp focus. As important as these issues are, they are, however, not the focus of this paper. The interest of this write-up is the issue of continued use of the qualifications as admission criteria by JAMB (see JAMB admission requirement for 1996/97, 1997/98 and 1998/99 sessions) which is not in line with the National Policy on Education (NPE) as stipulated under Section 21, pages 18–19 that:

The implementation of the 3-year senior secondary school system will mean planning ahead to convert secondary schools from a 5 to a 6-year course, ... in order to make senior secondary school leavers immediately employable. The curriculum of the senior secondary will also need to be reviewed, **The abolition of the Sixth Form (i.e. Higher School Certificate) course means that universities will have to restructure their courses from the 3-year to the 4-year course pattern to suit the six-year secondary school system. (Emphasis mine)**

The phasing out of the Sixth Form colleges and schools of Basic studies is however not of immediate application since those pupils who entered secondary school before and in 1981 will follow the 'old' 5-year course throughout.

The Sixth Form Colleges and Schools of Basic studies will therefore continue in operation for at least seven years after 1981. (Emphasis mine).

Because of the tremendous usefulness of the Sixth Form at that time,

Ojo (1983) made an earnest plea for the continued sustenance of the Sixth Form based on what he referred to as its superiority in producing university undergraduates with better academic performance than their counterparts admitted through preliminary studies. Again, while it is not the aim of this write-up to argue for, and against the relative superiority of the two preparatory programmes, it is noteworthy to point out that the last batch of Sixth Formers would have completed their programme thereafter, phasing out the programme and the continued use of the qualification for admission, by 1988. However, as at 1999, the apparent lack of compliance with the NPE on the issue has lingered on for eleven additional years. One wonders whether the provision of the NPE which is supposed to be the working tool of our educational policy is any longer worth its salt. Also, one wonders why JAMB, the National University Commission (NUC) and other policy implementation arms of the government have not yet successfully effected the change and harmonize the haphazard admission policies practised by some universities in the country. These are pertinent questions that need urgent attention and to which this discussion has to some extent addressed itself.

School-Leaving and University Entrance Examinations

In Nigeria, the secondary school leaving certificate (WASCE) or its equivalent, the General Certificate of Education (GCE) 'O' Level (one of the prerequisites for selection) was obtained after a formal completion of general education for eleven (11) years. In the early 1980's, a new educational structure the 6-3-3-4 system of education came into being, in place of the 6-5-3 system of education. The new educational policy changed the period of general education to 12 years. Although, the policy made allowance for those who are less academically unfit to proceed for further education to continue on vocational training after a 9-year period of schooling. It is hoped that this aspect is well implemented.

Selection for the 4-year university education in Nigeria is to a very large extent based on achievement in the Senior Secondary School Certificate Examination, and/or its equivalent – the GCE 'O' level. Similarly, selection for tertiary education (Polytechnics and Colleges of Education inclusive), has, and is still based, predominantly, on a matriculation examination conducted usually once in a year. The criteria for selection by JAMB, invariably, it based on the quality of performance in the matriculation examination. Thus, while admission by merit has the largest proportion of 40%, other criteria for admission such as quota system share the remaining 60% in these proportions – geographical location (30%), educationally less developed states (20%) and discretion of the universities (10%) which the Federal Government recently cancelled in September, 1999.

For direct entry, JAMB regulation stipulates that candidates must, in addition to the SSCE or GCE 'O' Level, possess a minimum of two Advance

Level (A/L) papers at H.S.C. or S.B.S. Cambridge Moderated IJMBE, or, National Certificate of Education (NCE) for students going for Education Courses. A brief review of what obtains in other parts of the world would suffice here so as to strike a balance with admission situations in Nigeria.

In other countries of the world, selection into the university is based on merit (Herman, 1995). As such most universities and Colleges of Education Herman stressed, seek for measures that will enable them select on this basis. These measures may be through grades in school leaving certificates, or in the entrance examination or both. Also, the use of aptitude test or test of ability has gained ground.

In the United States of America (USA), for example, it is typical of the College Entrance and Examination Board (CEEB) to administer for example, Scholastic Aptitude Test (SAT) and the American College Test (ACT) on prospective students. The situation is different in Germany and the Netherlands where admission is by lottery. According to Mitter (1985) a candidate who holds a secondary school-leaving certificate has first to submit an application letter further which selection is effected by way of weighted lottery.

As there are no other prognostic measures in the colleges and universities, the world over, the grade of scores in the selection examinations are used as prognostic measures to predict future academic performance. In Nigeria, therefore, the two selection examinations (SSCE and UME) should be naturally pure, devoid of errors and irregularities. It must be noted that the Nigerian educational system like any other West African country in the sub-region is certificate-oriented. The successful completion of one stage either at the primary, secondary and tertiary levels is viewed in terms of having to pass the final examination which is usually acknowledged through certification. This apparent craze or total dependence on certificates may have engendered the many atrocities perpetrated by students at almost all levels of education in the country (Uwadiae, 1997). Its gradual introduction in the tertiary level of education has to be discouraged by nipping it in the bud before it becomes entrenched. Measures as adopted by the University of Ibadan, Ibadan (Official bulletin (Special Release) No. 1447 and No. 1449) are welcomed. More enduring measures are, however, urgently needed such as admitting only the right calibre of students to the university in order to avert a vicious cycle of dishonest practices at examinations.

Trends in the Debates on Selection for Higher Education and the Prediction of Academic Achievement

Since, selection of students for tertiary education in the world and indeed in Nigeria is an age old phenomenon. The practice in modern times, has been to apply the most stringent measures to screen university candidates in order to admit the most eligible student.

Be that as it may, some prominent educators have criticized the

selection criteria currently used in university admission .among these critics are Nwana (1981), Obemeata (1986), Joe (1988). The main arguments against the selection criteria are as outlined:

- i. they have low prognostic values
- ii. they are basically achievement tests and as such are behavioural measures in the cognitive domain,
- iii. they are devoid of personality and/or environmental factors,
- iv. they at best perform predictive functions unlike personality tests which can tell you more about one's attitudes and temperaments.

Empirical evidence based on studies conducted by Nwana (1981) Agbonifo and Dimowo (1985) and the most recent Okwilagwe (1999) have indicated that JME (UME) is a poor predictor of university performance. Earlier studies such as Majasan and Bakare (1974) showed abysmal low correlation of between 0.09 to 0.25 when three entry qualification results – HSC, 'A' Level and first year university grades were correlated with various examination results in the University of Ibadan. Despite these disheartening reports, a few studies, however, reported a ray of hope. For instance, Nwana (1981) Yoloye (1982) Abdulahi (1983) and Ojo (1983) reported that although JME (UME) generally have low predictive validity, significant and positive correlations were observed for some faculties such as Medicine, Pure Sciences and Science or Mathematical related Faculties like Engineering. Also, although some faculties as Arts, Social /Sciences did feature in the picture painted by these studies, speaking in relative terms, the Faculty of Science had consistently emerged with higher predictive validity. These studies also indicated that the degree of success vary from one university to another. The general contention from these aforementioned studies is that selection criteria currently in use in Nigeria universities are poor predictors of success in future academic attainment. There is, therefore, the need to introduce other measures of selection. What then is the way forward from here?

Eminent educationists at various times have proposed several options but all seem to have fallen on deaf ears. Among these educationists are Nwana (1981) Ojo (1983) Obemeata (1986) and Joe (1988). The various options available include the introduction of one or more of these – aptitude test, intelligence test, personality test, weighting of SSCE results and environmental factor and standardized objective test.

The the acceptance of the idea that students vary markedly in personal attributes and characteristics is a breakthrough in education. That examination may not necessarily be a true measure of ones ability is another truism in education. If these views are true, then selection mechanism for university education in Nigeria based solely on achievement scores would seem to be losing sight of an important issue of building a complete personality.

In the face of increasing enrollment (Okwilagwe, 1999) and increasing costs of administering tertiary education (Akangbou, 1986; Sajo, Adeniran and Samaila, 1992), there is the need to apply the most appropriate measure to select the most eligible student to tertiary education in Nigeria. Before proposing a cause of action that can be taken in this country, a cue from the words of Jenks (1972) will help. He says that:

In many institutions admission has become a virtual guarantee of graduation, at least for students who are willing to go through the required motions.

Yet the very fact that admission guarantees graduation has made colleges and professional schools more careful about whom they admit. Instead of letting in large numbers and failing the less competent, many institutions now have elaborate procedures for excluding in advance those whom they think unworthy of a degree. This spares the faculty or University the unpleasant task of flunking students whom they may know personally. Instead, they can simply send polite letters of rejection to the less promising applicants, saying there are not enough room for everyone, however well qualified.

In the United State of America for instance, where students are admitted to College through Scholastic Aptitude Test (SAT), it has been found to be quite predictive of future academic attainment (Horton; 1985; Bridgeman, 1982). Also according to Thorndike and Hagen (1977) SAT has been found to correlate with Freshman College Grade Point on the average of 0.50. The use of aptitude tests to predict success at the secondary school level in Nigeria has also been found to be successful (Obemeata, 1986).

The College Entrance and Examination Board (CEEB, 1974) in America had gone as far as proposing for that country a comprehensive assessment device, that can assess and report the "variety of talents, positive attitudes and successful experiences that characterize the high school graduate". The demerits of using aptitude test notwithstanding, Obemeata (1986) is optimistic that these are surmountable. However, a caution from CEEB (1974) is of importance here. CEEB cautioned that aptitude tests be made comprehensive, that is going beyond verbal facility and quantitative skills, so that it will not promote few students from modest consideration over the more advantaged students. This problem would be compounded in a situation as ours where English (the language in which aptitude tests are written), is a second language.

Another option available, include evidence based on empirical research that a personality trait as cognitive style can predict future achievement of university undergraduates in conjunction with SSCE scores (Okwilagwe 1999). In the United State of America where cognitive style has been used in addition with other measures, it has been found that students with

marginal abilities who would not naturally be admitted on merit do benefit from university education as well as the good students. This option has heuristic value when considered alongside with the use of aptitude test because it has the neutralizing effects on an important demerit of aptitude test – that of favouring more students who are proficient in English Language over the least.

Summary and Conclusion

In this paper, issues that are pertinent to school leaving examination and selection for university education were discussed. It was pointed out that the number of students applying for a university education in Nigeria is large and as such selection mechanism will invariably continue to be used. It has also been pointed out that the use of the Sixth Form and consequently admission through such qualification be discontinued with so as to be in line with the provision of the National Policy on Education. The rôle of university education to the Nigerian society in terms of developing national manpower need was addressed. Trends in the debate on selection for higher education and the prediction of academic achievement vis-a-vis situations in other parts of the world were discussed. Empirical evidences provided to support the claims made, in this paper, were of the consensus that the selection criteria used in the country have low predictive validity.

It is being advocated in this discussion that, for the purpose of selection for university education, it is pertinent to know what the policy statements are. To this end, prominent opinions on the issue of selection were considered while at the same time empirical data in support of the need for a change so as to enhance the validity of the selection measures were considered. Consequently, two options were proposed. These are, two personality tests – aptitude test and a cognitive style test. It is hoped that the proposition made here would ensure that only students who are potentially capable of completing university education are offered admission in Nigeria in future.

References

- Abdulahi, A. (1983). "A study of the Predictive Value of Joint Matriculation Examination in Selected School Subjects". *Nigerian Journal of Educational Research Association*, Vol. 3, No. 1 pp. 29-34.
- Agbonifo, B. and Dimowo, F. (1985). "Admission into Social Sciences. A case study of the Predictive Value of JME at the University of Benin". *Journal of Nigerian Educational Research Association*, Vol. 5, No. 2, pp. 1-10.
- Akangbou, S. D. (1986). *Financing Nigerian Universities*. University of Ibadan, Faculty Lecture Series. No 2.

- Bridgeman, B. (1982). "Comparative validity of the College Board Scholastic Aptitude Test – Mathematics and the Descriptive Tests of Mathematics Courses". *Educational and Psychological Measurement*, 42, 361-366.
- Commission on Tests College Entrance Examination Board (1974). "Functions and Criticisms of College Board Tests" in Tyler, R. T. and Wolf, R. R. M. (eds) *Crucial Issues in testing*. Berkeley, California, Mc Cutchan Publishing Corporation.
- Federal Republic of Nigeria (1985). National Policy on Education (Revised).
- Gentle, M. (1965). The Sixth Form in Nigerian Secondary Schools, *WAJE* Vol. IX No. 3.
- Guardian 16th July (1999). Candidate's Performance in JAMB Slides.
- Herman, H. D. (1995). School Leaving Examinations, Selection and equity in Higher Education in south Africa. *Comparative Education* Vol. II, No. 2 pp 261-273.
- Hinzen, H. (1979). Aspects of conception and Implementation. In Hinzen, H. and Hundsdorfer U. H. (eds.) for Liberation and Development: The Tanzanian Experience. (Hamburg: UNESCO Institute for Education and Evans Brothers Ltd.).
- Horton, M. R. (1989). "Prediction of Performance on the Teacher achievement Examination based on cognitive and non-cognitive factors. *Dissertation Abstract International*. Vol. 51 No. 6 Dec.
- JAMB, (1995/96). Guidelines for admission to programmes in Universities, Polytechnics and courses in Colleges of Education.
- JAMB, *Knowing More About JAMB: Answers to Every Day Question on the JAMB*.
- Jenks, C. (1972). *Inequality*. Middlesex England, Penguin Books Ltd.
- Joe, A. I. (1988). Another look at the Predictive Validity of the JME into Nigerian Universities *Nigerian Journal of Educational Psychology*. Vol. 3 No. 1 pp. 92-103.
- Majasan J. A. and Bakare, C. M. G. (1974). The Predictive validity of Ibadan University entry qualifications, *African Journal of Educational Research*. Vol. 1, No. 1, pp. 61-71.
- Mitter, W. (1985). Selection mechanisms for entry to higher education, in: Husen T. and Postlethwaite, T. N. (ed). *The International Encyclopedia of Education*, Oxford, Pergamon Press.
- Nwana, O. C. (1981). Predictive validity of JME for performance in University first year.

- Obemeata, J. O. (1980). The use of achievement, scholastic aptitude and personality tests in the process of selection for University Education in Nigeria. *Nigeria Journal of Educational Psychology* Vol. 2, No. 1 pp. 33-43.
- Ojo, A. (1983), Nigerian Universities and high-level manpower development, HRRU Research Series. University of Lagos.
- Okwilagwe, E. A. (1999). Some Selection Criteria Personality and Academic Environmental factors as Predictors of Achievement in University degree examination. *Unpublished Ph.D. Thesis*, University of Ibadan.
- Sajo, M. B., Adeniran, M. B. and Samaila, I. W; (1992). "The development of Nigerian Universities" in Special Edition of University System News, Nov.
- Sawyerr, H. (1963). The university and the Sixth Form in West Africa. *WAJE* Vol. VII. No. 3 pp. 159-162.
- Thorndike, R. LC. and Hagen, E. (1977). *Measurement and Evaluation in Psychology and Education* (4th ed.). New York: Wiley.
- University of Ibadan (1999). Official Bulletin (Special Release). No. 1447, 22 Jan.
- University of Ibadan (1999). Official Bulletin (Special Release). No. 1449, 29 Jan.
- Uwadiae, I. (1997). School factors as determinants of examination malpractice in the senior school Mathematics Examination in Nigeria. *Unpublished Ph.D. Thesis*, University of Ibadan.
- Yoloye, E. A. (1982). Predictive Validity of JME for Performance in University Prelim Year. Ibadan, International Centre for Educational Evaluation.