

SUMMARY OF NATIONAL ASSESSMENT ON LEARNING ACHIEVEMENT IN BASIC EDUCATION IN NIGERIA

2018

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PREFACE

The Federal Government of Nigeria (FGN) launched the Universal Basic Education Programme (UBEP) in September 1999, to support state and local governments in the provision of quality basic education in the country. This was backed by an Act establishing Universal Basic Education Commission in 2004. The goal was to ensure access, equity and quality in the provision of basic education.

The first edition of National Assessment on Learning Achievement in Basic Education was conducted in 2001 on primary four learners, teachers, parents and headteachers. The findings from the study were used to further support state and local governments, particularly in the areas of teacher professional development, provision of instructional materials and infrastructure. The second edition of the study was carried out in 2003, using Primary School classes 5 and 6 and Junior Secondary School classes 1 and 2. The study was a follow-up to the first one. Findings from the study were used in reviewing the strategy for support to state and local governments in the areas of inputs and processes. Arising from the result of the two studies, the World Bank Supported Primary Education Project (PEP II) conducted an Action Research on improving teaching and learning that recommended the improvement of teaching and learning. The third edition of the study was conducted in 2006 which was a follow-up to the earlier ones. The edition examined learners' performance in Primary School class 6 and Junior Secondary School classes 1 and 2 with the aim of gauging the progress made in basic education delivery in the country. The result was used to effect changes in the strategies for teacher professional development and the provision of instructional materials to schools. The fourth edition of the study was conducted in 2011. It was a follow-up to the other previous studies with the indication to track various interventions in basic education.

This study is the fifth-edition in the series. It covers Primary School classes 5, 6 and Junior Secondary School classes 2 and 3. The test administration was conducted in November 2017, while data entry and analysis were carried out in March 2018 and the report finalized in November, 2018.

On the whole, UBEC's National Assessment of Learning Achievement in Basic Education (NALABE) provides evidence-based learning outcomes and their contexts, by attempting to determine the strengths and weaknesses of the subsystems with a view to offering useful recommendations in order to enable the review of the existing strategies. Additionally, it will strengthen the programme and provide policy directions that will guide government decisions on basic education in the country.

I wish to acknowledge and appreciate the efforts of Prof. Gidado Tahir and Prof C. O. Onocha who painstakingly summarized the four Main reports into a National Report. I, also commend the Technical Support Team consisting of Mal. Jibo Abdullahi (Coordinator); Mrs. Arit Akpan (Head of Assessment Unit); Mr. Julius Adedoja (Desk Officer Assessment); Mal. Abdulrasheed Ayangbayi; and Mr. Patrick Agu (Data Processor).

It is my strong belief that this Report will provide our key stakeholders: State and Local Governments, Civil Society Organizations, Community-Based Organizations, the Academia, International Development Partners, the Private sector, philanthropists and individuals, the opportunity to appreciate the progress being made in the achievement of the objectives of basic education in Nigeria. Finally, I wish to urge all our stakeholders to re-dedicate themselves towards the improvement of basic education delivery in the country through action research, technology-driven process and innovations that will uplift the programme to higher level, after all Education for All is the Responsibility of All.

Dr Hamid Bobboyi

Executive Secretary Universal Basic Education Commission

EXECUTIVE SUMMARY

One of the major concerns in the provision of Basic Education in Nigeria has always been that of quality. This issue is the major drive behind government's increased attention in the area of basic education since the return to democratic rule in 1999. Consequently, there has been an appreciable increase in government investment in Basic Education with a corresponding increase in the same by the donor community. However, this has not translated into any remarkable improvement in quality of learning in the nation's Basic Education sub-sector. This therefore explains the reason behind this study, whose objectives were to: assess level of achievement of learners in primary 5 and 6 Junior Secondary 2 and 3 in the four core subjects of English Studies, Mathematics, Basic Science and Technology and Social Studies; synthesise basic information on primary and junior secondary schools in Nigeria, and use it to explain learners' achievement, access to schools as well as school-community relationships; and finally assess contextual variables that might be used as explanatory variables for the levels of competency acquired in the various skill areas.

National Assessment on Learning Achievement in Basic Education (NALABE) 2017, as in previous studies and some international large scale assessments used a variety of instruments to obtain measures of what students know and can do in the classrooms, after interactions with teachers and instructional materials. Large-scale assessments are usually of the survey type research involving large and representative samples that are not subjected to experimental manipulations but focusing on after the fact observations and collection of measurements.

Four target populations were used in the survey and are described in accordance with UNESCO's International Standard Classification of Education. Specifically, the four target populations assessed were primary five and six and junior secondary two and three. All students in each target population were exposed to the same National Curriculum and instructional experiences, and were therefore eligible to participate in the survey.

A four stage sampling design was employed in the selection of school, classrooms and learners. The sampling frame of each population provided basis for selection. The Commission state offices updated the sampling frame for each population prior to sampling. In the first stage, six Local Government Education Authorities (LGEAs) were randomly selected from 35 States while Bayelsa and the FCT had three each. The LGEAs were stratified into urban and rural locations. This was to ensure the inclusion of all segments of the populations. The second stage of sampling focused on the selection of schools. Five primary schools were randomly sampled in each of the 35 States and three from FCT and Bayelsa. From the 216 LGEAs, three urban schools (two public and one private) and two rural schools were selected. At the third stage, that is school level sampling, an intact class was selected by simple random sampling procedure from the number of streams in the primary classes five and six. Finally, a fourth stage random sampling was undertaken where there were more than 20 learners in the selected class. The team decided to increase sample for each State to 240 from the estimated 220.94, which consequently increased national sample to 8,400. Therefore, statistically representative samples were 21,600 and 8,400 for each of the primary and junior secondary schools.

The basic software used for data capturing were Microsoft access and Microsoft Excel. Options were coded in words. Open ended items included in the four questionnaires- Teacher, Learner, Parent and Head Teacher/Principal were systematically captured by obtaining universe of options for the items. Numerical codes were used to replace the options coded in words. The data were imported to Statistical Package for Social Sciences (SPSS) software where final data editing and cleaning was done. Responses on Cognitive tests (Basic Science and Technology, English, Mathematics and Social Studies) were scored and coded dichotomously as well on Microsoft excel before importing to SPSS for further analysis.

The findings of the study were as follows:

- Majority (88.0 percent) of the learners lived with their parents and 73.5 percent of them ate breakfast at home. Learners ate between 1-4 times per day. Ownership of textbooks facilitated independent home study and work on learning tasks and assignments and directly impacted on academic performance.
- However, 50.0 percent of the learners owned English Studies and Mathematics textbooks. But only 8.70 percent of the learners spent up to three hours or more on homework per week.
- The head teacher, a *primus inter pares* occupies a unique position and plays an important role in a school.
- 83.4 percent of the teachers had 0-20 years teaching experience and 87.0 percent of the headteachers and 78.2 percent of the teachers were married.
- 50.1 percent of the head-teachers and 28.6 percent of teachers had university degrees with teaching qualification.
- Generally, 84.0 percent of the headteachers attended in-service training/workshops in the past five years.
- Learners received between 1-30 lessons per week, whose average duration was between 21 and 40 minutes.
- The number of weeks spent on teaching in a year was between 21 and 40 weeks.
- Nearly half of the teachers (49.30 percent) gave learners homework/assignment in English Studies, Mathematics and Basic Science and Technology and Social Studies daily.
- Teachers and head-teachers did not like their poor salary and delay in the payment of their salary; poor working environment, lack of societal recognition, attitude of some of the parents to the learners' discipline and lateness.
- The average distance of the schools from majority of learners' homes was less than 1 kilometer (55.50 percent).
- About 70.00 percent of the schools had well-demarcated compounds, secured from encroachment and large enough for buildings, playgrounds and gardens.
- Teaching and learning processes are facilitated by a learner-friendly environment. The components of a learner-friendly environment considered were the availability of water, toilets, recreational facilities, disposal facilities, etc.
- The main source of water supply in the 850 sampled schools was the borehole (31.60 percent). However, there was no established source of water in 31.10 percent of the schools.
- Toilets were available in 60.80 percent of the schools.
- The attitude of communities towards their schools was positive in teaching and learning, school activities, solving problems relating to the learners and their conduct, etc.
- One major avenue through which the communities rendered assistance to their schools is the Parent-Teachers' Association (PTA).
- English Studies and Mathematics were the subjects most liked by the learners.
- Basic Science and Technology and Social Studies were the two subjects least liked by the learners.
- About 90.70 percent of the learners liked their teachers.
- There were no significant differences in achievement between the levels of each variable (gender, location and type of school) for both Multiple Choice and Essay tests in all the four subjects, although, there were variations from states to states.
- For English Studies, learners were good in the Multiple Choice Test whereas, they are fair in the Essay test.

- State achievement on content and cognitive domains shows that scores were higher in reading (59.59) than in grammar (53.66). Learners performed higher in Comprehension (63.43) than in Knowledge (56.65) and Higher Order (53.41). The performance in the Multiple-Choice Test was higher than that of the essay in urban locations in North-Central, South-East, South-West and South-South. Learners, whose parents were farmers/fisher folks had performed higher than other occupations.
- In Mathematics, the learners were good in the Multiple Choice Test whereas, they were fair in the Essay Test.
- Learners' achievement in Mathematics by the content domains, the national mean scores were highest in numbers and numeration (64.40), Algebraic process (59.11), Basic operations (51.04) and least in Everyday Mathematics (34.48). By cognitive domains, the national mean scores were Comprehension (60.47), Knowledge (59.54) and Higher Order (54.31). The relational analysis shows that the national mean scores on assistance with homework were moderate level (59.70), low level (59.60) and high level (58.30).
- In Basic Science and Technology, the learners were fair in both Multiple Choice and Essay Tests, but by content domains, the learners' scores varied.
- In Social Studies, the learners were good in both the Multiple Choice and Essay Tests. The national achievement scores shows there were no significant differences in achievement between the levels of each variable (gender, location and type of school) for both Tests.
- The improvement and sustenance of quality of education require, among other factors, a friendly school environment, a competent and well-motivated teaching force; and the optimum deployment of teaching and learning resources in the schools. After eighteen years of implementing the UBE Programme, this study still found these requirements were far from being met. With respect to the development of a friendly school environment, the schools need first to be made secure with respect to the learners and the school property. The Federal Government/UBEC should, therefore, have an established policy that provides every school with perimeter wall fencing a gate house with adequate security personnel.
- In view of the findings of this report, the UBEC needs to formulate and implement policies on 'Water for All' and 'Toilets for All' in all schools in the country. Furthermore, in order to improve the friendliness of the schools, UBEC and the SMoEs should act to implement the National Policy on Sports and Recreation, which was approved by the National Council on Education in 2016.
- The current rate of school dropout has a negative impact on literacy and increases the number of out-ofschool children in the country and this hampers the realization of the SDGs, and therefore calls for the enforcement of the provisions the UBE Act on free and compulsory education. This study has demonstrated that little or no provision has been made for learners with special needs. UBEC should ensure that the current policy provisions on the education of all learners and teachers with special needs are implemented.
- The achievement of learners varied across subjects, objectives and states. The level of and disparity of learners' achievement across subjects and objectives need to be investigated and addressed.
- The variations among states in achievement in content and objectives domain needs to be further investigated and should be factored in future studies. Of particular interest should be how the utilization of UBE funds has impacted on the States' achievements.
- One of the principal complaints of the teachers and against their job is often the poor pay and lack of
 residence within the host communities of their schools. In this regard, the Federal Government should
 encourage and support the State Governments to implement the Teachers Salary Structure (TSS). They
 should also be supported in order to build or acquire houses and live within the host communities of their

schools; as this will create greater teacher-learner interaction in the schools and within the communities in which they work.

- This study has found out that in spite of the many years of professional development of teachers a substantial number of teachers have not yet benefited from the programme while many benefited many times. In order to enhance the competence of the teachers, UBEC should also intensify its implementation policy on regular capacity building and enrichment programmes for all teachers and redress this anomaly. This study has identified areas where teachers expressed need for training for example the selection and use of appropriate teaching methods. Such needs should be factored in the design of professional development programmes for teachers.
- The supervision of schools should be intensified, in order to ensure that teachers use varieties of teaching methods for more effective teaching, apart from the demonstration method, which is the dominant method in use now. Similarly it should ensure that schemes of work, lesson notes/plan are developed and used appropriately.
- The shift system has been found to be still in operation in some schools. This negatively affects the time spent on teaching and learning in the schools. To check this, the Federal Government, through UBEC, should enact a policy against the shift system and encourage SUBEBS to build more schools and classrooms. The Federal Government should step up its Social Investment programme, in order to empower poor parents; as poverty was identified to be one of the principal reasons for the inability of the parents to support the education of their children.
- The Parents Teachers Association (PTA) plays a supportive role in the education of their children, UBEC should therefore encourage SUBEBs to sustain an excellent relationship that exists with the host communities.

BACKGROUND

1.1 Introduction

Quality has been a major concern in the provision of Basic Education in Nigeria as far back as the colonial period. However, it is one educational challenge that continues to elude developing countries ostensibly because of the complexity that is involved in ensuring that it is achieved. Universal Basic Education in Nigeria is an all-inclusive right-based policy reform which has to contend with meeting the Education for All (EFA), Millennium Development Goals and the more contemporaneous Sustainable Development Goals and targets. It has been acknowledged that the access targets of the first two global initiatives have been almost half-way realized in Nigeria, although a lot more challenges remain elusive. Furthermore, it is on record that there has been appreciable increase in government investment in Basic Education lately with a corresponding increase in the same by the donor community. However, this has not translated into any remarkable improvement in quality learning outcomes in the nation's Basic Education sub-sector.

Since the last National Assessment in 2011, a number of policy changes and fairly robust financial investment have been witnessed in this sub-sector. It is only expedient therefore to embark on yet another exercise with a view to appreciating the extent to which these interventions have impacted on the learning outcome. In other words, do the Ministerial and Commission's UBE- related policies and increased funding have any positive impact on the classroom activities with consequential effect on improved quality of learning outcomes on a more sustainable basis?

1.2 National Assessment

Conceptually, National Assessment is a procedure that is used to assess learners' learning at the system level. It is variously referred to as learning assessment, system assessment, assessment of learning outcomes, or national /international assessment. It is applied to a survey of schools and learners that is designed to provide evidence about learners' achievements in identified curriculum areas, such as reading/literacy, mathematics/numeracy, science and other skills, for a clearly defined part of the education system.

Assessment entails measurement of learning, analysis to diagnose problems, and use of the findings to guide remedial action. An effective national assessment policy demands real political commitment to action based on results, such as reallocation of resources, curriculum reform and/or reorientation of teaching. The overriding goal is to learn more about factors that influence learners' attitude and achievement which may be managed to bring about improvement in attitudes and achievement, or efficiencies in the education system. Large-scale assessments by themselves cannot result in quality improvement, unless the system is ready to reflect on the findings and use them for improving the quality of teaching and learning.

The typical outcome of most national surveys of educational progress are: i) a detailed description of the knowledge and skills possessed by learners of a particular age or grade level in a given domain, and ii) a further description of contextual variables believed to be related to the former, and within each group of measures. The outcome as well as further analysis of the data collected facilitates comparison of achievements with local standards, monitoring of progress over time, comparison between various population groups and delineation of possible correlates of achievement.

1.3 The 2017 National Assessment of Basic Education (NALABE)

1.3.1 Rationale

From inception in 2001, when NALABE was conducted by the Universal Basic Education Commission, it has officially been a triennial large-scale survey, which attempts to evaluate the Basic Education sub-system in Nigeria. The Commission has previously conducted four studies, in 2001, 2003, 2006 and 2011. Although in the ensuing years the triennial cycle was disrupted partly because of paucity of funds and frequent changes in the Commission's large-scale leadership. Nonetheless, the urge for conducting a large scale system assessment has never veered.

Unlike the previous Basic Education assessments, the 2017 exercise assessed learners in the two senior classes of the two levels of the programme in all the four core subjects. Thus the 2017 NALABE assessed 43,200 learners in primary classes five and six; 17,280 learners in junior secondary school classes two and three; in Mathematics, English Studies, Basic Science and Technology and Social Studies. Additionally, 38,880 parents; 3,888 and 1,512 Head teachers respectively in primary and junior secondary schools participated in the exercise. However, like the previous assessments, the 2017 NALABE also assessed the impact of the characteristics of learners and their parents, teachers and Head teachers on Basic Education development, in addition to providing a framework for systemic "health check" for policy implementation and school improvement.

1.3.2 Objectives

The main objective of the NALABE 2017 was to assess the efficiency and quality of performance of primary and junior secondary school learners in Nigeria. The sole aim of the study was to track standards of education at the basic level with a view to identifying where schools are failing to meet their commitments to learners and consequently design appropriate remedial actions to ameliorate them.

Specifically, the objectives of the study are to:

- i) assess level of achievement of learners in primary classes 5 and 6 and JSS classes 2 and 3 in the four core subjects of English Studies, Mathematics, Basic Science and Technology and Social Studies;
- ii) synthesize basic information on primary and junior secondary schools in Nigeria, and use same to explain learners' achievement, access to schools as well as school-community relationships;
- iii) evaluate internal efficiency of primary and junior secondary schools in the country;
- iv) assess contextual variables that might be used as explanatory variables for the levels of competency acquired in the various skill areas; and
- v) determine the normative indices in the core subjects in Primary 5 and 6 and JSS 2 and 3

1.3.3 Focus

The 2017 NALABE focused on both the aggregate performance of learners and item-level data at each of the class levels. Data on aggregate performance are provided on State and national levels, whereas data on item-level performance are provided on a national level only. State level aggregate performance data provided reference data (norms) which each State could use for planning purposes and monitoring performance of learners in future assessments.

The 2017 assessment, like others before it, also focused on non-cognitive characteristics of learners, teachers, headteachers and parents, as well as the influence of some explanatory variables on the learners' aggregate performance (relational analyses).

1.3.4 Scope

This study covered the last two classes of primary and junior secondary levels of Basic Education in Nigeria. Learners are assessed on the aforementioned content of four subjects. Furthermore, non-cognitive measures are also obtained using the questionnaires for the learners, teachers, Head teachers and parents at both levels of Basic Education in the country.

METHODS AND PROCEDURES

2.1 Project Design

This section provides technical details on methods and standard procedures undertaken to ensure that results of the survey are reliable, comparable across States and reflect differences in the achievement of learners measured within schools and across States.

NALABE 2017, as in previous studies and some international large scale assessments used a variety of instruments to obtain measures of what learners know and can do in the classrooms, after interactions with teachers and instructional materials. Large-scale assessments are usually of the survey type research involving large and representative samples that are not subjected to experimental manipulations but focusing on after the fact observations and collection of measurements.

2.2 Sample Design

2.2.1 **Populations Investigated**

Four target populations were used in the SURVEY and are described in accordance with UNESCO's International Standard Classification of Education, ISCED 2011(ISCED, 2012). (ISCED) describes the full range of schools from pre-primary (level 0) to doctoral level (level 8). Level 1 corresponds to the first stage of basic education in the Nigerian system "which coincides with the transition point in an educational system where systematic teaching and learning in reading, writing and mathematics begin" (UNESCO, 2012, p.30)

Specifically, the four target populations assessed are described as follows:

- 1. primary five: all learners enrolled in this class that represents five years of schooling counting from the first year of ISCED level 1;
- 2. primary six: all learners enrolled in this class that represent six years of schooling counting from the first year of ISCED level 1;
- 3. junior secondary two : all learners enrolled in this class that represent 8 years of schooling counting from the first year of ISCED level 1; and
- 4. junior secondary three: all learners enrolled in this class that represent 9 years of schooling counting from the first year of ISCED level 1.

All learners in each target population were exposed to the same National Curriculum and instructional experiences, and were therefore eligible to participate in the survey. Box 1 provides National Education Statistics for the Primary and Junior Secondary School subsystems. Also in Box 1, the statistics of the four populations assessed are segregated from the national data. As can be seen, more males are represented in the populations of Primary Five, Junior School Two and Three while in Primary Six there was near equity in gender representation.

Box 1: National Education Statistics.

Number of primary schools: 63,532	Females: 9,456 (47%)
Enrollment: 24,714,725	Sub- Populations
Males: 13,338,735 (54%)	Primary five: 3,465,002
Females: 11,375,990 (46%)	Males: 1,821,588 (52.8 %)
Teachers: 51,718	Females: 1,643,414 (47.1%)
Males: 32,652 (63%)	Primary six: 3,212,771
Females: 19,066 (37%)	Males: 1,618,688 (50.4%)
Junior Secondary school	Females: 1,594,083 (49.6 %)
Number of schools: 12,570	Junior school Two: 1,711,370
Learners: Enrollment: 5,330,606	Males: 923,249 (53.4 %)
Male: 2,781,334 (52%)	Females: 803,135 (46.6 %)
Females: 2,549,272 (48%)	Junior School Three: 1,538,868
Teachers: 20,294	Males: 871,862 (56.7%)
Males: 10,838 (53%)	Females: 667,006 (43.3%)

2.2.2 Sampling Procedures for Representativeness

A four stage sampling design was employed in the selection of school, classrooms and learners. The sampling frame of each population provided basis for selection. The Commission has a robust quality assurance structure with offices in the 36 states and the FCT. The states offices updated the sampling frame for each population prior to sampling.

In the first stage, six Local Government Education Authorities (LGEAs) were randomly selected from 35 States while Bayelsa and the FCT had three each. The LGEAs were stratified into urban and rural locations. In each of the 35 States, selection ensured equity participation of urban and rural schools whereas participation in FCT and Bayelsa was in the ratio 2:1 in favour of urban location. Stratification was to ensure the inclusion of all segments of the populations. The decision to sample 50 percent of LGEAs in Bayelsa and the FCT was one of numbers, since the two States have eight and six LGEAs respectively.

The second stage of sampling focused on the selection of schools. Five primary schools were randomly sampled in each of the 35 States and three from FCT and Bayelsa. From the 216 LGEAs, three urban schools (two public and one private) and two rural schools were selected.

At the third stage, that is school level sampling, an intact class was selected by simple random sampling procedure from the number of streams in the primary classes five and six. And a fourth stage random sampling was undertaken where there were more than 20 learners in the selected class.

Sampling Statistics at the primary level consisted of :	Primary five: 12,960 (12 per class)
LGEAs. 216	Primary six: 12,960 (12 per class)
Primary schools: 1080	Sampling at Junior School level:
Primary five classrooms: 1080	Junior School Two: 432
Primary six classroom: 1080	Classrooms: 432
Primary five pupils: 21,600	Learners: 8,640
Primary six pupils: 21,600	Parents: 6,480 (15 per class)
Teachers:	Junior School Three: 432
Primary five: 3240 (three per school)	Classrooms: 432
Primary six: 3240 (three per school)	Learners: 8640
Parents:	Parents: 6480 (15 per class)

Box 2: Sampled Statistics from the Population of LGAs, schools, classes and learners

2.2.2.1 Sample Size Determination

Sample size determination and representativeness are central to the effective generalization and comparability of results across the populations surveyed in the country of study and out- countries. After much deliberation by Technical team, the following standards were agreed upon:

Box 3: Sampling size statistics

Margin error of estimate set at 0.031				
Confidence interval = 95%				
Standard Deviation for Primary = 2.	289			
Standard Deviation for Junior Secor	ndary = 1.41			
Sample size per class of Primary is	600 X 36 States = 21,600			
Sample size per class of Junior Seco	ndary is 240 X 36 States = 8,400			
Calculations	= 21,000			
ME = t S/Vn	Sample by State = 21000/36 = 600 pupils per class per State			
ME = Margin Error	Junior Secondary class sample			
t = t distribution score	0.031 = 1.96 x 1.41/√n			
n = sample size	0.031√n = (1.96 x 1.41)			
Primary class sample	√n = (1.96 x 1.41)/0.031 = 7953.874			
0.031 = 1.96 x 2.289/√n	Sample per State = 7953.874/36 = 220.941			
0.031√n = (1.96 x 2.289)				
$vn = (1.96 \times 2.289)/0.031$				
n = 20944.998				

Responses on Mathematics were used because it is a high stake subject where large variance is always observed.

The team decided to increase sample of each State to 240 from the estimated 220.94 which consequently increased national sample to 8,400. Therefore, statistically representative samples were 21,600 and 8,400 for each of the primary and junior secondary schools.

2.3 Data Analysis Procedures

2.3.1 Conversion of Data to Analysis Software

The basic software used for data capturing were Microsoft access and Microsoft Excel. Options were coded in words. Open ended items included in the four questionnaires- Teacher, Learner, Parent and Head teacher/Principal were systematically captured by obtaining universe of options for the items. Numerical codes were used to replace the options coded in words. Miss-spell of some of the options at the level of data coding constituted a challenge, but this was overcome at data cleaning level. The data were imported to Statistical Package for Social Sciences (SPSS) software where final data editing and cleaning was done. Responses on Cognitive tests (Basic Science and Technology, English, Mathematics and Social Studies) were scored and coded dichotomously as well on Microsoft excel before importing to SPSS for further analysis.

2.3.2 Classical Test Theory versus Item Response Theory

Previous National Assessments conducted by the Commission were anchored on Classical Test Theory (CTT). With the engagement of measurement experts for data analysis and reporting, major limitations of the old procedures were highlighted. CTT is approximately 100 years old, and still remains commonly used because it is simple enough that it can be used by researchers without formal training in psychometrics. Most statistics are limited to means, proportions, and correlations. However, it lacks the sophistication to deal with a number of very important measurement problems.

Here are just a few comparisons between Classical Test Theory (CTT) and Item Response Theory (IRT) to justify the adoption of IRT for NALABE 2017.

- Sample dependency: Classical statistics are all sample dependent, and unusable on a different sample; results from IRT are sample-independent within a linear transformation (that is, two samples of different ability levels can be easily converted onto the same scale)
- Test dependency: Classical statistics are tied to a specific test form, and do not deal well with sparse matrices introduced by multiple forms, linear on the fly testing, or adaptive testing which are the strengths of IRT
- Weak linking/equating/Scaling: CTT has a number of methods for linking multiple forms, but they are weak compared to IRT
- Measuring the range of learners: Classical tests are built for the average student, and do not measure high or low learners very well; conversely, statistics for very difficult or easy items are suspect. IRT offers opportunity to extremely high and low ability testees to exhibit their proficiency.
- Lack of accounting for guessing: CTT does not account for guessing on multiple choice examinations whereas IRT does.
- Scoring: Scoring in classical test theory does not take into account item difficulty. Each item is assumed to have equal difficulty whereas it is not so. IRT allows for estimating the difficulty of each item and build the same into individual score.
- Anchor Items: CTT is sample dependent, hence linking scores using anchor items is not practicable but using Anchors item under IRT to allow for future prediction is feasible.

More comprehensive report of the technical details on instrumentation, data administration, monitoring and management are provided in the appropriate sections of the reports of the four populations investigated.

SUMMARY OF FINDINGS PRIMARY FIVE LEARNERS' HOME



- 17, 298 learners (52.7 percent boys and 45.30 percent girls) participated in the study and 88 percent of them lived with their parents.
- 10,321 parents were involved in the study, 63.40 percent being fathers and 33.60 percent mothers.
- Distribution of parents by occupation showed that: for fathers, 31 percent were into farming, 28 percent were workers and 18.30 percent were doing business, while for mothers 33.30 percent were doing business and 14 percent each were farmers and workers.
- 35 percent of the families that participated in the study had 1 3 children, 37 percent had 4 6 children, 20 percent had 7 10 children while as much as 8 percent had more than 10 children.
- 66 percent of the families had a daily three meal plan in spite of the large family size.
- 53 percent of learners spent an hour daily on home work while 55.5 percent received very much assistance from their parents.
- 74 percent of learners lived more than 2 km away from school while 78 percent of them walked to school.
- 62 percent of learners were engaged in games and sports while 58 percent were involved in cooking after school hours.



HOME SUPPORT

- 39 percent of learners in Nigerian schools did not have Mathematics textbooks.
- 32 percent did not possess
 English language text book while more than 55 percent lacked text books in Basic Science and Technology.

Possession of Textbooks

TEACHERS IN SCHOOL

Headteachers

- 850 head teachers participated in the study, 52 percent of them were between the ages of 50 – 59 years.
- 78 percent of the head teachers were married.
- 53 percent of them had professional development experience in the last 5 years.
- 81 percent were holders of university degrees while only 10 percent had NCE.
- 94 percent of them were professionally qualified.



Teachers

- 1,020 teachers (52 percent male and 48 percent) females participated in the study.
- 37 percent of them were between the ages of 30 – 39 years and 89 percent were below 50 years.
- 49 percent had professional development experience, specifically in subject methodology, in last 5 years, 59 percent were holders of NCE while 28 percent had university degrees with teaching qualification.
- 88 percent of them were professionally qualified.
- 38 percent had about 20 years of teaching experience.

Freedom in making Decision about school Activities

Head teachers' freedom in decision making about school activities

ASPECTS	FULLY	TO SOME EXTENT	NOT AT ALL
Selection of instructional materials.	37.8	34	16.8
Use of learners' achievement tests.	56	24.2	10.1
Specification of Minimum requirements before pupils/Students can progress to the next level	50.5	29.5	9.9
Extent and type of reporting to parents/guardians	35.8	46	8.2
Extent and type of interaction with parents/guardians.	48.6	33.9	7.5
Taking disciplinary measure towards correcting teachers.	49.2	31.1	6.8
Teachers transfers/retention	17.5	34.6	33.8

- At least 80 percent of Nigerian teachers had freedom to decide on: the use of learners' achievement, minimum requirement for learners' progress, type and extent of reporting to parents, type and extent of interaction with parents and disciplinary measures towards correcting teachers.
- Only 42 percent of Nigerian teachers had freedom to decide on transfer and retention of teachers.

Teachers' freedom in decision making

	NOT	FAIRLY	VERY
ASPECTS	FREE	FREE	FREE
	%	%	%
Selection of topics for teaching	34.4	23.6	38.9
Selection of instructional materials	10.5	23.9	62.9
Sequence of learners' learning.	12.1	37.5	44.3
Use of learners' achievement tests	7.4	25.2	62.5
Amount of homework to be assigned.	7.4	21.7	67.7
Extent and type of reporting to parents.	13.5	39.7	42.2
Taking disciplinary measures towards	12 7	11 0	A1 A
correcting pupils.	13.7	41.9	41.4

- At least 80 percent of Nigerian teachers in primary schools had freedom to decide on: the use of learners' achievement test, selection of instructional materials, sequencing of learning, amount of home work assigned to learners, type and extent of interaction with parents and taking disciplinary measures towards correcting learners.
- Only 63 percent had freedom in the selection of topics for teaching.

Instructional needs of teachers

	NO	SOME	MUCH
ITEMS	HELP	HELP	HELP
	%	%	%
Writing performance objectives.	63.1	22.5	12.2
Identifying appropriate teaching activities.	35.2	38.5	24.2
Securing or improvising appropriate teaching/learning materials.	63.9	20.6	13.4
Identifying appropriate evaluation techniques.	32.5	37.6	27
Organising resources and materials for more effective teaching.	63.3	20.4	13.8
Developing techniques for teaching in large classes.	26.8	40.3	29.4
Developing in learners the ability to relate content of learning to everyday life.	44	33.2	20
Overcoming difficulties encountered in providing excursions outside the classroom	29.6	42.2	25.5

- 89 percent of head teachers were satisfied with their job and for various reasons including modelling lives of future generation (13 percent) and developing skills in learners (11 percent)
- However, poor salary (22 percent) and depressing working environment (12 percent) were reasons for dissatisfaction.

Job satisfaction



- At least 63 percent of teachers did not require help in writing performance objectives, improvising teaching materials and organising resources for more effective teaching.
- 70 percent of the teacher required help to develop techniques for teaching in large classes.
- At least 63 percent of them needed help to overcome difficulties encountered in providing excursions, identifying appropriate teaching activities and evaluation techniques
- 53 percent required help to develop in learners the ability to relate content of learning to everyday life.
 - 98 percent of teachers were satisfied with their jobs due largely to self – motivation and the salary package

850 schools participated in the study

- 62 percent of the schools served learners in pre-primary and primary learners.
- 25 percent were purely primary schools, while 7 percent were the nine year basic school.
- 71 percent operated a single morning session only.
- 74 percent of the schools were within 2 km from learners home and 90 percent walked to school.
- 53 percent of the schools were affected by erosion.



- Stealing was the main disciplinary problem in 29 percent of the schools which was followed by quarrelling in 18 percent of the schools.
- 18 percent reported bullying and absenteeism.
- 77 percent of schools had classroom space while 23 percent used open spaces.
- 69 percent of the schools had well defined and secured compound, with many buildings, play ground and gardens.

CHILD-FRIENDLY AND ENVIRONMENT

Type of fence

- Only 40 percent of primary schools in Nigeria had one form of fence or the other.
- 33 percent had perimeter or cement block fencing.

Recreational Facilities

Less than 16 percent of primary schools in Nigeria had usable game /sports facilities with more than 60 percent of schools having football pitch, athletics 30 percent, handball 21 percent and table tennis 15 percent.

Source of water supply

49 percent of the schools had boreholes and dug out wells as their major sources of water, only 4 percent had pipe borne water, while 16 percent relied on rain/stream/tanker as their source of water supply.

Facilities in schools

- 87 percent of Nigerian primary schools did not have Science laboratory
- 96 percent lacked Mathematics laboratory.
- Libraries were available in 64 percent of the schools, while ICT facilities were available in **only** 21 percent of Nigerian primary schools.
- Football field was available in 100 percent of the schools but only in 34 percent of them could the fields be regarded as standard.

Availability of Curriculum and Related Materials

- About one-third of the schools had between one to 10 copies of the National Curriculum, Curriculum Modules and Scheme of Work.
- 60 percent of schools had good quality curriculum materials but adequate only in about 40 percent of them.

Operational Problem of Schools

- 8 percent of the schools had insecurity problem.
- 30 percent experienced inadequacies infrastructure and furniture.
- 8 percent of the schools felt insecure.
- 30 percent had limited supplies of furniture and infrastructure.
- 15 percent had shortage of instructional materials.
- 7 percent of them had inadequate number of teachers.
- Inadequate teaching staff 7 percent.

Type of Security engaged by school

- 58 percent of schools in the Nigeria engaged local people and the community to provide security services.
- 25 percent of them engaged private security services.

Availability and use of refuse disposal facilities.

35 percent of schools had one type of refuse disposal or another, with 18 percent using large bins 24 percent compose pits 24 percent and 10 percent incinerators.

Availability of toilet facilities

• 81 percent of the schools did not have appropriate toilet facilities for teachers and learners.

- At least 43 percent of schools did not have a copy of the Curriculum Modules, Diary and Scheme of Work.
- 55 percent of the schools lacked Teachers' Guides.
- 66 percent of them had no copy of syllabus.

Parents' support to and attitude towards

• Parents often rendered assistance to schools in the forms of finance (12 percent), engaging Auxiliary teachers (10 percent), building construction (10 percent), provision of land (23 percent) and provision of security (25 percent).

ATTITUDE OF LEARNERS

Parents liking for learners and reasons



• 89 percent of learners indicated that they were liked by their parents albeit for various reasons, such as obedience to parents (25 percent), paternity factor (12 percent) and success in school (5 percent).

Attitude towards school subjects



Attitude towards Teachers



• Very few liked Basic Science and Technology, French, Business Studies, Arabic, and Cultural and Creative Arts.



Attitude towards schooling



89 percent of learners liked their schools albeit for various reasons such as provision of co-curricular activities (6 percent), schools close to their homes (5 percent) and teachers were friendly (5 percent).



ACHIEVEMENT IN ENGLISH STUDIES

National Average score for Multiple choice and Essay

RANGE

Score distribution in Multiple Choice and Essay tests

Crode	Multiple	Choice	Essay		
Grade	Frequency	Percent	Frequency	Percent	
Fail (0 - 39 percent)	5024	30.2	369	2.2	
Fair (40 - 49 percent)	3540	21.3	10345	62.2	
Good (50 - 59 percent)	4860	29.2	3843	23.1	
Very Good (60 - 69 percent)	3217	19.3	1304	7.8	
Excellent (70 - 100 percent)	0	0.0	780	4.7	
Total	16641	100.0	16641	100.0	

- There was heterogeneous distribution of scores within the five clusters in the Multiple Choice Test.
- 30.2 percent of the learners **failed** the multiple choice test.
- 62.2 percent of the scores was within the cluster 40-49 percent in the Essay Test.
- A larger proportion of the learners **failed** in the Multiple Choice Test. Whereas, in the Essay Test, scores of a greater proportion of the learners was just **Fair**.
- About 5 percent of the learners' obtained excellent scores in the Essay Test while none of them had excellent scores in the Multiple Choice Test.

ACHIEVEMENT AT STATE LEVEL

Learners in five states, namely: Anambra, Delta, Ebonyi, Enugu, Kogi and Rivers scored above the National average for both Test Forms.

Multiple Choice Test

- Scores ranged from 42 percent (Edo) to 58 percent (Kebbi).
- Top achieving states were: Kebbi (58), Katsina (56), Borno (55), Yobe (55), Cross River (54) and Enugu (54).
- Learners in 18 states scored above the National Average.
- Large differences were observed in the states with score clusters close to the score range, notably Kebbi, Edo, Sokoto, etc.

 The National Average for English Studies was 50.00 in both Multiple Choice and Essay tests. • Achievement on the test was largely generally good.

Essay test

- Score range was from 30 percent (Benue) to 58 percent (Edo and Ebonyi) with significantly large differences.
- Top achieving states were: Ebonyi, (58), Edo (58), Anambra (56), Ekiti(55) and Akwa Ibom (54).
- Only 12 states and FCT scored above the National Average.
- Large differences were observed in states with score clusters close to the score range, notably Ebonyi and Benue.
- Overall achievement was only **Fair** on the Essay test.



Mean Score of Primary 5 Learners in English Studies

KEY: i. Learners' score in multiple choice are out of the parentheses *ii.* Learners' score in essay are in parentheses

Gender-wise Analysis

Multiple choice test

- Scores ranged from 35.14 (Benue) to 60.42 (Bayelsa) for male learners and 35.88 (Benue) to 60.39 (Bayelsa) for female learners.
- Female learners in 20 states obtained scores higher than their male counterparts.
- 16 states scored above the National Average for male learners, 17 states scored above the National Average for female learners.
- Achievement was largely homogeneous with little variation between male and female learners in each state.

Top achievers by gender:

Male		Female	
Bayelsa	60.42 percent	Katsina	60.65 percent
Katsina	57.86 percent	Bayelsa	60.39 percent
Edo	57.26 percent	Kano	58.40 percent
Kano	57.17 percent.	Edo	57.13 percent

• Generally, achievement for both male and female learners was Fair, within the cluster 40-49 percent.

Essay test

- Scores ranged from 40.74 (Bayelsa) to 57.39 (Edo) and for male learners; and 41.22 (Bayelsa) to 58.49 (Ekiti) for female learners.
- Female learners in 19 states had higher scores than their male counterparts.

Top achievers by gender:

Male		Female	
Edo	57.39 percent	Ekiti	58.49 percent
Ebonyi	56.87 percent	Anambra	58.03 percent
Anambra	56.62 percent	Ebonyi	57.49 percent
Ekiti	56.05 percent	Edo	57.27 percent

- Male learners in 17 states scored above their National Average, while only in 14 states did female learners score above the National Average.
- Achievement by type of gender was **Fair**, within the cluster 40-49 percent.
- Gender had a strong influence on achievement at the state level and more pronounced among the female learners.

School Location

Multiple choice test

- Score range for learners in urban schools was from 35.51(Benue) to 58.31 (Katsina) and for rural schools from 43.38 (FCT) to 60.15 (Katsina).
- Learners in urban schools in 22 states and FCT had higher scores than their rural counterparts.

• Learners in urban schools in 18 states scored above the National Average while those in 17 states had scores higher than the National Average for those from rural schools.

Top achievers by school location

Urban s	schools	Rural so	chools
Bayelsa	60.72 percent	Katsina	60.15 percent
Katsina	58.37 percent	Edo	57.26 percent
Kano	57.90 percent	Kano	57.20 percent
Edo	57.24 percent	Kogi	56.48 percent

• Overall, achievement was **Good** (within the 50-59 percent cluster) for both learners located in urban and rural schools.

Essay Test

- Score range for learners in school located in urban areas from 40.80 (Bayelsa) to 57.82 (Anambra) and for those in rural schools, 43.00 (Sokoto) to 57.46 (Ekiti).
- Scores were homogeneous within states but large differences were observed between states with score clusters around the score range, eg Bayelsa, Anambra, Sokoto, Ekiti etc.
- Learners in rural schools from 17 States and FCT had higher score than their counterparts in urban schools.
- Learners in schools located in urban areas in 15 states scored above the National Average while those in rural schools in 16 states scored above the National Average.

Тор	achievers
-----	-----------

Urban Schools		Rural Schools	
Anambra	57.82 percent	Ekiti	57.46 percent
Edo	57.79 percent	Ebonyi	57.40 percent
Ekiti	57.38 percent	Anambra	56.96 percent
Ebonyi	57.08 percent	Edo	56.70 percent

- Achievement was Fair for learners in schools location in both urban and rural areas.
- School location had a strong influence at the state level analysis and was slightly more pronounced in rural schools.



ACHIEVEMENT IN MATHEMATICS

 National Average for learners in Primary Five was 50.00 in both the Multiple Choice and Essay tests.

RANGE



• About 33 percent of the learners' achievement was within the 40-49 percent score cluster.

- 30 percent of learners were within the 50-59 percent cluster.
- An interesting observation was that 18.2 percent of the learners had very **Good** scores while 18.5 percent **Failed** in the test.
- Overall, larger proportion of the learners' achievement was Fair.



Range of scores in Multiple choice test

- 61.40 percent of the learners' scores in the Essay test fell within the cluster 40-49 percent.
- Only 20 percent were within 50-59 percent score cluster.
- In contrast to the Multiple Choice Test, 5.7 percent of the learners had **Excellent** scores and only 2 percent **Failed** in the test.
- Overall, learners' achievement in the Essay test was only **Fair** for the larger proportion of the sample.

ACHIEVEMENT AT GEOPOLITICAL ZONES

Achievement in Multiple choice and Essay tests

Distribution of means and standard error of achievement in multiple choice and essay tests for geopolitical zones by gender

	MULTIPLE CHOICE				ESSAY			
ZONES	Male		Female		Male		Female	
	Mean	SE	Mean	SE	Mean	SE	Mean	SE
NORTH CENTRAL	49.43	0.30	49.91	0.31	49.98	0.29	49.80	0.29
NORTH EAST	47.95	0.23	48.94	0.26	50.04	0.23	50.10	0.26
NORTH WEST	47.09	0.24	49.73	0.29	48.83	0.23	49.03	0.28
SOUTH EAST	52.48	0.27	52.72	0.26	49.96	0.29	49.75	0.27
SOUTH SOUTH	49.25	0.25	49.28	0.24	50.20	0.27	50.23	0.27
SOUTH WEST	51.89	0.24	52.72	0.25	50.06	0.27	50.05	0.28
NATIONAL	49.50	0.11	50.56	0.11	49.83	0.11	49.85	0.11

- There were little variations within and between zones for each gender-type and test-forms.
- Learners from South East and South West scored above the National Average for both gender-types on the multiple choice test.
- Learners from North East, South East and South West scored above the National Average for both gendertypes on the Essay Test.
- Generally, the influence of gender was **weak**.

ACHIEVEMENT AT STATE LEVEL

Learners from five states, namely, Abia, Edo, Kebbi, Ondo and Osun scored above the **National average** for both Multiple Choice and Essay tests.

Multiple Choice Test

- Scores ranged from 34 (Benue) to 57 (Imo, Kogi), with a 23 percent difference.
- Low score variation within states but significantly large difference in states with score clusters around the range, eg Benue, Imo, Kogi and Osun.
- Learners in 13 states scored above the National Average.
- Top achieving states: Imo (57), Kogi (57), Osun (56) and Yobe (56).

Essay Test

- Scores ranged from 46 (Kano) to 52 (FCT).
- Low score variation was observed within and between states.
- Learners in only 12 states scored above the National Average.
- A 6 percent difference in scores between the lowest and highest showed little variations in the Essay Test unlike in the Multiple Choice Test, with a 23 percent difference.

• Learners' achievement 'hanged together' and was more homogeneous in the Essay Test than in the Multiple Choice Test.



States' Mean Scores in Mathematics

- *Note: i.* Learners' score in multiple choice are out of the parentheses
 - *ii. Learners' score in essay are in parentheses*

GROUP ACHIEVEMENT: GENDER

Learners' Achievement in multiple choice test by gender

	Mal	e	Female			
	Mean	SE	Mean	SE		
Abia	53.90	0.62	55.38	0.55		
Adamawa	46.73	0.59	45.63	0.56		
Akwa-ibom	48.24	0.58	46.52	0.54		
Anambra	53.86	0.62	53.54	0.62		
Bauchi	42.43	0.50	47.81	0.65		
Bayelsa	38.71	0.43	39.57	0.44		
Borno	47.18	0.57	46.48	0.66		
Benue	34.25	0.38	33.91	0.26		
Cross river	47.47	0.57	48.27	0.59		
Delta	52.72	0.52	51.65	0.50		
Ebonyi	49.70	0.59	49.31	0.52		
Edo	50.82	0.54	52.18	0.52		
Ekiti	53.18	0.62	56.30	0.62		
Enugu	48.71	0.50	49.28	0.51		
Gombe	47.58	0.56	48.06	0.65		
Imo	56.39	0.61	56.90	0.54		
Jigawa	42.59	0.42	46.46	0.57		
Kaduna	46.92	0.61	48.97	0.61		
Kano	44.91	0.53	46.94	0.72		
Katsina	46.45	0.56	49.86	0.66		
Kebbi	52.55	0.55	52.77	0.70		
Kogi	57.22	0.60	56.91	0.60		
Kwara	54.76	0.58	55.16	0.52		
Lagos	53.06	0.58	52.75	0.54		
Nasarawa	39.38	0.36	39.57	0.35		
Niger	48.20	0.61	47.56	0.88		
Ogun	48.22	0.61	48.48	0.53		
Ondo	52.44	0.58	52.65	0.70		
Osun	54.95	0.54	56.51	0.49		
Оуо	48.86	0.55	49.36	0.54		
Plateau	42.95	0.44	44.25	0.46		
Rivers	49.66	0.54	49.71	0.52		
Sokoto	48.30	0.56	48.12	0.71		
Taraba	48.90	0.54	49.23	0.65		
Yobe	54.04	0.64	57.69	0.69		
Zamfara	47.75	0.58	53.15	0.79		
FCT	47.58	0.64	47.49	0.60		
National	49.50	0.11	50.56	0.11		

- National Average
 Male : 49.50
 Female : 50.56
- Score range on Multiple Choice Test for male learners was 34.25 (Benue) to 52.22 (Kogi) and for female learners 33.91 (Benue) to 57.69 (Yobe).
- Large and significant differences were observed in states with score clusters around the score range, eg Yobe, Kogi and Benue states.
- 15 states scored above the National Average for male learners while 14 states did likewise in the case of female learners.
- Female learners in 24 states obtained higher scores than their male counterparts in the test.

• Top achieving States:

Males:

Kogi	57.22 percent
Imo	56.39 percent
Osun	54.95 percent
Kwara	54.76 percent

Females:

Yobe	57.69 percent
Kogi	56.91 percent
Imo	56.90 percent
Osun	56.51 percent

 Generally, gender had a stronger influence at state level and largely more on female learners.

ACHIEVEMENT IN BASIC SCIENCE AND TECHNOLOGY

National Achievement in Essay and Multiple choice tests



- The National Average for both Multiple Choice and Essay Tests: 50.00
- Achievement for the larger sample of learners was 30.1 percent.
- 25.3 percent of the learners Failed the test.
- 43 percent of learners' achievement fell within the score cluster for **Good** and **Very Good**.
- The overall achievement was Good.



Distribution of Achievement score in Multiple Choice test

- The National Average in Multiple Choice Test was 50.00
- Achievement was **Fair** for 38.6 percent of the learners as the highest concentration of scores.
- About 25 percent Failed the Essay test.
- Only 36.7 percent were in the score cluster for **Good**, **Very Good** and **Excellent**.
- Overall, achievement was generally Fair.

Distribution of Achievement scores in Essay test



- There was low score variation at each score percentile for both test forms.
- Learners' achievement at the 10th, 25th and 90th percentiles was higher on the Essay test than Multiple Choice Test.
- Largest sample of learners' scores was at the 90th percentile for both test forms, which showed that 64 and 66 percent of the learners obtained scores higher than 90 percent of the learners that responded to the Multiple Choice and Essay tests, respectively.

Percentile Scores of Learners

Achievement in Geo-political zones

The mean scores of the zones in Multiple Choice Test vary between 44.67 for the South East and 56.79 for the North Central. Learners from the North Central, South West, North West, North East scored above the National Average, while those from the South South and South East scored below the National Average.

In the Essay test, the mean scores of the Zones vary between 48.09 for the South West and 51.02 for the North Central. Learners from the North West, North Central, and South East scored above the National Average, while those from the North East, South South, and South West scored below the National Average.

Geo-Political	Multip	le Choice	Essay		
Zones	Mean SE		Mean	SE	
North Central	56.79	0.12	51.02	.220	
North East	51.17	0.21	48.78	.155	
North West	52.75	0.15	50.03	.207	
South East	40.95	0.08	50.90	.214	
South South	44.67	0.18	48.41	.181	
South West	55.56	0.11	48.09	.186	
National	50.31	0.08	49.45	.079	

Learners Achievement in Multiple Choice and Essay Tests for Basic Scienceand Technology Primary Five

Achievement at State Level

- Clearly, there were large differences in learners' achievement in the states.
- There were also differences between achievement in Multiple Choice Test and Essay Test.
- Score range in the Multiple Choice Test was 35 percent (Abia) to 71 percent (FCT) and in the Essay Test, 42 percent (Osun) to 57 percent in Nasarawa.
- Top achieving states in the Multiple Choice Tests:
 - i. FCT 71.00 percent
 - ii. Zamfara 69.00 percent
 - iii. Yobe 67.00 percent
 - iv. Taraba 65.00 percent
- In the Multiple Choice test, learners in 19 states scored above the National Average.

- Top achieving states in the Essay Test:
 - i. Abia 57.00 percent
 - ii. Nasarawa 57.00 percent
 - iii. Kebbi 56.00 percent
- Learners in 8 states scored above the National Average for the Essay Test.



Mean Score of Primary 5 Learners in Basic Science and Technology *Note:*

- i. Learners' score in multiple choice are out of the parentheses
- *ii.* Learners' score in essay are in parentheses



States' mean score in science and development

The National Average for this domain was 57.50.

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- Learners in 19 states scored above the National Average.
- Achievement was **Fair** in five states, **Good** in 16 states and also **Very Good** in 16 other states.
- Generally, achievement on the content was **Very Good**.

ACHIEVEMENT IN SOCIAL STUDIES

Achievement at the National Level

Range



Score range in the Multiple choice test



Score range in the Essay test

- National average for Multiple choice Test was **50 percent**.
- Large sample of learners' scores were Fair and Good (31.2 percent and 29.6 percent), respectively for both Multiple Choice and Essay tests.
- Achievement was Very Good for 23 percent of the learners, although 16.6 percent of them Failed.
- Overall, achievement in Social Studies was Good (within score cluster 50-59 percent) at the national level.
- The National Average for the Essay test was **49 percent**.
- Only 6.5 percent of the learners obtained **Excellent** scores while 15 percent had **Very Good**.
- Achievement was Fair for 32.8 percent, Good for 23.5 percent, while 22 percent Failed.
- Overall achievement was **Fair** on the Essay test for a larger proportion of the learners.

Achievement in Geo-Political Zones

Zone	Mean	Mean
	Multiple Choice test	Essay test
North Central	50.67	51.62
North East	49.62	47.98
North West	50.27	50.36
South East	50.62	50.37
South South	49.86	48.05
South West	48.37	49.25
National	50.00	49.00

- Learners' achievement was homogeneous within and between states on both test forms.
- No significant differences were observed in the scores of learners within and between states.
- North Central, North West and South East zones scored above the National Averages for both test forms.

STATE LEVEL ACHIEVEMENT

Gender

Multiple Choice Test

- Score range for male learners was 46.27(Oyo) to 55.09 (Imo) and for female learners, 45.22 (Oyo) to 55.04 (Imo).
- Low score variation was observed within state based on gender but large and significant differences in states with clusters around the range, Oyo and Imo.
- Male learners in 18 states and female learners in 20 states scored above their respective National Averages.
- Female learners in 22 states obtained higher scores than their male counterparts.
- Learners in 18 states scored above both National Average for both test forms.

Essay Test

- Score range for male learners was 41.36 (Bayelsa) to 54.82 (Abia) and female learners, 42.44 (Bayelsa) to 54.63 (Nasarawa).
- Low score variation was observed within states. However, large and significant variations were obtained in states with score clusters around the score range, eg. Bayelsa, Abia and Nasarawa.
- Learners in 14 states scored above both National Average.
- Female learners in 20 states obtained higher score than their male counterparts.

	MULTIPLE CHOICE			ESSAY					
State	Male		Female		Male		Fem	Female	
	Mean	SE	Mean	SE	Mean	SE	Mean	SE	
Abia	52.87	0.56	54.08	0.58	54.82	0.71	54.51	0.69	
Adamawa	51.07	0.83	51.40	0.71	46.82	0.52	47.41	0.44	
Akwa-Ibom	47.56	0.57	48.74	0.56	48.79	0.54	49.10	0.56	
Anambra	50.56	0.60	50.05	0.54	48.05	0.70	48.69	0.73	
Bauchi	49.37	0.62	47.44	0.66	45.67	0.57	43.23	0.53	
Bayelsa	50.83	1.27	52.36	1.56	41.36	0.38	42.44	0.68	
Borno	49.41	0.52	49.80	0.65	52.48	0.68	52.66	0.87	
Benue	49.70	3.21	51.86	3.07	48.95	1.40	50.21	1.53	
Cross River	50.53	0.60	50.15	0.56	48.14	0.67	47.72	0.65	
Delta	50.04	0.52	50.92	0.53	45.81	0.50	45.20	0.49	
Ebonyi	47.79	0.54	48.87	0.50	49.51	0.63	49.52	0.57	
Edo	52.21	0.63	51.36	0.63	53.56	0.82	51.87	0.79	
Ekiti	50.59	0.52	50.28	0.59	46.45	0.54	46.89	0.60	
Enugu	46.52	0.52	46.32	0.52	51.51	0.66	50.56	0.65	
Gombe	47.81	0.56	48.05	0.64	47.21	0.48	49.08	0.61	
Imo	55.09	0.57	54.64	0.58	47.64	0.56	48.85	0.56	
Jigawa	48.07	0.62	45.67	0.67	51.61	0.50	52.00	0.57	
Kaduna	47.89	0.56	48.18	0.54	49.26	0.66	47.44	0.64	
Kano	53.34	0.71	53.59	1.02	46.93	0.61	44.08	0.67	
Katsina	51.57	0.82	53.14	0.74	49.96	0.67	51.64	0.76	
Kebbi	52.43	0.58	52.37	0.75	52.50	0.58	53.31	0.70	
Kogi	52.40	0.65	52.59	0.67	53.82	0.64	53.00	0.65	
Kwara	51.99	0.64	51.97	0.59	50.37	0.51	50.12	0.50	
Lagos	49.52	0.56	48.43	0.52	54.61	0.68	54.37	0.66	
Nasarawa	46.91	0.77	47.56	0.80	54.76	1.14	54.63	1.20	
Niger	51.77	0.68	50.44	0.90	45.15	0.60	45.88	0.79	
Ogun	45.42	0.64	45.34	0.52	50.56	0.68	51.71	0.71	
Ondo	48.97	0.56	49.61	0.65	47.76	0.48	48.23	0.59	
Osun	49.92	0.52	50.41	0.52	46.09	0.49	46.38	0.50	
Оуо	46.27	0.48	45.22	0.50	48.78	0.58	49.37	0.63	
Plateau	49.01	0.73	49.35	0.71	54.81	0.77	54.61	0.71	
Rivers	48.43	0.51	49.09	0.51	47.87	0.52	48.06	0.54	
Sokoto	47.16	0.49	47.12	0.61	49.61	0.50	49.35	0.62	
Taraba	49.67	0.53	50.26	0.66	46.89	0.51	46.52	0.67	
Yobe	53.92	0.66	55.04	0.71	46.20	0.55	46.88	0.61	
Zamfara	51.39	0.56	50.49	0.78	51.20	0.62	49.39	0.80	
FCT	49.69	0.84	49.68	0.91	52.39	1.03	52.32	0.96	
National	49.86	0.10	49.86	0.11	49.45	0.11	49.52	0.11	

Achievement in multiple choice and essay tests by gender across the states



PRIMARY SIX LEARNERS' HOME

- 17,298 learners (52.70 percent boys and 43.5 percent girls) participated in the study, 88 percent of them lived with their parents.
- 10,324 parents were sampled for the study, 63.4 percent of them were fathers and 33.6 percent mothers.
- About 9 percent had university degrees and 12 percent had NCE/HND
- Distribution of parents by occupation showed that 26 percent of them were engaged in businesses, 23 percent were farmers and 25 percent were workers.
- 37 percent of the families that took part in the study had 4-6 children, and 20 percent were from homes whose parents had 10 children and above.
- In spite of the large family size, 68 percent of the families had a **daily three meal plan.**
- 54 percent of the learners spent an hour on homework daily while 55 percent of parents indicated that they provided **very much** assistance to their children.
- 74 percent of the learners lived about 2km away from their schools and 78 percent of them walked to their schools from home.
- After school hours, 62 percent of learners were engaged in games and other sporting activities, 58 percent in cooking and 54 percent assisted parents in farming.
NATIONAL REPORT



HOME SUPPORT

- 30 percent of learners in the schools did not have English text books, while 38 percent lacked Mathematics textbooks.
- At least 57 percent of learners lacked textbooks in **Basic Science and** Technology, while 48 percent did not have Social Studies textbooks.

TEACHERS IN SCHOOLS

Headteacher

- 850 headteachers • participated in the study, 52 percent of them were within the age range 50-59 years
- 87 percent of the headteachers were married
- 93 percent of them held university degree /Nigerian Certificate in Education
- 84 percent had professional development experience in the last 5 years.



Teacher

- 1,034 teachers participated in the • study.
- 59 percent were males and 49 percent females.
- 67 percent of them were between ٠ 30-49 years old, while 6 percent were below 20 years.
- 78 percent of the teachers were married and 63 percent were within the salary range of ₦10,000-₦50,000 per month.
- 87 percent of them held University degree/NCE.
- 43 percent had 6-15 years teaching • experience.
- 71 percent of the teachers had professional development experience in the last 5 years.

NATIONAL REPORT



PRIMARY SIX ACHIEVEMENT IN ENGLISH STUDIES

The National Average for English Studies was 50.00 in both Multiple Choice and Essay tests.

National average score for Multiple choice and Essay Tests





- The cluster 0-39 contained 26.5 percent and 29.2 percent respectively, for the Multiple Choice and Essay Tests, an indication that 27 percent and 29 percent of the learners **Failed** items in the Multiple Choice and Essay tests, respectively.
- None of the learners scored in the range of 70 – 100 percent in Multiple Choice English Studies test, but there were 4.9 percent of such learners in that range for the Essay Test.
- Achievement in the Multiple Choice Test was largely **Good**, but just **Fair** in the Essay Test.
 - Learners' achievement did not reveal much variation at each percentile for both test forms.
 - At the 10th and 90th percentiles learners had higher scores on the Essay Test than the Multiple Choice Test.
 - At least 63 percent of the learners scored above 90 percent of all learners who participated in the study.





Geo-political zones

- Learners' achievement showed a narrow score range in all the geopolitical zones for Multiple Choice Test.
- Only learners from the North East and South East zones scored above the National Average.



- Learners' achievement revealed more score variation on the Essay Test than the Multiple Choice Test, with a 7-point difference in score range (46.98 – 54.06) between North West and South West zones.
- Learners from the three Southern zones obtained scores above the National Average.
- Learners from the South West zone had the highest mean score of 54.06 while their counterparts from North West had the least mean scored 46.98.

Achievement at State Level

- Learners in 18 states and FCT scored below the National Average in Multiple Choice Test. Some of the states were Benue ($\bar{x} = 35.51$), FCT ($\bar{x} = 43.54$), Ekiti ($\bar{x} = 43.57$) and Enugu ($\bar{x} = 44.80$). While 18 states scored above the National Average in Multiple Choice Test. Some of the states were Bayelsa ($\bar{x} = 60.41$), Katisna ($\bar{x} = 59.26$) and Kano ($\bar{x} = 58.16$). In the Essay Test, learners from 13 states scored below the National Average. Top achievers were Ekiti, Edo, Anambra and Ebonyi states, each with a mean score of 57.6.
- A notable observation was the large variation between Multiple Choice and Essay Tests scores in Kano (58, 49), Bayelsa (60,41), Enugu (45,54) and Ekiti (44,57) states. In Kano and Bayelsa states the variation was in favour of the Multiple Choice Test while in Enugu and Ekiti states, the variation was more in favour of the Essay Test.



Achievement in Multiple choice and Essay Tests across States and FCT in English Studies

Note:

i. Learners' score in essay are in parentheses

Content/	Reading		Grammatical		
Objective	Real	ung	Accu	racy	
State	Mean	SE	Mean	SE	
ABIA	54.82	0.96	47.94	1.00	
ADAMAWA	54.83	0.73	45.08	0.70	
AKWA-IBOM	66.80	0.58	59.72	0.71	
ANAMBRA	69.94	0.37	61.56	0.55	
BAUCHI	63.72	0.89	58.69	1.05	
BAYELSA	77.24	0.61	75.59	0.78	
BORNO	60.16	0.85	54.45	0.91	
BENUE	32.84	0.87	26.09	0.60	
CROSS RIVER	56.99	0.79	50.46	0.92	
DELTA	59.78	0.89	55.10	0.93	
EBONYI	56.10	0.68	48.06	0.72	
EDO	72.76	0.43	67.60	0.67	
EKITI	46.70	1.16	42.85	1.30	
ENUGU	49.76	0.71	44.04	0.70	
GOMBE	57.41	0.76	51.01	0.87	
IMO	58.81	0.46	50.97	0.60	
JIGAWA	59.88	0.58	51.56	0.74	
KADUNA	57.12	0.76	51.01	0.90	
KANO	72.18	0.41	69.82	0.59	
KATSINA	74.52	0.81	73.97	0.90	
KEBBI	63.00	0.53	56.89	0.66	
KOGI	71.88	0.41	66.94	0.56	
KWARA	53.91	0.90	48.53	0.95	
LAGOS	63.51	0.78	57.14	0.95	
NASARAWA	65.21	1.05	61.20	1.14	
NIGER	64.21	1.00	61.07	1.11	
OGUN	60.84	0.98	56.96	1.06	
ONDO	63.51	0.72	60.15	0.84	
OSUN	51.64	0.56	43.63	0.61	
OYO	51.85	0.77	44.74	0.79	
PLATEAU	60.03	0.96	55.66	1.04	
RIVERS	60.20	1.04	56.29	1.10	
SOKOTO	51.55	0.81	47.40	0.90	
TARABA	56.37	0.54	50.13	0.69	
YOBE	59.52	0.80	51.87	0.88	
ZAMFARA	57.76	0.87	49.39	1.03	
FCT	49.32	0.88	39.07	0.79	
NATIONAL	59.59	0.14	53.66	0.16	

Achievement on Content Domains

Main Findings

The Score range for the Reading content was 32.84 (Benue) to 77.24 (Bayelsa)

- Learners in 19 states scored significantly above the National Average in Reading. Top achievers were Bayelsa, (77.27 percent), Katsina (74.52 percent), Edo (72.76 percent), Kano (72.18 percent) and Kogi (71.88). However, 17 states and FCT scored below the National Average.
- In Grammatical Accuracy, score range was 26.09 (Benue) to 75.59 (Bayelsa). Learners in 18 states scored above the National Average. Top achievers were learners from Bayelsa (75.59), Katsina (73.97), and Kano (69.82) state.
- Significantly large differences were observed in states with score clusters around the ranges for the Reading and Grammatical Accuracy. For example, learners' achievement in the items that examined Reading Skills from Bayelsa, Edo, Kano, Katsina, Kogi was significantly higher than their counterparts from Benue, Ekiti, Enugu and FCT.



ACHIEVEMENT IN MATHEMATICS

 Learners' achievement was homogeneous on both test forms, which is an indication that National Averages scores for the Multiple Choice and Essay tests were not significantly different.

Achievement of learners in the Multiple choice and Essay tests

Range



- Learners' achievement showed a good distribution of scores in four of the clusters with 70-100 percent representing Excellent.
- The cluster within which most learners scored on the Multiple Choice Test was 50-59 (28.5 percent) and for the Essay Test, it was 40-49 (29.5 percent). The cluster 0-39 contained 25.5 percent and 29.2 percent respectively, for the Multiple Choice and Essay Tests. Learners' achievement was **Good** in the Multiple Choice Test, whereas achievement was just **Fair** in the Essay Test.
- 26 percent and 29 percent of learners **Failed** in the Multiple Choice and Essay test, at the National level.
- At least 53 percent of the learners' scores were within the clusters 40 – 49 and 50 – 59 for both Test forms, and 49 percent and 39 percent of the learners' scores were within the cluster 50-59 and 60 – 69.



Percentiles

- A larger proportion of learners scored at the 50th percentile on the Multiple Choice Test than on the Essay Test.
- More learners scored at the 10th, 25th and 75th percentiles on the Essay Test.
- Learners' achievement at each percentile for both the Multiple Choice and Essay tests revealed very low variations.
- The largest proportion of learners (63 percent) performed better than 90 percent of the study sample for the Mathematics Test forms.

NATIONAL REPORT



Geo-political zones





Distribution of mean scores Essay in geopolitical zones.

- Learners' achievement scores showed low variations within and between zones in the Multiple Choice and Essay tests.
- Learners from North Central, South West and South East zones scored above the National Average in the Multiple Choice Test, while learners from North West, North East and South East zones scored above the National Average in the Essay test.
- Learners from South East obtained the highest scores in both the Multiple Choice and Essay tests.

Achievement in Content domains



• The National Average for Content Domain was 64.4

- Learners in 19 states scored above the National Average.
- Top achievers: Imo 76.07
 Osun 74.19
 Kano 72.81
 Kogi 72.33
 Abia 72.13
- Achievement was Fair in two States, Good in nine, Very Good in 17 and Excellent in nine of them.
- Overall, learners' achievement was Very Good on the Content Domain.

Learners' Achievement in Number and Numeration

ALGEBRAIC PROCESS



- The National Average for Algebraic Process was 59.11.
- Learners in 20 States and FCT scored above the National Average.
- Top achievers were: Imo (69.94), Osun (68.17), Kogi (67.00), Kano (66.69) and Yobe (66.56) states.
- Achievement was
 Fair in five states,
 Good in 13, and Very
 Good in 19 others.
- Overall, learners' achievement in the Algebraic process was Very Good.

Learners' Achievement in Alebraic Process

EVERYDAY STATISTICS



• The National Average for Everyday Statistics was 34.48

- Achievement was generally Poor as learners in 33 states Failed the test items that examined the Everyday Statistics.
- The top achieving states were Katsina (43.54 percent), Imo (42.37 percent), Kogi (42.09 percent) and Osun (40.29 percent) states. The scores fell within the cluster 40-49 percent.
- Primary 6 learners in Nigerian schools seemed to have serious challenges with the teaching and learning of topics in Everyday Statistics.

Learners' Achievement in Everyday Statistics





 National Average of learners' achievement in Multiple Choice test was 50.0 and 49.26 in Essay Test. Learners did not demonstrate outstanding achievement in any of the test forms at the national level.

National Average for Multiple Choice and Essay Tests



RANGE

- Learners' achievement within each cluster for both test forms were homogeneous with little variations.
- The cluster within which most learners scored in the Multiple Choice and Essay tests was 40-49 (28.1 percent and 29.8 respectively).
- Slightly more than 25 percent of the learners **Failed** in both test forms, while less than three percents had **Excellent** scores in both.
- Overall, 55.8 percent of learners scored within the range 40-59 percent in the Multiple Choice Test and 52.6 percent on the Essay test

PERCENTILES



Percentile scores in Multiple Choice and Essay Tests for Basic Science and Technology

- Learners' achievement at each percentile showed little variations in both Multiple and Essay Tests.
- Achievement was highest in the Multiple Choice test at all percentiles, with the exception of the 10th.
- At the 10th percentile, test items in the Essay Test appeared relatively easier for the learners, while learners experienced some difficulties at the 90th percentile in both test forms.

Achievement in Geopolitical zones



- Learners' achievement in both Multiple Choice and Essay tests concentrated within a narrow score range with the exception in the Essay Test for the South South (50.28 and 47.09) and North West (50.28 and 48.75) zones.
- Learners from the North Central, North West, South East and South South zones scored above the National Average for the Multiple Choice Test.
- Learners from the North East and South East zones obtained scores higher than the National Average in the Essay Test.

STATE LEVEL ACHIEVEMENT

Detailed analysis of state level achievement shows the following:

Multipe Choice Test

- 15 States scored above the National Average.
- Top achievers were Kaduna (54 percent), Cross River (54 percent), Oyo (53 percent), Osun (53 percent) and Edo (53 percent).
- Variations ranging from 7 to 13 percent were observed in the scores for both test forms in the following order Ondo (**48/61**), Nasarawa (**43/56**), Benue (**51/40**) and Abia (**50/57**) states.

Essay Test

- 19 States scored above National Average
- Top achievers were: Ondo (61 percent), Abia (57 percent), Nasarawa (56 percent), Osung (55 percent) and Niger (54 percent).



Mean Score of Learners in Basic Science and Technology by States and FCT **Note:** *i.* Score in essay are in parentheses

STATE LEVEL ACHIEVEMENT

Gender

Multiple Choice Test

- Score range for male learners was 45.86 (Kebbi) to 54.84 (Rivers) and for female learners, 45.70 (Kebbi) to 54.29 (Kaduna).
- Male learners in 20 states obtained higher scores than the female learners

Top Achiev	ers by gender:		
<u>Males</u>		Females	
Rivers	54.84	Kaduna	54.29
Kaduna	53.85	Osun	54.06
Edo	53.27	Rivers	53.77

- Male learners from 18 states scored above the National Average for males.
- Female learners from 19 states scored above their National Average.

Essay Test

- Score range for male learners was 40.34 (Benue) to 56.71 (Abia) and for the female learners, 39.26 (Benue) to 56.61 (Abia).
- Female learners from 17 states achieved above the National Average.
- In 19 states female learners scored higher than the male learners.
- Top Achievers by gender:

<u>Males</u>		<u>Females</u>	<u>Females</u>			
Abia	56.71	Abia	56.61			
Osun	55.82	Osun	54.45			
Niger	54.55	Niger	53.07			

SCHOOL TYPE

Multiple Choice Test

- Score range for public schools was 45.74 (Kebbi) to 54.35 (Rivers) and for private schools 46.19 (Kebbi) to 54.74 (Kaduna). Variations in score range were similar (8.60 percent and 8.16 percent).
- Learners in private schools from 21 States and FCT obtained higher scores than those in public schools.
- Top achiever by school-type:

Public schools: Rivers (54.35), Kaduna (54.06) and Edo (53.17)

Private schools: Kaduna (54.71), Kwara (54.16), Osun (54.13) and Rivers (54.00)

Essay Test

- Score range for public schools was 40.13 (Benue) to 56.73 (Abia) and for private schools, 42.17 (Ogun) to 56.27 (Abia).
- Large score variations were observed in the Essay Test than the Multiple Choice Test, with differences of 16.60 percent for learners in public schools and 14.10 percent for those in private schools.
- Learners in public schools from 23 States and FCT obtained higher scores than their counterparts in private schools.
- Learners from 19 States and FCT scored above the National Average for public schools, while those from 16 states and FCT scored above the National Average for private schools.

• Top achiever by school-type:

Public schools: Abia (56.73), Osun (55.08) and Niger (53.89)

Private schools: Abia (56.27), Osun (54.92) and Niger (53.48)



ACHIEVEMENT IN SOCIAL STUDIES

• Learners' achievement was homogeneous in both Multiple Choice and Essay tests.

Distribution of score for Multiple Choice and Essay Tests



- A larger proportion of learners, that is 32 percent and 29.8 percent, obtained scores within the 50-59 percent cluster in the Multiple Choice and Essay tests, respectively.
- Nearly 30 percent of the learners **Failed** in both test forms while none obtained excellent scores.
- The spread of scores suggests that the learners demonstrated varying capacities and competencies that are expected in a normal testing situation.

STATE LEVEL ACHIEVEMENT

Multiple Choice Test

- Scores ranged from 39 (Gombe) to 57 (Ebonyi), with 18 percent difference indicating a large spread of scores between states.
- 15 states and FCT scored above National Average.
- Top achievers were: Ebonyi (57), Lagos (57), Osun (57), FCT (56) and Imo (55).

Essay Test

- Scores ranged from 48 (Niger) to 58 (Bauchi).
- Learners' achievement was more homogeneous than in the Multiple Choice Test.
- Only 12 states had scores above the National Average.
- The Top achiever was Bauchi State (58).

Both Test Forms

• Learners from four states: Anambra (54/50), Ebonyi (57/51), Imo (55/51) and Ogun (51/51) had scores above National Average in both the Multiple Choice and Essay tests.



Mean Score of Primary 6 Learners in Social Studies **Note:** Learners' score in essay are in parentheses

STATE LEVEL ACHIEVEMENT: GENDER

9 states namely, Bayelsa, Delta, Edo, Kwara, Osun, Oyo, Plateau, Taraba, Zamfara and FCT scored above the National Average for male and female learners on both test forms.

Multiple Choice Test

- Score range for male learners was 42.22 (Nasarawa) to 54.84 (Adamawa) and female learners, 41.58 (Nasarawa) to 54.86 (Rivers). About 13 percent difference in both score ranges.
- Female learners from 19 states and the FCT obtained higher scores than their male counterparts.
- Male learners from 19 states and the FCT scored above the National Average for males, while female learners from 18 states and the FCT had mean scores above their National Average.
- Male and female learners in Sokoto State obtained the same score of 54.58 percent
- Top achieving male learners: Adamawa (54.84), Rivers (54.63), Sokoto (54.58), Bayelsa (53.56) and Yobe (53.17).
- Top achieving female learners: Rivers (54.86), Sokoto (54.58), Adamawa (54.50), Kaduna (54.10) and Yobe (53.66).

Essay Test

- Score range for male learners was 33.84 (Bauchi) to 56.24 (FCT) and for female learners, 33.84 (Bauchi) to 56.41 (FCT)
- Large score variation was observed between states, with a significantly large difference of 23 percent, eg Bauchi, FCT and Edo.
- Male learners in 17 states and FCT scored higher than their female counterparts.
- Female learners in 17 states and FCT scored higher than their male counterparts.
- Bauchi state male and female learners obtained the same score of 33.84 percent.
- Male learners in 21 states and FCT scored above the National Average.
- Female learners from 19 states and FCT had scores higher than their National Average.

School Location

Learners in Nine States, namely: Bayelsa, Delta, Edo, Kwara, Osun, Oyo, Plateau, Taraba, Zamfara and FCT obtained scores higher than the National Average for both school locations in both Test Forms.

Multiple Choice Test

- Score range for urban schools was 41.88 (Nasarawa) to 55.06 (Rivers).
- Score range for rural schools was 41.75 (Nasarawa) to 55.28 (Adamawa) with moderate differences of 13 percent points each.
- Learners in rural schools from 20 States and FCT obtained higher scores than their counterparts in urban schools.
- Learners in 17 States and FCT scored above the National Average for urban location.
- Learners in 16 States and FCT scored above the National Average for rural location.
- Urban and rural learners from Plateau state had the same score of 52.69 percent.
- Top achieving urban schools were: Rivers (55.08), Sokoto (54.86), Adamawa (54.40), Kwara (53.60) and Kaduna (53.47).
- Top achieving rural schools were: Adamawa (55.28), Rivers (54.43), Sokoto (54.32), Bayelsa (54.01) and Yobe (53.93).

Essay Test

- Score range for urban schools was 33.84 (Bauchi) to 55.91 (FCT) and for rural schools was 33.84 (Bauchi) to 56.78 (FCT). Scores were heterogeneous with observed large variations.
- Learners in 21 States and FCT from rural schools scored higher than their counterparts in urban schools.
- Learners in 20 States and FCT scored above the National Average for urban location, while those in 21 States and FCT had highest scores above the National Average for rural schools.
- Top achieving states with urban schools: FCT (55.91), Imo (55.07), Abia (54.88) and Ebonyi (54.36).
- Top achieving states with rural schools: FCT (56.78), Imo (55.85), Abia (55.35), Ebonyi (55.13) and Edo (54.12).

Content Domains



FAMILY

- National Average on this domain was 69.23.
- 16 States and FCT scored above the National Average.
- Top achieving states: Adamawa (80.28), Sokoto (79.96) and Rivers (76.64).
- Achievement was Fair in one state, Good in two states, Very Good in 17 and Excellent in 17 of them.
- Overall, achievement was **Excellent** on the content domain.

Achievement on the theme family

NATIONAL ECONOMY



- National Average on this theme was 50.31.
- 17 States and FCT scored above the National Average.
- Achievement was Poor in one state, Fair in 17 and Good in 19 of them.
- Generally, achievement was
 Good, although it was the least of the eight themes/content domains examined.

Achievement on the theme National Economy



• The National Average here was 67.02.

- 16 States and FCT scored above the National Average.
- Top achieving States: Adamawa (75.82), Rivers (75.52), Sokoto (75.47), Kwara (73.19) and Kaduna (73.10).
- Achievement was Fair in one state, Good in two, Very Good in 22 and Excellent in 12 of them.
- Overall, achievement on the theme was at least Very Good.

Achievement on the theme Health issues

RIVERS 69.81 The National Average 69.46 **SOKOTO** here was 60.02. 69.23 ADAMAWA 67.49 16 States and FCT KADUNA 67.04 BAYELSA above the 66.95 YOBE National Average. 66.92 KWARA Top achieving states 65.12 OYO were: Rivers (69.81), 65.12 OGUN Sokoto (69.46), and 63.65 DELTA Adamawa (69.22). 63.43 PLATEAU 62.2 GOMBE Achievement was Fair 61.55 OSUN in two states, Good in TARABA 60.89 18 and Very Good in 60.84 FCT 60.68 ZAMFARA Overall, achievement 60.03 EDO 60.02 was Very Good. NATIONAL 59.85 ONDO 59.61 EBONYI 59.34 EKITI 58.07 IMO 57.93 LAGOS 57.62 KOGI 57.42 JIGAWA 57.34 ENUGU 57.01 ANAMBRA 56.93 BENUE 56.28 **AKWA-IBOM** 56.02 KANO 55.76 ABIA CROSS RIVER 55.65 54.86 NIGER 54.28 KATSINA 53.65 BAUCHI 51.53 KEBBI 47.62 BORNO 44.99 NASARAWA 0 20 40 60 80

scored

17 of them.

PEOPLE AND THEIR ENVIRONMENT

Achievement on the theme People and their environment

56

- National Average was 62.45.
- 18 States and FCT scored above the National Average.
- Top achieving states were: Rivers (72.93), Adamawa (71.35) and Sokoto (71.28).
- Achievement was Fair in one state, Good in 13 states, Very Good in 20 and Excellent in three of them.
- Overall, achievement on the theme was Very Good.



SOCIAL ISSUES AND PROBLEMS

Achievement on the theme Social issues and problems

JUNIOR SECONDARY TWO LEARNERS' HOME



- 7,512 learners (52.4 percent boys and 46.1 percent girls) participated in the study.
- 86 percent of the learners live with their parents.
- 5,277 parents also participated in the study; with 63.3 percent of them being fathers and 35.3 percent mothers.
- 63.3 percent of the parents that participated were fathers while 3.53 percent of them were mothers.
- Only 9 percent of the parents had university degrees and qualification of 45.5 percent of them was below NCE.
- Distribution of parents by occupation showed that 27 percent of them were doing business/trading, 22 percent farming and 26 percent were workers in the public and private sectors of the economy.
- 37 percent of the families studied had between 4 and 6 children while 22 percent had between 7 and 10 children.
- Inspite of family size, 70 percent of them had a **daily Three Meal Plan**.
- 58 percent of learners spent one hour daily on Home Work while 55 percent of parents provided a lot of assistance to the learners.
- 75 percent of the learners lived about 2km away from the schools they attended and 77 percent of them **walked** to their schools.
- After school hours, 64 percent of learners were engaged in cooking while 66 percent got involved in games and sports.





 Nearly half of learners in schools did not have Mathematics textbooks while more than 54 percent lacked textbooks in Social Studies and Basic Science and Technology.

Percentage of learners with Textbooks in Core Subjects





 Almost 80 percent of learners in Nigerian schools received at least moderate (one hour a day) assistance on homework from their parents.

Percentage of Assistance with Homework

TEACHERS IN SCHOOL

Principals

- 533 Principals participated in the study, 71 percent of them were between ages 50-59 years.
- 90 percent of them were married and 81 percent of them were degree holders.
- 82 percent had one form of professional development experience or another in the last 5 years.
- 47 percent of the principals reported to have disciplinary cases in their schools, but only 50 percent were documented.
- 50 percent of the principals discussed disciplinary cases with parents.

Principals' Freedom in Decision Making

ItemsPully extent%%Selection of instructional materials31.142.6Use of learners' achievement tests49.329.6Specification of Minimum requirements before Learners can progress to the54	
%%Selection of instructional materials31.142.6Use of learners' achievement tests49.329.6Specification of Minimum requirements5422.3	all
Selection of instructional materials31.142.6Use of learners' achievement tests49.329.6Specification of Minimum requirements5422.3	%
Use of learners' achievement tests 49.3 29.6 Specification of Minimum requirements before Learners can progress to the 54 22.3	20.6
Specification of Minimum requirements before Learners can progress to the 54 22.3	15.4
next level	18.6
Extent and type of reporting to parents/guardians 32.3 58	4.3
Developing or modifying infrastructural facilities 17.6 63	13.3
Teachers' transfers/retention 16.3 30.6	46

Freedom in Making Decision about school activities Teachers freedom in Decision Making

		Not free at	Fairly	Very
S/N	Items	all	free	free
		%	%	%
1	Selection of topics for teaching	31.9	25.6	40.8
2	Selection of instructional materials.	9.1	25.9	62.3
3	Sequence of learners' learning.	11.8	35.1	46.3
4	Type of class organisation (e.g.) small group, large group, all class.	14.2	31.3	49.3
5	Use of learners' achievement tests.	7.7	27.8	60.2
6	Specification of minimum requirements before learners can progress to the next level.	21.5	33.5	39.6
7	Amount of homework to be assigned.	6.7	23.5	67
8	Extent and type of reporting to parents.	14.2	44.6	37.3
9	Extent and type of interaction with parents (e.g. Parent nights, Visitation).	22.1	40.2	34.6
10	Taking disciplinary measures towards correcting pupils.	12.6	40.9	42.5



Teachers

- 684 teachers participated in the study with 58 percent of them being males and 42 percent females.
- 41 percent of them were between 30-39 years while **94** percent were below 50 years.
- 79 percent of the teachers had either degree or NCE but only 3 percent of them had either M.Ed or PhD.
- 82 percent of teachers in the study were professionally qualified teachers.
- 45 percent of them had 6-15 years of teaching experience.
- 63 percent of the teachers were within the salary range of \10,000 \454,000.
- 52 percent of them had no professional development experience at all in the last five years.
- **90** percent of Nigerian principals had freedom in making decisions on the extent and type of report they make to parents.
- At least 73 percent of the principals had freedom to select instructional materials they use in their schools,
- They were also free to use achievement tests to determine learners progress to next level.
- Principals had some latitude in deciding on the type of school infrastructural facilities their school needed.
- Only 46 percent of them were involved in deciding Teachers' transfer and participation in re-training.
 - 90.5 percent of Nigerian teachers had freedom to decide on amount of homework assigned to learners.
 - At least 80 percent had freedom to select Instructional materials, decided on types of classroom organization use achievement tests in deciding progress of learners, report to parents on children's performance, behaviours and also correct learners.
 - Only 66 percent of the principals had freedom to choose topics for teaching.

Use of Instructional Materials by Subject Teachers



- 79 percent of teachers in the school use mainly published textbooks.
- 65 percent of Nigerian teachers had never used audio visual materials.

Things Principals like about their job

- Only few Principals liked to be appreciated by parents, government and society (3.4 percent).
- Only a few of them liked to develop knowledge/skill acquisition for learners (11.6 percent).
- Only a negligible proportion of them liked to receive cooperation from members of staff (2.6 percent).



- Allows time to take care of family (5.6 percent).
- Means for earning a living (1.3 percent).
- Instilling morals on learners (6.9 percent).
- Modeling lives of future generation/Nation building (12.2 percent).



Use of Assessment Instruments by Subject Teachers (percent)

 At least 62 percent of Nigerian teachers assessed learners by means of homework which were in the form of their written work project, oral and objective tests.



Help Needed by Subject Teachers in Management Practices (percent)

- About 54 percent of subject teachers needed help in managing learners' disciplinary cases and health problems.
- At least 67 percent of the teachers did not require any assistance and made constructive use of them by time, ordering, priorities, planning schedule of activities, maintaining disciplinary cases and managing distractive learners' behaviours.

Help Needed by Subject Teachers in Co-curricular Activities (percent)



- More than 55 percent of subject teachers did not require any help in developing learners' appreciation of cocurricular activities.
- 75 percent of teachers needed a lot of help in organizing out-ofschool activities on the basis of learners' abilities and interests.

Problems teachers encounter with learners

 40 percent of Nigerian teachers encountered limited basic infrastructure, furniture and instructional materials in the course of discharging their responsibilities as teachers.



- About 30 percent of the teachers indicated that they encountered the following amongst learners:
 - a) lateness to class/ truancy;
 - b) outright absenteeism; and
 - c) lack of interest in classwork.

THE SCHOOL AND THE COMMUNITY

- 533 schools participated in the study.
- 53 percent were located in urban areas and 44.9 percent were in rural communities.
- High proportion of them provided JSS education (83 percent).
- 74 percent of them run morning shift only; while 16 percent run both morning and afternoon shifts.



- Some incidence of class repetition occurred across all states but it was more pronounced in Taraba, Oyo and Lagos, with 6.68 percent, 7.09 percent and 10.14 percent, respectively.
- Similarly, incidence of drop-out occurred across all states but it was more pronounced in Zamfara (52.37 percent), Rivers (5.02 percent) and Bauchi (13.17 percent) states.
- Slightly more than a quarter of the teachers indicated that poverty and lack of parental care were key threats to Basic education implementation Nigeria (27.6 percent).

PARENTS SUPPORT FOR SCHOOLS



 Nearly 30 percent of parents very often rendered assistance to schools in the forms of financial contribution, provision of instructional materials, building construction, security, co-curricular activities and teachers' welfare. However, monetary support constituted most of the assistance that parents rendered to schools.

Levies and other charges payment by parents



• A majority of parents' of learners in Nigerian schools regularly paid fees and other levies for the education of their wards.

Description of school compound

- Well defined, secured from encroachment and large enough for buildings, playgrounds and gardens 380(71.3 percent).
- Small school compound, little or no extra land for expansion 105 (19.7 percent).
- Extremely small compound with no defined play field or gardens 21(3.9 percent).

CHILD-FRIENDLY ENVIRONMENT

Security provision Type of fence

 Only 30 percent of schools in Nigeria had one form of fence or another and 23 percent of this had permanent or cement block fencing

Type of security engaged by school (percent)

 More than 40 percent of schools in the country engaged local people and the community to provide security services while more than 30 percent of them engaged private security services.



Available, useable games/sports facilities





 Less than 30 percent of schools in Nigeria had usable games/sports facilities, with more than 60 percent of schools having football pitches then followed by handball, athletics, volley ball, basket/net ball, table tennis and lawn tennis.

 More than 77 percent of schools had one type of refuse disposal or another, with the use of dustbin having nearly 30 percent, then followed by the use of large bins and collection van coming next.

Usability of refuse disposal facilities in school



• However, only 16 percent of the schools had refuse disposal facilities that were usable .



 More than 65 percent of the schools had borehole and dugout wells as their major sources of water, only 3 percent had pipe borne water, while about 10 percent of them relied on stream/river/rain water supply.

SOURCES OF WATER SUPPLY

Toilet facilities

• 82 percent of Junior Secondary Schools lacked appropriate toilet facilities for both teachers and learners and they used unconventional locations and school premises as places where they eased themselves.

FACILITIES IN SCHOOLS

- It was only in 17 percent of the schools that the existing science laboratories were appropriate, while the rest were in dilapidated state or none existed at all.
- When respondents were requested to indicate the reasons for the observed conditions, 72.20 percent failed to respond. However, 12.90 percent of the facilities were said to be in dilapidated condition.
- Similarly only 16 percent of the schools had appropriate Mathematics laboratories, even then they lacked equipment.
- Only 28.10 percent of the schools had appropriate library facilities, while large number were inadequate because they were in poor condition or the library projects were not completed at all.
- Only 25.70 percent of the schools had ICT facilities that were appropriate, while 24 percent were
 not appropriate. Even those said to be appropriate had 15.00 percent, 12.90 percent, 11.80
 percent, 2.30 percent and 1.70 percent of them had indicated inadequate facilities/equipment,
 dilapidated infrastructure that were poorly maintained.

Furniture in schools

- Only 45 percent of schools in the country had indicated availability of furniture in them.
- Less than 35 percent of principals had indicated that the conditions of teachers' and learners' furniture were appropriate.
- More than 60 percent of schools in the country had no designated administrative block and even those available were mostly inappropriate.



ATTITUDE OF LEARNERS

 Nearly all learners had indicated that they were liked by their parents with many of them indicating they were liked because they were obedient and also passed their examinations. However, those who indicated that they were disliked by their parents was because they paid little attention to school work and also disobeyed them.

Percentage of parents liking the learners

ATTITUDE TOWARDS SCHOOL SUBJECTS

Subjects liked and not liked by learners



About 23 percent of the learners had shown some preference or liking for English Studies,
Mathematics and Basic Science; and very little or 1.3 percent preferred French, Arabic and Cultural and Creative Arts.



ATTITUDE TO SCHOOLING

More than 90 percent of learners liked their schools, because schools were close to their homes, teachers were friendly and their schools organized co-curricular activities.

Liking teacher

54.7 percent of learners liked schooling as a result of teacher related factors, principal among which were teachers teach well, teachers are friendly, teachers were interested in learners and they dressed moderately but smartly.

MAJOR FINDINGS: ACHIEVEMENTS

National average on learners achievement in the core subjects



- Low score variations were observed within each core subject.
- National averages were higher on the Multiple Choice Test than in the Essay test, although these were not significant.
- Learners' achievement was not particularly outstanding in any core subject.

Range

Subjects	Type of Exam	0 - 39	40 - 49	50 - 59	60 - 69	70 – 100
	MT	17.5	29.7	30.6	20.8	1.3
English Studies	ET	13.1	44.8	22.8	14.4	5.1
Mathematics	MT	16.4	30.7	33.5	17.3	2.1
	ET	0.0	62.2	21.0	10.4	6.4
Basic Science	MT	17.9	24.2	33.4	24.5	0.0
and	ET	22.1	26.0	27.6	23.8	0.6
Technology						
	MT	18.1	25.5	33.6	22.7	14.0
Social Studies	ET	0.0	60.1	17.8	14.0	8.0
NAT NAVIENIA Chaine Test						

MT = Multiple Choice Test,



- A larger proportion of scores in Essay Test in English Studies, Mathematics and Social Studies were within the range of 40-49.
- Achievement in Essay test for Basic Science and Technology showed that at least 22 percent of the learners were within each score range, except the range 70 – 100 percent.
- A larger proportion of scores in the Multiple Choice Test in the four core subjects were within the 50-59 score range.
- No learner Failed the Essay Test in Mathematics and Social Studies while 13 percent and 22 percent of them Failed in English Studies and Basic Science and Technology, respectively.
- It was only in Social Studies that 14 percent scored within 70-100 percent range in the Multiple Choice test.
- Overall, achievement was Fair in the Essay test on English Studies, Mathematics and Social Studies but Good in the Multiple Choice for the four subjects.

Percentile

Subjects	Type of Exam	10th	25th	50th	75th	90th
	MT	36.92	41.56	50.41	58.32	63.75
English Studies	ET	38.14	42.49	46.81	55.49	64.16
	MT	36.81	41.77	49.88	58.02	63.77
Mathematics	ET	40.52	40.52	45.89	46.63	64.69
Basic Science	MT	35.71	41.66	51.81	58.88	62.01
and	ET	35.28	40.10	49.71	57.78	64.21
Technology						
	MT	35.94	41.9	51.06	58.45	62.28
Social Studies	ET	39.99	41.5	45.97	56.41	66.88
MT = Multiple Choice Test, ET = Essay Test						

Type of

Exam

MT

EΤ

MT

ΕT

MT

ΕT

MT

ΕT

Gender

Female

50.60

49.90

50.52

49.88

50.24

49.96

50.08

50.08

Male

49.99

49.98

49.84

49.95

50.38

49.89

49.94

49.94

Location

R

50.44

50.03

50.0

49.8

50.26

49.92

50.06

50.06

U

50.14

49.87

50.11

49.95

50.27

49.93

49.56

49.56

- Achievement was higher in the Multiple Choice test for all four subjects at the 50th and 75th percentile however at the 90th percentile achievement was higher in the Essay test.
- At the 10th percentile, achievement was higher in the Essay test for all the subjects except in Basic Science and Technology.
- At least 2 percent of the learners scored above 90 percent.

 Scores hanged together for all the four subjects with little variation across subjects, test forms and grouping variables.

 Overall, gender and location had weak influences on achievement in both test forms and on the four core subjects.

Content Domains

English studies

Group Analysis

English Studies

Mathematics

Technology

Social Studies

Basic Science and

Subjects

	Literature	Writing	Grammatical accuracy	Reading	Speech
National average	42.02	38.56	43.41	47.20	56.70

• In the Content Domain, English Studies test forms which measured writing skills were more difficult as compared to Speech.

Mathematics

	Number and	Basic	Algebraic	Geometric	Everyday
	Numeration	Operation	Process	Mensuration	Mathematics
National average	58.59	61.28	56.35	51.17	55.70

Basic Science and Technology

	You and	Living and Non-	You and	You and
	Environment	Living things	Technology	Energy
National average	49.91	57.84	49.87	55.32

Domain, learners' achievement on Basic Operations was very higher, although, Geometry, Geometric Mensuration appeared to be very difficult.

• In Mathematics Content

 In Basic Science and Technology, the highest National Average was on Living and Non-living things, while the content "You and Technology" appeared to be most difficult.

Social studies

	Introduction to Social Studies	People and their Environment	Socialization	Culture	Social issues and problems	National unity and integration
National average	9.34	44.34	32.16	25.69	26.85	17.54

• In Social Studies, the National Average was generally low when compared to other Content Domains in the three other core subjects with "Introduction to Social Studies and National Unity and Integration" being the lowest among the six content areas examined. Conversely, "People and their Environment" was the content with the highest score (44.34 percent).

ENGLISH STUDIES



ACHIEVEMENT ACROSS GEOPLITICAL ZONES

 Achievement across the zones was heterogeneous with a 9.79 percent difference between North East and South

East.

• Learners in the three Southern zones scored above the National Average in English Studies, although the differences were not significant.



Group Achievement across the Geo-Political Zones

• Generally, learners' scores in English Studies were homogeneous within zones in both test forms, although male learners in the three Southern zones obtained scores above the National Average in both test forms, although the scores were not significant. Learners from the North East Zone obtained the least scores in English Studies when analysed along gender dimension.
STATE LEVEL ACHIEVEMENT

Major Findings

i.

- TOP ACHIEVING STATES:
 - > Multiple Choice Test: Lagos, Anambra and Kebbi states
 - **Essay Test:** Katsina, Bayelsa and Akwa Ibom states
 - Above National Average in both Multiple Choice and Essay tests: Kebbi, Imo, Ebonyi and Bayelsa states.
- ii. Learners in four states, namely Kebbi, Imo, Ebonyi and Bayelsa **scored** above the National Average for both Multiple Choice and Essay tests.

Multiple Choice Test

- Scores range from 40.0 (Gombe) to 59.00 (Lagos)
- 18 States and FCT scored above the National Average in the Multiple Choice Test.
- Significant differences were observed in states with score clusters around the range, e.g. Kaduna, Nasarawa, Benue, etc.
- Achievement in this test was **Good**.

Essay Test

- Score range was 47 (Benue) to 53 (Katsina)
- 19 States scored above the National Average for Essay test
- Low score variation with concentration between 49 and 51 percent. Given the small sample size for the Essay test, no significant differences were observed.



Note: National Average for Essay Test are in parentheses

MATHEMATICS

Achievement based on Geo-political zones



Mean scores in Multiple Choice Test across geopolitical zones

Multiple choice test

- Score for National Average was 50.16 percent.
- Highest mean score of 54.47 percent was by learners in South East. While the lowest mean score of 45.85 for learners in North East.
- Learners in two zones, South East and South West scored above the National Average.
- The influence of learners' zone of domicile was weak.



Essay Test

- Score for the National Average was 50.08 percent.
- Learners from the South East and South West achieved above the national average
- Achievement scores on Essay Test were more homogeneous with a range of 49.06 to 50.64, than on the Multiple Choice Test
- Variation between zones was low.
- Again even this test form learners' zone of domicile did not exert any **strong** influence on achievement.

Distribution of Learners scores in Essay Test across geopolitical zones

	ESSAY				MULTIPLE CHOICE			
Zones	Male		Female		Male		Female	
	Mean	SE	Mean	SE	Mea n	SE	Mean	SE
North Central	49.27	0.44	49.40	0.44	48.76	0.45	49.26	0.47
North East	50.44	0.39	49.63	0.43	44.88	0.35	47.11	0.43
North West	49.40	0.33	50.16	0.43	49.73	0.38	48.49	0.47
South East	49.56	0.43	48.61	0.39	52.58	0.35	52.52	0.36
South South	50.69	0.43	50.59	0.43	48.94	0.37	49.61	0.36
South West	50.36	0.40	50.68	0.31	54.46	0.34	54.48	0.33

Distribution of means and standard error of Mathematics achievement in multiple choice and essay tests for zones by gender

- There were no significant differences in achievement of male and female learners within and between zones on both test forms.
- Learners from South West obtained the highest mean score on both test forms.
- Overall, gender had a weak influence on achievement on each test form between and within zones.

Distribution of means and standard error of achievement in multiple choice and essay tests for zones by location

	ESSAY				MULTIPLE CHOICE			
Zone	UR	BAN	RURAL		URBAN		RURAL	
	Mean	SE	Mean	SE	Mean	SE	Mean	SE
North Central	48.93	0.42	49.83	0.48	48.46	0.45	48.77	0.49
North East	50.56	0.40	49.39	0.42	45.88	0.36	45.80	0.41
North West	49.34	0.37	49.80	0.38	49.42	0.43	49.34	0.37
South East	49.12	0.41	48.92	0.41	52.78	0.35	52.26	0.36
South South	50.52	0.42	50.64	0.45	49.02	0.35	49.72	0.39
South West	50.76	0.37	50.22	0.41	54.45	0.32	54.56	0.35

- Learners achievement showed low score variation on the Essay test for locations.
- Larger score variations were observed on the Multiple Choice test, such that differences were as much as 9 percent between learners in North East and South West.
- Generally, location had a weak influence on achievement in the zones.

STATE LEVEL ACHIEVEMENT

A detailed examination of state level achievement shows the following:

- Learners in 15 states scored above the National Average for Multiple Choice test and only 12 states were above National Average for Essay test.
- Score range in Multiple choice test was 40.0 (Gombe) to 61.0 (Kebbi), and on the Essay test 49.0 (Abia and 15 other states) to 52 (in Akwa Ibom and Oyo), indicating a greater variation in learners' achievement on the Multiple choice test.
- Learners in six states scored above the National Averages for both Multiple Choice and Essay tests as thus: Kebbi (61 and 51), Lagos (57, 51) Oyo (53, 52) Ondo (53, 51), Ogun (53, 51) and Yobe (53, 51). This is generally an outstanding achievement.
- The highest achieving state on the Multiple Choice test was Kebbi, with a mean score of 61.0; while the least was Gombe and mean score of 40.0. On the Essay test, the highest mean score of 52.0 was obtained by learners from Akwa Ibom and Oyo states, while Abia and 15 other states had the lowest mean score of 49.0.

STATE LEVEL ACHIEVEMENT

TOP ACHIEVING STATE:

Multiple Choice Test; Kebbi



Note: Scores on the Essay Test are in parentheses

Achievement of Learners in Mathematics Content Domain

1. Number and numeration

National average 58.59. Top Achievers:

- i. Kebbi 80.32 percent
- ii. Kwara 78.05 percent
- iii. Osun 75.68 percent
- iv. Lagos 72.79 percent
- v. Imo 70.47 percent.

3. Algebraic process

National average was 56.35 Top Achievers:

- i. Kebbi 74.66 percent
- ii. Kwara 73.49 percent
- iii. Osun 69.9 percent
- iv. Lagos 67.92 percent
- v. Imo 65.41 percent.

2. Basic operation

National average was 61.23 Top Achievers:

- i. Kebbi 84.86 percent
- ii. Kwara 81.95 percent
- iii. Osun 78.53 percent
- iv. Lagos 76.19 percent
- v. Imo 73.95 percent.

4. Geometric Mensuration

National average was 51.17 Top Achievers:

- i. Kebbi 71.41 percent
- ii. Kwara 65.6 percent
- iii. Osun 62.4 percent
- iv. Lagos 61.01 percent

5. Everyday mathematics

National average was 53.70 Top Achievers:

- i. Kwara 75.14 percent
- ii. Kebbi 75.14 percent
- iii. Osun 70.39 percent
- iv. Lagos 69.84 percent
- v. Imo 68 percent

Summary

What do these data tell us about learners' achievement on the content domains?

- At the National level, achievement in the content domains was in the decreasing order: Basic Operation (61.28), Number and Numeration (58.59), Algebraic Process (56.35), Everyday Mathematics (55.70) and Geometric Mensuration (51.17).
- Variations in score ranges decreased from Basic Operation (47.24) Number and Numeration (42.50), Everyday Mathematics (41.40), Geometric Mensuration (37.15) and Algebraic Process (35.46).
- On the basis of the analysis above learners had more difficulties responding to test items on Algebraic Process and Geometric Mensuration. Furthermore, learners in Kebbi State had excelled by topping in the four of the five content domains, which is considered outstanding.



BASIC SCIENCE AND TECHNOLOGY

Achievement in Geo-politcal Zones

Gender Achievement by zone on Multiple choice test

7000	location	MULTIPLE	CHOICE	ESSAY		
Zone	location	Mean	SE	Mean	SE	
	URBAN	48.78	0.50	49.64	0.47	
	RURAL	49.16	0.46	49.79	0.45	
	URBAN	46.71	0.37	50.52	0.39	
NORTHEAST	RURAL	45.96	0.43	50.52	0.45	
	URBAN	47.93	0.37	49.58	0.39	
NORTH WEST	RURAL	47.46	0.40	49.17	0.40	
	URBAN	53.23	0.36	49.39	0.42	
SOUTH EAST	RURAL	53.38	0.38	50.01	0.45	
	URBAN	52.63	0.37	49.69	0.42	
30010 30010	RURAL	53.52	0.38	50.52	0.43	
	URBAN	52.44	0.32	50.50	0.37	
SOUTH WEST	RURAL	52.36	0.38	49.67	0.42	
ΝΑΤΙΩΝΑΙ	URBAN	502	.7	49.91		
NATIONAL	RURAL	50.2	28	49.91		

Gender

Key Points:

- Female learners from North East Zone obtained the highest mean scores in the Multiple Choice test with a score of 51.12.
- Learners' achievement in the Multiple Choice test showed little variation within and between zones.
- Male and female learners from South West and North East scored above their respective National Average.
- Male learners from South South and North Central zones scored above the National Average.

Achievement in Geo-political Zones by location

Distribution of means and standard error of achievement in Multiple choice and Essay tests for geopolitical zones by location

- Learners in urban schools from the three Southern Zones scored above the National Average in the Multiple Choice test.
- Achievement in the Multiple Choice test showed a greater spread of scores between zones more than in the Essay test.
- Learners in urban and rural locations in North East scored above the respective National Averages in the Essay test, while learners in rural schools from South East and South South scored above the National Average for rural location.
- The overall achievement of learners in Nigerian Junior Secondary School Two did not indicate a **strong** influence of location.

Content Domain

Top Achiever: South East zone had the highest mean scores on the four Content Domains.

Major findings

Achievement data on content domains showed some interesting results as thus:

- i. The highest National Average of 57.84 was obtained on the content "Living and Non-Living Things". Each zone had the highest mean score on this theme with a range of 50.76 (North East) to 63.42 (South East). The three Southern Zones: South East (63.42) South South (62.77) and South West (61.94) scored above the National Average.
- ii. The theme "You and Technology" seemed to have presented some difficulty to the learners in the North Central, North East and North West zones in which the learners had the lowest mean values of 47.77, 42.08 and 44.47 respectively. Whereas, for learners in the South East, South South and South West, their lowest achievement was in the theme "You and Your Environment", with mean scores of 55.05, 54.52 and 53.45, respectively.
- iii. South East zone had the highest mean scores in the four themes (55.05, 63.42, 56.01 and 60.09) while North East (43.25, 50.76, 42.08 and 49.12) had the lowest.

Coo political Zapas	You a enviror	and Iment	Living and non- nt living things		You and technology		You and energy	
Geo-political_zones	Mean	Std. Error	Mean	Std. Error	Mean	Std. Error	Mean	Std. Error
NORTH CENTRAL	48.10	0.53	55.19	0.65	47.77	0.61	53.29	0.54
NORTH EAST	43.25	0.46	50.76	0.55	42.08	0.49	49.12	0.45
NORTH WEST	45.51	0.44	53.24	0.54	44.47	0.48	51.38	0.44
SOUTH EAST	55.05	0.41	63.42	0.50	56.01	0.49	60.09	0.42
SOUTH SOUTH	54.52	0.42	62.77	0.51	55.37	0.50	59.58	0.43
SOUTH WEST	53.45	0.39	61.94	0.47	54.01	0.46	58.74	0.39
NATIONAL	49.91	0.19	57.84	0.23	49.87	0.21	55.32	0.19

Means on content Domains across geopolitical zones (Percent)

ACHIEVEMENT AT STATE LEVEL

Top Achiever: Kebbi State (59 percent)

- The national map displays achievement scores on Multiple Choice and Essay tests for states and FCT.
- The National average was 54.0 for Multiple Choice test and 49.0 for Essay test.
- State distribution shows score range of 41.0 (Gombe) to 59.0 (Kebbi).
- Three states namely Kebbi (59.0), Osun (57.0) and Imo (55.0) scored above the National Average for the Multiple Choice test, while four states, namely Ebonyi, Anambra, Yobe and FCT had the same score as the National Average.
- The other 30 states obtained mean scores below the National Average.
- In respect of the Essay test, score range was 48.0 for Niger, 51.0 for Lagos, Ondo, Ekiti, Yobe, Bauchi, Borno, Benue and Gombe states.
- Learners in 26 states scored above the National Average while achievement of learners in 10 states was equal to the National Average.

- Only Niger State with a mean of 48 obtained a score below the National Average.
- Overall, learners had higher scores in the Multiple Choice Test than in the Essay test. There were large differences between states on the Multiple Choice test, in which scores range from 41 to 59 percent more than on the Essay test where scores ranged between 48 and 51 percent.



Note: Essay test score in parentheses



SOCIAL STUDIES



- Learners in the three Southern Zones scored above the National Average.
- Learners' achievement in zones above and below the National average was homogeneous.
- Achievement was not outstanding for any zone with only a 9 percent difference between North East and South East.
- It was obvious that learners' Zone of domicile did not exert any strong influence on achievement.
- Learners' achievement in all zones showed very little variations with a difference of 1.5 percent between North Central and North East zones.
- Learners in schools from the North East zone obtained the <u>highest</u> score in the Essay test.
- Only two zones, South West and North East, scored above the National Average.
- Similar to observation made in the Multiple Choice test, the zone of domicile appeared to have weak influence on achievement.

Distribution of mean a	nd standar	d error of Achieveme	nt in Multiple ch	oice and essay tests for geopolitical
zones by gender				
		MULTIPLE CHOICE	FSSΔY	- Consentitut loonsens' ashioveneestu

	Condor	MULTIPLE C	HOICE	ESSAY	
GEOPOLITICAL_ZOINE	Genuer	Mean	SE	Mean	SE
	Male	48.89	0.42	49.75	0.43
NORTH CENTRAL	Female	49.90	0.44	49.04	0.44
	Male	46.15	0.37	51.01	0.41
NURTHEAST	Female	46.27	0.42	50.69	0.44
NORTH WEST	Male	47.90	0.36	49.50	0.34
	Female	48.36	0.44	49.42	0.41
	Male	53.57	0.36	49.60	0.43
SOUTH EAST	Female	53.71	0.33	50.23	0.42
	Male	51.32	0.37	49.75	0.41
30010 30010	Female	51.66	0.35	50.13	0.41
	Male	51.66	0.33	50.03	0.39
SOUTH WEST	Female	51.89	0.32	50.70	0.38
National	Male	49.6	9	49.9	4
National	Female	50.46		50.08	

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- Generally, learners' achievement was hung homogeneous for both gender types and on both test forms in all the zones.
- Learners in the three Southern Zones obtained mean scores above their respective National Average in the Multiple Choice test.
- In the Essay test, only learners from North East and South West scored above the National Average, although female learners from South East and South South also scored above their National Average.
- Overall, the influence of gender in achievement at the zonal level was **Weak**.
- Male learners from the North East Zone obtained the highest score of 51.01 on the Essay test, while female learners from South East zone had the highest score of 53.71 on the Multiple Choice test.

	School	MULTIPLE C	HOICE	ESSAY	
GEOFOLITICAL_ZONE	Location	Mean	SE	Mean	SE
	URBAN	49.82	0.39	49.34	0.42
NORTH CENTRAL	RURAL	48.61	0.50	49.67	0.48
	URBAN	47.30	0.36	50.96	0.40
NORTHEAST	RURAL	44.72	0.42	50.77	0.46
	URBAN	48.12	0.39	49.01	0.36
NORTH WEST	RURAL	47.52	0.40	50.01	0.39
	URBAN	53.41	0.35	49.66	0.42
SOUTHEAST	RURAL	53.93	0.35	50.03	0.43
	URBAN	51.37	0.35	50.09	0.39
30010 30010	RURAL	51.78	0.38	49.64	0.44
	URBAN	52.67	0.28	50.55	0.36
SUUTH WEST	RURAL	50.67	0.37	50.18	0.42
National	URBAN	50.40)	49.56	
	RURAL	49.98	5	50	.06

Distribution of means and standard error of achievement in Multiple choice and Essay tests for geopolitical zones by location

- Learners' achievement showed little variations within and between zones for both locations and test forms, except for learners' achievement in Multiple Choice test in rural schools in the North East zone.
- The three Southern zones scored above the National Averages for urban and rural locations on the Multiple Choice test.
- Achievement on the Essay test was more homogeneous than the Multiple Choice test, with a difference of 1.76 percent between North East and North West zones.
- Learners from North East and South West zones scored above the National Average for Essay test.
- The North East zone was a **Top** achiever for male and female learners on the Essay test.
- Overall, location had a weak influence on achievement.

State level Achievement

Top Achievers were:

Multiple Choice Test

- i. Kebbi 59 percent
- ii. Osun 57 percent
- iii. Imo 55 percent

Major Findings

- Score range in the Multiple Choice test was 41 percent for Gombe, to 59 percent for Kebbi states while for the Essay test 48 percent for Niger, to 52 percent for Adamawa. There were larger variations in achievement on the Multiple Choice test than on the Essay test.
- Learners in 18 States and FCT scored above the National Average for the Multiple Choice test, whereas, learners in 20 states scored above the National Average in Essay test.
- Learners in 13 states had higher achievement scores in the Essay test than in Multiple Choice test.
- Learners in 13 states namely: Abia, Akwa Ibom, Cross River, Delta, Ebonyi, Ekiti, Enugu, Kano, Lagos, Ogun, Ondo, Rivers and Yobe scored above the National Averages for both the Multiple Choice and Essay tests.

NATIONAL REPORT



Note: Essay test scores in parentheses



Achievement in Multiple choice test by Gender



	- 0 -
Male -	49.69
Female -	50.46

Major Findings

- Learners' achievement by gender showed little variation within states.
- Score range for male learners was 40.47 (Gombe) to 59.17 (Kebbi) and for female learners 41.87 (Gombe) to 59.33 (Kebbi)
- Learners in 21 States and FCT scored above the respective National Averages for male and female learners.
- Achievement of learners between states revealed significantly large variations in states with score clusters around the ranges. For example, the achievement of female learners in Kebbi State was significantly higher than their counterparts from Gombe State.

JUNIOR SECONDARY THREE

LEARNERS' HOME

- 7,464 learners participated in the study.
- 51.7 percent of them were boys and 47.2 percent were girls.
- 86.10 percent of learners who participated in the study lived with their parents.
- 5,332 parents were sampled for the study, with 64.4 percent of them being fathers and 34.10 percent mothers.
- Nearly 25 percent of the parents had the West African School Certificate or its equivalent.
- Distribution of parents by occupation showed that 29.70 percent of fathers were workers, 22.9 percent were farmers and 20.50 percent were engaged in one form of business or another.
- Mothers' occupation showed a slightly different distribution with 41 percent doing business, 13.5 percent as workers and 12.60 percent were into farming.
- 37.30 percent of the families had 4-6 children, while 21.40 percent had 7-10 children.
- 69 percent of families had a **daily three meal** plan inspite of the large size of the families.
- 70 percent of Nigerian learners in Junior Secondary School three ate breakfast at home before setting off to school.
- About 42 percent had two pairs of school uniform while 5.50 percent did not have uniform at all.
- 63 percent of the learners lived about 2km away from school and 79 percent of them **walked** to school from their homes.



- HOME SUPPORT
- Nearly half of the JSS 3in Nigeria did not have English Studies and Mathematics textbooks; while more than half of them had textbooks for both Social Studies and Basic Science and Technology.

Percent of learners who Possess Textbooks



 Nearly 54 percent of learners in Nigerian Junior Secondary Schools three spent at least one hour on their home work.

Time spent on homework.



- 78 percent of learners in JSS 3 received Very much assistance on their homework assignments from parents/guardians.
- And of 36 percent of the learners in JSS 3 received very much assistance from paid tutors and or teachers.

Percent of Assistance with Home work



ACHIEVEMENT IN ENGLISH STUDIES

The National Average for both English studies multiple choice and Essay tests were 50.0 and 49.83 percent, respectively; and the scores had shown very little variation.

National average scores on Essay and Multiple choice tests



Percentile Score in multiple choice and essay tests.

- Generally scores in English Studies for both test forms were homogeneous on all percentiles.
- A larger proportion of learners' scores were at the 90th percentile, an indication that 65 percent of the learners obtained higher than 90 percent of the study sample.
- Learners obtained slightly higher scores at the 10th, 25th and 90th percentiles in the Essay tests. While learners had higher scores at the 50th, 75th percentiles in the Multiple Choice test.



Achievement across Geo-Political Zones on Essay and Multiple Choice test

- Learners' achievement showed little variations within and across the zones, except in the North East zone.
- The scores showed that learners from the three northern zones obtained higher scores in the Essay test while those from the Southern zones had higher scores in the Multiple Choice test.
- Learners in JSS 3 from the three Southern zones scored above the National Average for the Multiple Choice test, while those from the North Central and North East zones scored above the National Average for Essay test.
- Learners from the South East Zone obtained the highest score of 54.74 in the Multiple Choice test.

	MULTIPLE CHOICE				ESSAY			
Zone	Ma	ale	Fema	ale	Male		Female	
	Mea n	SE	Mean	SE	Mean	SE	Mean	SE
North Central	49.51	0.48	48.57	0.49	49.75	0.46	50.56	0.47
North East	44.64	0.36	43.87	0.37	49.86	0.40	50.44	0.46
North West	46.12	0.32	46.34	0.38	49.72	0.34	49.33	0.42
South East	54.60	0.38	54.85	0.35	50.01	0.43	50.18	0.41
South South	52.22	0.39	52.51	0.38	49.79	0.42	50.76	0.43
South West	53.58	0.33	53.84	0.32	49.18	0.39	48.91	0.35

Distribution of means and standard error of English achievement in multiple choice and essay tests for the zones by gender

- Learners' achievement was homogeneous within zones for both gender types in the Essay test.
- Female learners from the South East Zone obtained the highest score among the zones in both Multiple choice and Essay tests
- Female learners from the North Central, North East, South East, South South and South West zones unlike their counterpart in the North West zone, scored above the National Average for the Essay test.

NATIONAL REPORT

ACHIEVEMENT AT STATE LEVEL



Mean Score in Essay and Multiple Choice tests for English Studies

Top Achiever: Lagos State 58 percent in Multiple Choice test

Major Findings

- Score range on the Multiple Choice test was 41 to 58 for Gombe and Lagos states respectively and on the Essay test, 45 to 51 for Taraba and Bauchi states, respectively.
- The score range recorded large variations or wider spread of scores in achievement between the states on the Multiple Choice test than on the Essay test.
- 18 and 10 states scored above the National Average for the Multiple Choice and Essay tests, respectively.
- Learners in 15 states had higher scores on the Essay test than on the Multiple Choice test.
- Learners in four states namely: Imo, Delta, Akwa Ibom, Abia and Cross River scored above the National Average for both Multiple Choice and Essay tests.

ACHIEVEMENT IN CONTENT DOMAINS FOR ENGLISH STUDIES

SPEECH

- National Average 46.86.
- 18 states scored above the National average, with FCT (52.28), Lagos (50.36) and Kwara (50.45) being the top achievers.
- Overall achievement was only Fair.

READING

- National average 65.50.
- 18 States and FCT scored above the National Average, with Lagos (80.46), FCT (78.42), Ebonyi (76.72) and Imo (75.66) as top achievers.
- Overall achievement was Fair in two states, Good in 11, Very Good in 10 and Excellent in 14 others.
- On the whole achievement on the Reading Skills Content was **Excellent**.

GRAMMATICAL ACCURACY

- National Average 48.10.
- 18 States and FCT scored above the National Average, with Lagos (64.56), Ebonyi (61.41) and FCT (61.22) being the top achievers.
- Achievement was Poor in 10 states,
 Fair in 11, Good in 14 and Very
 Good in three others.
- Generally, achievement was **Good**.

LITERATURE

- National Average 50.03.
- Learners from 19 States and FCT scored above the National Average with Lagos (69.94), FCT (64.55), Ebonyi (63.90) and Kwara (62.60) being the top achievers.
- Achievement was **Poor** in five states, **Fair** in 12, **Good** in 16 and **Very Good** in four others.
- Overall, achievement was **Good** on the Content.

WRITING

- National Average 59.83.
- Learners from 20 States and FCT scored above the National Average with Lagos (72.22), Ebonyi (72.21) and FCT (71.05) being the top achievers.
- Achievement was **Fair** in four states, **Good** in 12, **Very Good** in 18 and **Excellent** in three others.
- Overall achievement was Very Good on the content.

ACHIEVEMENT IN MATHEMATICS



- At the National level, learners' achievement was similar on the Multiple Choice and Essay tests, with a difference of just less than half of a percentage point.
- Test items in both test forms were some what equally challenging to the JSS 3 learners.







- Learners' achievement did not show much variation within and across zones on both test forms except in North East and South West zones.
- South West zone had the highest score of 53 percent while North East zone had the least score in the Multiple Choice test.
- Learners in North East zone obtained a higher score in the Essay test, while those in the other zones had higher scores in the Multiple Choice test.
- Learners in South South and South West zones scored above the National average for Multiple Choice and Essay tests.

1		, 0				
Zone	Gender	Multiple	e Choice	Essay		
20116	Genuer	Mean	SE	Mean	SE	
	Male	49.6	0.47	50.05	0.49	
NORTH CENTRAL	Female	50.58	0.51	49.72	0.44	
	Male	47.52	0.36	49.27	0.37	
NORTHEAST	Female	46.35	0.37	49.89	0.42	
	Male	49.96	0.38	49.27	0.35	
NORTH WEST	Female	50.58	0.42	50.41	0.4	
	Male	50.67	0.32	50.99	0.41	
SOUTHEAST	Female	50.62	0.4	49.73	0.46	
	Male	49.41	0.41	49.39	0.39	
300111 300111	Female	49.85	0.41	49.44	0.42	
SOUTH WEST	Male	53.54	0.38	49.92	0.41	
	Female	52.59	0.34	49.97	0.37	

Distribution of means and standard error of Mathematics achievement in Multiple Choice and Essay tests for Zones by gender

- Learners' achievement was homogeneous within Zones on both test forms, although some variations between the North East (Male 47.52, Female 46.35) and South East zones (Male 53.54, Female 52.59) on the Multiple Choice test.
- Learners from South East and South West scored above the National Average for both gender types, only female learners from North Central and North West scored above their National Average on the Multiple Choice test.
- Achievement on the Essay test was concentrated within a of range 49.27 to 50.99.
- Generally, the influence of gender on achievement at the zonal level was weak amongst JSS 3 learners in Mathematics.

The largest proportion of Nigerian

learners at this population cohort

was 40-49, with 46 percent on the

About 41 percent and 36 percent

Very Good, respectively for both

Multiple Choice and Essay tests.

About 9 percent failed in the

Multiple Choice test while 7

achievement in the Essay test.

Overall, the achievement level of learners in JSS 3 was **fair** in both

multiple choices and essay tests.

• Learners who scored 39.23, 42.01, 47.6, 57.26 and 65.1 on the Multiple

Choice test performed better than 10

percent, 25 percent, 50 percent, 75

percent and 90 percent of all learners

who took the Multiple Choice tests

 Similarly, on the Essay test, learners who scored 40.25, 42.18, 46.05, 55.73 and 65.4 performed better than 10

percent, 25 percent, 50 percent, 75

percent and 90 percent of all learners who took the test respectively.

• Learners performed better on the

respectively.

percent had excellent

were within the clusters Good and

Multiple Choice test and 57 percent in Essay test.



Distribution of score ranges in Mathematics Essay and Multiple choice tests





- Essay test compared to the Multiple Choice test at the 10th, 25th and 90th percentiles. • At the 50th and 75th percentiles
- learners performed better on the Multiple Choice test than the Essay

Percentile scores in multiple choice and essay tests for Mathematics

ZONE	location	Multiple	e choice	Essay		
ZONE	location	Mean	SE	Mean	SE	
	URBAN	49.8	0.45	49.94	0.43	
NORTH CENTRAL	RURAL	50.49	0.53	49.82	0.52	
	URBAN	48.34	0.4	49.06	0.39	
	RURAL	45.72	0.32	50	0.39	
	URBAN	50.62	0.38	49.95	0.36	
	RURAL	49.79	0.41	49.61	0.39	
	URBAN	49.75	0.32	50.2	0.39	
SOUTHEAST	RURAL	51.85	0.4	50.8	0.49	
	URBAN	49.26	0.41	49.1	0.4	
30018 30018	RURAL	50.01	0.41	49.74	0.42	
SOUTH WEST	URBAN	51.99	0.33	49.74	0.37	
	RURAL	54.18	0.39	50.18	0.41	

Distribution of means and standard error of Mathematics achievement in Multiple choice and Essay tests for Zones by location

- Learners' achievement pattern in respect of location was similar to the observations on gender.
- Specifically, learners in rural schools had higher scores in both test forms in the Southern zones. However those in the North central had higher scores in only Multiple Choice test.
- Generally, school location had a weak influence on achievement in the zones with the exception of learners in rural schools from North East zone, where the influence was more pronounced.

ACHIEVEMENT AT STATE LEVEL



Mean Score of learners in Mathematics Essay and Multiple Choice tests **Note:**

- *i.* Learners' score in multiple choice are out of the parentheses
- *ii. Learners' score in essay are in parentheses*

ACHIEVEMENT IN CONTENT DOMAINS

NUMBER AND NUMERATION

- National Average 48.67.
- Learners in 19 States and FCT scored above the National Average with Kebbi (64.95), Osun (61.09) and FCT (60.79) being the top achievers.
- Achievement was **Poor** in six states, **Fair** in 15, **Good** in 13 and **Very Good** in three others.
- Overall, achievement was Good.

ALGEBRAIC PROCESS

- National Average 50.46.
- 19 States and FCT obtained scores higher than the National Average with Kebbi (56.87), Osun(55.92), Kwara (55.19) being the top achievers.
- Achievement was Fair in 17 states and Good in 20 others.
- Overall, achievement on the content domain was Good.

ACHIEVEMENT IN BASIC SCIENCE AND TECHNOLOGY



- Distribution of mean scores for Essay and Multiple Choice tests
 - Learners' achievement was the same in both Multiple Choice and Essay tests in Basic science and Technology.
 - Test form did not have any influence on learners' capacity or interest.



Percentile scores in multiple choice and Essay tests in JS 3 Basic Science and Technology

- Learners' achievement showed little
 variations and progressive increase in scores at each percentile.
- Learners obtained higher scores in the Multiple Choice test at all percentiles except the 90th. Indeed, the items in the multiple choice test were relatively easier to the learners while the Essay test at the 90th percentile was more challenging.



Achievement in Essay and Multiple choice tests by Gender.

- Male and female learners' achievement presented a similar pattern to the National Average. There were very low variations within and between the test forms.
- Achievement of male and female learners was higher in the Essay test than in the Multiple choice test.
- It would appear that the gender of learners had a weak influence at the national level as none of the scores was outstanding.
- Achievement data based on location and school type were similar for both genders in JSS 3 in Basic science and Technology. Thus nationally location and school type had weak influence on achievement on the basis of gender.



Achievement across geo-political Zones

- Learners' achievement was generally low for each zone as none of the zones scored above the National Average for both Multiple Choice and Essay tests in Basic science and Technology.
- Learners in the three northern zones obtained higher scores in the Essay test while their counterparts from the Southern zones had higher scores in the Multiple Choice test.
- Overall none of the zones was outstanding in achievement in Basic Science and Technology.

ACHIEVEMENT AT STATE LEVELS: Gender

Multiple Choice

- Score range in the Multiple Choice test for the male learners was 40.14 to 59.11 for sokoto and FCT respectively. And for the female learners it was 40.87 to 56.77 for sokoto and Lagos states respectively.
- The score range revealed large variations between states, with a difference of nearly 19 percent for male learners and 16 percent for female learners.
- Male learners in 22 States and FCT scored above National Average for Multiple Choice test.
- Female learners in 19 States and FCT scored above their National Average in the Multiple Choice test.

Top Achievers: Multiple Choice Test

Male			Female
FCT	- 59.11	Lagos	- 56.77
Lagos	- 57.92	FCT	- 55.87
Ebonyi	- 54.84	Delta	- 54.29

• Female learners in 20 states obtained higher scores in the Multiple Choice test as compared with their male counterparts.

Essay Test

- Score range for male learners in Essay test was 48.19 to 52.65 for Ekiti and Akwa Ibom states respectively. and for female learners, it was 47.76 to 54.03 for Bayelsa and Benue states respectively.
- Score range showed low variations in achievement within each state for both male and female learners, and to a large extent between states.
- Male learners in 17 states scored above the National Average in the Essay test. Also, Female learners from 17 States and FCT also obtained scores higher than their National Average.
- Female learners from 22 States and the FCT obtained higher scores than their male counterparts in the Essay test in Basic science and Technology.

•	Top Achievers:	Male	Female
		Akwa Ibom- 52.63	Benue - 54.03
		Benue - 52.53	Borno - 52.58
		Bauchi - 52.11	Gombe - 51.51

• Gender appeared to have a **stronger** influence in learners' achievement at the state level, and this needed to be slightly pronounced amongst female learners in both test forms.



Mean Score in Basic Science and Technology Essay and multiple Choice Tests *Note:*

- *i.* Score in multiple choice are out of the parentheses
- *ii.* Score in essay are in parentheses

	Multiple Choice				Essay			
STATE	MALE		FEMALE		MA	LE	FEMALE	
	Mean	SE	Mean	SE	Mean	SE	Mean	SE
ABIA	51.42	0.87	52.21	0.79	49.39	0.99	50.01	1.03
ADAMAWA	50.19	1.24	47.27	1.06	49.86	1.09	48.95	1.11
AKWA-IBOM	51.68	0.83	52.30	0.86	52.63	0.93	50.47	0.93
ANAMBRA	52.30	0.85	51.98	0.81	48.85	1.03	49.13	0.88
BAUCHI	45.99	0.84	45.54	0.90	52.11	1.03	49.70	1.06
BAYELSA	47.17	1.25	47.45	1.27	49.24	1.57	47.76	1.74
BORNO	47.36	0.73	47.30	1.05	49.07	0.93	51.58	1.24
BENUE	46.87	1.13	47.61	1.89	52.53	1.69	54.03	2.38
CROSS RIVER	51.63	0.85	53.03	0.95	50.09	0.90	49.80	1.07
DELTA	53.26	0.90	54.29	0.89	49.13	1.02	48.26	1.06
EBONYI	54.84	0.82	53.83	1.01	49.93	0.93	48.80	1.05
EDO	51.30	1.01	52.82	0.92	48.64	1.16	49.22	1.19
EKITI	53.73	0.82	52.68	0.81	48.19	0.88	49.56	0.94
ENUGU	53.04	0.94	52.97	0.87	48.19	0.98	48.37	0.89
GOMBE	40.45	0.56	40.92	0.65	50.25	0.88	51.51	1.08
IMO	54.07	0.94	53.79	0.81	50.46	1.00	50.89	0.88
JIGAWA	46.50	0.91	46.35	0.85	49.61	0.96	50.78	1.00
KADUNA	45.28	0.72	45.31	0.82	48.87	0.95	49.39	0.99
KANO	51.78	1.37	49.50	1.62	50.24	1.14	50.54	1.54
KATSINA	49.89	1.01	51.98	0.96	49.92	1.00	49.70	1.05
KEBBI	51.78	1.04	52.35	1.39	49.55	0.98	50.16	1.30
KOGI	49.47	1.01	48.39	1.17	50.43	1.05	47.97	1.19
KWARA	51.45	0.90	52.95	1.04	49.24	0.93	47.83	0.84
LAGOS	57.92	0.78	56.77	0.71	48.69	1.10	48.88	0.85
NASARAWA	47.21	1.59	44.83	1.23	49.20	1.28	49.35	1.31
NIGER	51.48	1.56	49.65	1.37	50.27	1.29	50.70	1.15
OGUN	51.49	0.91	50.46	0.86	51.16	1.10	48.67	0.98
ONDO	50.34	0.92	51.29	1.11	48.61	0.88	50.35	1.06
OSUN	54.64	0.74	54.14	0.78	49.55	1.01	48.93	0.94
ΟΥΟ	48.07	0.76	49.43	0.75	50.00	1.03	48.32	0.90
PLATEAU	44.97	0.77	45.10	0.86	51.00	1.11	50.88	1.13
RIVERS	51.60	0.86	53.41	0.78	48.23	1.08	48.54	0.87
SOKOTO	40.14	0.39	40.87	0.58	49.34	0.83	49.54	1.06
TARABA	42.77	0.61	42.90	0.77	50.27	0.83	48.93	1.04
YOBE	49.68	0.94	50.23	1.01	49.87	1.04	49.28	1.19
ZAMFARA	50.33	0.83	51.21	1.24	48.20	0.79	48.79	1.24
FCT	59.11	1.20	55.87	1.34	49.46	1.31	50.66	1.37
NATIONAL	49.77	0.16	50.38	0.17	49.65	0.17	49.48	0.17

Distribution of mean scores on Essay and Multiple choice tests based on gender across States

ACHIEVEMENT AT STATE LEVEL: CONTENT DOMAINS

YOU AND YOUR ENVIRONMENT

- National Average 50.97
- Learners in 19 States and FCT scored above the National Average with top achievers: Lagos (63.69) and FCT (63.36).
- Achievement was **Poor** in three states, **Fair** in 12, **Good** in 20 and **Very Good** in only two.
- Overall, achievement on the content domain was **Good**.

SCIENCE AND DEVELOPMENT

- National average 27.95
- Achievement on the content domain Science and Development was **Poor** as learners in all states obtained scores below 40 percent. That is, the entire sample of learners **failed** items which examined the content.

LIVING AND NON-LIVING THINGS

- National Average 52.58
- Learners in 22 States and FCT scored above the National Average with FCT (64.76) Lagos (63.91) Osun(60.26)and (Ebonyi) 60.14 being the top achievers.
- Achievement was **Poor** in three states, **Fair** in eight Good in 22 states and **Very Good** in four others.
- Overall, achievement was **Good** on the content domain.

YOU AND YOUR ENERGY

- National Average 31.39
- Achievement on the content domain on you and your energy was **Poor**.
- Similar to content on Science and Development, learners in Nigerian Junior Secondary School Three **Failed** in the test items which examined this content.

ACHIEVEMENT IN SOCIAL STUDIES



• The National Average of 50.0 and 50.15 are better indications that the learners in JSS 3 had demonstrated the same level of mastery in both tests.

Distribution of score for Multiple Choice and Essay Tests





National distribution of scores

- A notable observation was the progressive increase in each cluster, with a peak at the 50-59 percent cluster, and dropped at the 60-69.
- None of the learners achieved at the Excellent cluster (70-100).
- About 37 percent and 28 percent of learners' achievement in the Multiple Choice and Essay tests respectively were within the score cluster 50-59.
- A larger proportion of learners (27.5 and 25.5 percent) were within the clusters 40-49 and 60-69 in the Essay tests more learners (18.9 percent) failed in the Essay than in the Multiple Choice tests.
- More than 53 percent of the learners' achievements were within the combined cluster 50-69 percent in both test forms.

PERCENTILES



- Achievements in both test forms hanged together and having low variations at each percentile.
- Learners obtained higher scores in the Essay test than in the Multiple Choice test at the 10th, 75th and 90th percentile. Suggesting that items in the Essay test were relatively easier to the learners at these percentile points.

Percentile scores in multiple choice and essay tests for JSS 3 Social Studies



 Nationally, learners' gender and school location had weak influence on achievement.



Achievement in essay and Multiple Choice by school location

Learners' achievement across Geo-political Zones

- Learners' achievements on both test forms were similar within and between zones in both test forms.
- The three southern zones obtained higher scores in the Multiple choice test while the three northern zones had higher scores in the Essay test.
- Learners from North West, South East, South South and South West scored above the National Average for the social studies Multiple choice test.



ACHIEVEMENT AT STATE LEVEL: GENDER

- National Average: Male learners 49.90, Female learners 50.44.
- Male learners from 21 States and FCT scored above the National Average.
- Female learners from 17 States and FCT scored above National Average.
- Scores were generally homogeneous within states, except Benue State with a 10 percent difference between male and female learners.
- Female learners from Ebonyi State (57.68), FCT (57.15) and Lagos (56.66) outperformed their counterparts in other states.
- Male learners from Osun (57.25), Lagos (56.81) and Ebonyi (56.65) outperformed their male counterparts in other states.
- Male learners from 20 States and FCT obtained higher scores than their female counterparts.
- Gender had a stronger influence at the state level, and perhaps slightly in favor of male learners in JSS 3 Social studies.

ACHIEVEMENT AT STATE LEVEL



Mean Score in Social Studies Essay and Multiple Choice tests *Note:*

- *i.* Learners' score in multiple choice are out of the parentheses
- *ii.* Learners' score in essay are in parentheses

ACHIEVEMENT AT STATE LEVEL: CONTENT DOMAINS

SOCIAL ISSUES AND PROBLEMS

- National Average 70.92 percent.
- Learners in 18 States and FCT scored above the National average with Osun (85.68) Ebonyi (84.75) Lagos (84.42) and FCT (82.53) being the top achievers.
- Achievement was Fair in only one state, Good in five Very Good in 10 and Excellent in 21 others.
- Overall, learners' achievement on the content domain in JSS 3 social studies was Excellent.

SCHOOL AND COMMUNITY

- National Average 59.81 percent.
- Learners in 18 States and FCT scored above the National Average with Lagos (75.94) Ebonyi (75.56) Osun (75.16) FCT (73.84) and Imo (70.18).being the top achievers.
- Achievement was Poor in only one state, Fair in eight, Good in 10 Very Good in 13 others and Excellent in five states.
- Overall, achievement on this content was **Very Good**.

FAMILY I, FAMILY II

- National Average 82.90 percent.
- Learners in 19 States and FCT scored above the National Average with Osun(93.19) Lagos (92.95) Ebonyi (92.78) and FCT (92.52) being top achievers.
- Achievement was Very Good in three states and Excellent in 34 others.
- Generally, learners' achievement on the Content Domain: Family I and Family II, was Excellent.

NATIONAL ECONOMY

- National Average 44.50 percent.
- Learners in 17 States and FCT scored above the National Average but none of the states had outstanding achievement in this content.
- Achievement was Poor in 15 states, Fair in 9, Good in 9 states and Very Good in four others.
- Generally, learners' achievement on this Content Domain was **only Fair**.

IMPLICATIONS FOR POLICY AND PRACTICE

The findings of this study have raised a lot of issues relating to the foundations and structure of education in the country. These principally relate to the policies and operation of the entire education system, a matter that affects all the bodies that bear the responsibility for it at all levels. Indeed, the formulation of policies and implementation of Basic Education in Nigeria rest on a tripod, the Federal Government through the UBEC; the State Governments, through the SUBEBs; and the Local Governments, through LGEAs. The findings that emerged from this study have many implications, both for policy and the practice of basic education within its overall goals of access, equity and quality.

The improvement and sustenance of quality of education require, among other factors, a friendly school environment, a competent and well-motivated teaching force; and the optimum deployment of teaching and learning resources in the schools. After eighteen years of implementing the UBE Programme, this study still found these requirements were far from being met. With respect to the development of a friendly school environment, the schools need to first be made secure with respect to the learners and the school property. The Federal Government/UBEC should, therefore, have an established policy that provides all schools with perimeter wall fencing, together with a gate house and adequate security personnel.

In view of the findings of this report, the UBEC needs to formulate and implement policies on 'Water for All' and 'Toilets for All' in all schools in the country. Furthermore, in order to improve the friendliness of the schools, UBEC and the SMOEs should act to implement the National Policy on Sports and Recreation, which was approved by the National Council on Education in 2016.

In order to facilitate effective teaching and learning in all schools, the Federal Government should ensure UBEC supplies textbooks to every learner in basic education, especially in the core subjects. Similarly, it should encourage the SUBEBs, through the State Ministries of Education, to supply furniture, laboratories, libraries, teachers' textbooks, teachers' guides and syllabi.

The current rate of school dropout has a negative impact on literacy and increases the number of out of school children in the country and hampers the realisation of the SDGs. This calls for the enforcement of the provisions the UBE Act on free and compulsory education.

This study has demonstrated that little or no provision has been made for learners with special needs. UBEC should enforce the current policy provisions on the education of all learners and teachers with special needs.

The achievement of learners varied across subjects, objectives and states. The level of and disparity of learners' achievement across subjects and objectives need to be investigated and addressed. Organisations like NERDC and associations like Science Teachers Association

of Nigeria, Mathematics Association of Nigeria and National Association of Education Evaluators and Researchers among others should play important roles in this regard.

The variations among states in achievement in content and objectives domain needs to be further investigated and should be factored in future studies. Of particular interest should be how the utilisation of UBE funds has impacted on the States' achievements.

Teachers are central to effective teaching and learning. Their commitment to and competence in teaching is, therefore, fundamental to quality education delivery in the country. One of the principal complaints of the teachers and against their job is often the poor pay and lack of residence within the host communities of their schools. In this regard, the Federal should encourage the State Governments to implement the Teachers Salary Structure (TSS). There should also be a national housing policy for teachers, so that they can build or acquire houses and live within the host communities of their schools; as this will create greater teacher-learner interaction in the schools and within the communities in which they work.

This study has found out that in spite of the many years of professional development of teachers a substantial number of teachers have not yet benefited from the programme while many benefited many times. In order to enhance the competence of the teachers, government should also intensify its implementation policy on regular capacity building and enrichment programmes for all teachers and redress this anomaly. This study has identified areas where teachers expressed need for training for example the selection and use of appropriate teaching methods. Such needs should be factored in the design of professional development programmes for teachers.

The supervision of schools should be intensified, in order to ensure that teachers use varieties of teaching methods for more effective teaching, apart from the demonstration method, which is the dominant method in use now. Similarly it should ensure that schemes of work, lesson notes/plan are developed and used appropriately.

The shift system has been found to be still in operation in some schools. This negatively affects the time spent on teaching and learning in the schools. To check this, the Federal Government, through UBEC, should enact a policy against the shift system and encourage SUBEBS to build more schools and classrooms.

The Federal Government should step up its Social Investment programme, in order to empower poor parents; as poverty was identified to be one of the principal reasons for the inability of the parents to support the education of their children.

In the Nigerian school system the Parents Teachers Association (PTA) plays a supportive role in the education of their children. The UBEC should encourage SUBEBs to sustain an excellent relationship with the host communities. Consequently, UBEC and the States Ministries of Education should promote the participation of parents in the host communities of schools to attend their local PTA meetings and the election of a responsible leadership, for the greater involvement of the communities in the management of their local schools. After all Education for all is the responsibility of all.