ASSESSMENT OF LEARNING ACHIEVEMENT OF PRIMARY SIX (6) PUPILS IN FOUR CORE SUBJECTS, IN SOUTH EAST STATE OF NIGERIA.

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Abstract

The research paper focused on Assessment of Learning achievement for both Public and Private Primary School pupils in South-East Nigeria. A descriptive survey design was used. The sample size for the study was 4,043 pupils and was restricted to primary six (6) pupils, made up of 2,010 males and 2,033 females. Three research questions and two null hypotheses guided the study. Instrument for data collection was 110 test items developed by the researcher in the areas of English, Mathematics, Primary science and Social studies. The instrument was given to the Experts for face and construct validity and was finally subjected to a reliability test, using Kudar-Richardson formula 20(K-R 20) which yielded a reliability co-efficient of 0.82. The test instruments were administered to the pupils with the help of Research Assistants. Mean, Standard deviation and Percentage were used to answer the research questions while t-test and Chi-square (x^2) statistics were used to test the null hypotheses at 0.05 level of significance. The results of the findings revealed that both male and female primary 6 pupils are very poor and have very low competencies in English, Mathematics, Primary science and Social studies. It is therefore recommended that the Federal Government of Nigeria should mount training and retraining programmes for the teachers on the method of teaching the pupils Mathematics, English language, Primary science and Social studies. In addition to supply of adequate textbooks. Also Supervision Team to monitor classroom teaching and learning should be set up among other recommendations

Key words: Core subjects, Assessment, Learning achievement and South-East States of Nigeria.

Introduction

In pursuit of educational aspirations, successive governments have set up universal functional education for all. This explains why government budget much money on education every year. The huge investment on education is

justifiable only to the extent that schooling is effective in promoting the realization of national objectives and serves as a mean of actualizing the basic learning needs of those exposed to the system. The extent to which schooling meets the basic learning needs of the learners can be ascertained through assessment. The Jomtien Declaration in 1990 and the follow-up framework for Action adopted at the World Education Forum in Dakar, Senegal in April 2000, recognized the quality of education as a crucial component in the broad movement of achieving Education for All (Worldbank,2013). Goal 6 of the Dakar Framework states that all aspects of education quality should be improve so that recognized and measurable learning are achieved by all. According to World Bank (2013), Learning achievement include knowledge, skills or behaviour that students are expected to exhibit after a period of study. Learning achievement reflect the nation's concern with the level of knowledge acquisition among its students population. In his own view, Byu (2013) States that learning outcomes are what a student is expected to be able to "Do", as a result of a learning activities. In other words, "Do" suggests what skill, knowledge or behaviour a student is able to demonstrate as a consequence of a learning activity. Jude (2001) states that learning achievement are what the students will do that demonstrates learning, the context within which the student will demonstrate learning and how well he/she have to demonstrate his/her learning. He further stressed that, learning outcomes must be something to be observed. This is why Kennedy, Hyland and Ryan (2006), state that learning achievement are direct statements that describe the competences that student should know and be able to demonstrate upon completion of a course or programme. The researcher succinctly states that learning outcomes are the extent to which the learner/student is able to perform tasks after he/she has been taught or exposed to instructions/programmes. Assessment of learning achievement , can be defined as a systematic process of collecting, analyzing and interpreting data on a measured performances of the students/learners with a view to determine the extent to which the learners are achieving the instructional objectives . On the other hand, assessment of learning achievement should flow from needs assessment, and the need assessment should determine the gap

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between an existing condition and a desired condition (American Association of Law Libraries,2013). Therefore, it is the desired conditions expected from the students that are to be assessed. Proper assessment of learning achievement should be based on student behavior, appropriate assessment methods and specific student performance criteria for success. In view of the above therefore, the assessment should cover the basic domains. Starting from the lowest to the highest cognitive skills of knowledge, comprehensive, application, analysis, synthesis and evaluation.

The Federal Government of Nigeria in Conjunction with United Nations International Children Education Scientific and Cultural Organization (UNESCO), laid a foundation of a national assessment in Nigeria primary education in 1997. The assessment which was carried out nation-wide was called "monitoring of learning achievement" (Falayajo, Makoju, Okebukola, Onugha, and Olubodun, 1997). In that national assessment of primary education, primary four (iv) pupils were selected and their curriculum used in the test item development. However, due to logistics problems the administration of the test was delayed and it was administered to the pupils after their 1st term in primary five (v) of 1995/1996 academic session. The results of the assessment exercise revealed very low performances of pupils nation-wide in the three competency areas assessed. The national performance of 6,233 pupils tested were: For Numeracy test, the mean was 32.2 and standard deviation of 17.04. The Literacy tests had a national mean of 25.2 and standard deviation of 18.19 and Life-skill tests had a mean of 36.86 and standard deviation of 21.16.

Other researchers such as Kachii (2005) and Ikoro (2009) made similar findings thus; Kachii (2005) assessed the performance of primary 6 pupils of Staff School Jalingo. His sample size was 99 pupils. The results revealed a very poor performance of the pupils with mean of 25.90 and standard deviation of 7.17. Then, Ikoro (2009) computed the mean performance of primary school pupils in the Common Entrance Examinations for 2001 and 2005 and found out that their average mean performances were 19.75 for 2001 and 18.75 for 2005. In all the cases sited above, the pupils' performances or competency levels were very low and poor. According to Falayajo et al (1997), the poor performance by the pupils

at the penultimate to completion level of primary education, constitutes a cause for concern and has implications for curriculum planning, teacher education and classroom teaching-learning process.

1.2 Statement of Problem

Over the years, individuals and groups have raised alarm over the perceived falling standard of education especially at the primary school level. The South-East States are left out, because they were part of the assessment 1997. It therefore, becomes imperative that the study should be carried out in these states to ascertain the performance of primary six(6) pupils. The researcher is therefore, faced with the challenge of assessing the learning achievement of primary six(6) pupils as to ascertain their level of competencies in Mathematics, English, Primary science and Social studies.

1.3 Purpose of the Study

Generally, the purpose of the study was to assess the learning achievement of primary six (6) pupils in South-East, Nigeria. Specifically, the study determined to find out:

1. The extent to which primary six (6) pupils show level of competencies in Mathematics, English, Primary science and Social studies.
2. The performance of male and female pupils in the four test forms.
3. The proportion (male or female) that will perform better or show greater mastery of the competencies in the tests.

1.4 Scope of the Study

The study focused on the Assessment of learning achievement of primary six (6) pupils in South-East Nigeria. It was restricted to primary 6 because they will pass into the Junior Secondary School. Equally, the Federal Ministry of Education in Nigeria in conjunction with the UNESCO used primary four (4) pupils in their own assessments of other states in Nigeria. Therefore the researcher want to assess the primary six (6) in South-East States, Which are Abia State, Anambra State, Ebonyi State, Enugu State, Imo State.

1.5 Research Questions.

These research questions guided the study.

1. To what extent does the primary six pupils show level of competency in Mathematics, English, Primary science and Social studies.
2. What is the performance of male and female pupils in the four test forms.
3. What proportion of the pupils (male or female) that will perform better or show greater mastery of the competencies in the tests.

1.6 Research Hypotheses

The hypotheses were tested at 0.05 significant level.

HO_1: There is no significant difference in the mean scores between male and female of primary 6 pupils in each of the test forms.

HO_2: There is no significant difference in the proportion of primary 6 pupils performance in favour of any sex groups, male or female.

1.7 Design of the Study

The study adopted a descriptive survey design because it seeks to find out and describe the learning achievement of primary 6 pupils on the tests.

1.8 The Population of the Study

The population of the study comprised all the 2160 public and 516 private primary schools in South-East States of Nigeria. Their population is 58,629 primary 6 pupils in public schools and 10290 primary 6 pupils in private schools, making a total of 66,919 primary 6 pupils. This population is made up of 32,615 males and 34,304 females.

1.9 Sample and Sampling Techniques

Out of the population, a total of 6,691 primary 6 pupils was selected which 3,261 males and 3,430 females from the sampled schools of 205 public primary schools and 63 private primary schools. Furthermore 10% was used to draw the pupils sample and select the schools. A stratified random sampling technique was used for the selection, because the schools are already in strata. These are appropriate because according to Nwana (2008), if a population is in several thousand, a 10% or less sample will do.

1.10 Instrument for Data Collection

The instrument for data collection was developed by the researcher titled: Assessment of Learning achievement questions (AOLAQ).

The instrument covered four thematic areas namely: Mathematics, 40 items, English language 55 items, Primary Science 40 items and Social studies 25 items, given a total of 160 items.

1.11 Validity and Reliability of Instrument.

The draft instrument was face and construct validated by five experts. Two from Measurement and Evaluation, one from Mathematics and one from English Language, one from Primary Science and one from Social studies Ebonyi State University Abakaliki. The instrument was validated on the followings: item structure, as it pertains to the age and class of the pupils, general test format and appropriateness of the sub-heads and the clarity of the items. After the validation, 25 items were dropped. The remaining 135 items were restructured in line with the recommendations of the experts and were administered to a group of pupils who were not part of the sampled group. Scores generated from the instrument were further subjected to a reliability test, using Kuder-Richardson formula 20 (KR-20).

2. Method of Data Collection And Analysis

The researcher administered the tests to the pupils with the Assistance of the classroom teachers, after they have been trained on how to carry out the exercise in the selected primary schools. The data collected were analyzed using mean and standard deviation to answer the research questions while the hypotheses were tested using T-test and chi-square (x^2) statistics.

The instrument yielded a reliability co-efficient of 0.72. The reliability of the sub scales are Mathematics 0.67, English language 0.87, Primary Science 0.61 and Social studies 0.73

The development of final instrument for the core subjects is presented below.

Mathematics	Number/numeration 6	Fractions 6	Measurement 6	Every day statistics 6	Geometry 6	**Total 30**
English Language	Structure 15	Reading comprehension (guided) 5	Completion of blank spaces 10	Writing guided letter 15	Spelling 5	**50**
Primary science	Weather/Climate 6	Photosynthesis 6	Magnetism 6	Pollination 6	Sources of good water 6	**30**
Social study	Family 5	Marriage 5	People culture 5	Transportation 5	Traffic signs 5	25
Total mean	32	22	27	32	22	135

RESULTS Research Question I

To what Extent do the primary six (6) pupils show level of competencies in Mathematics, English, Primary science and Social studies.

Table 1: Mean scores and standard deviation of pupils on their level of competencies in the three test forms.

Test form	Number of Pupils	Mean	SD
A. Mathematics		35.8	18.02
B. English Language	**6691**	24.43	13.14
C. Primary science		35.34	16.93
D. Social studies		31.85	16.93
Grand mean		31.82	16.82

The data in table 1, above show that the pupils competency in Mathematics is below 50.00 which is the acceptable mean score for all the subject. Mathematics 35.8, Primary science 35.34and Social studies 31.82 respectively while English has the least mean score of 24.43. In all, the grand mean is 31.82 with SD 16.82 which is very poor.

Research question 2
What is the performance of male and female pupils in the three test forms.

Table 2: Mean performance (score) of male and female pupils in the three test forms.

Test Form s	Male 3261 Mean SD		FEMALE 3430 Mean SD	
A. Mathematics	34.3	17.32	36.15	18.97
B. English Language	25.26	12.23	23.6 0	14.06
C. Primary science	35.07	17.66	34.62	15.81
D. Social studies	31.54	15.66	31.45	16.28
Grand mean	31.52	15.68	31.47	16.32

The data in table 2, above reveal that females have a higher mean of 36.15 with SD 18.97 than males with mean of 34.3 and SD 17.32 in Mathematics. In English male has 25.26 with SD 12.23 higher than female with mean of 23.60 and SD 14.06 while in Primary science male also perform slightly higher than female with mean of 35.07 and SD of 17.45 and female mean of 34. 62 and SD of 15.81. In Social studies male has 31.54 with SD 15.66 and female has mean of 31.45 with SD 16.2.While the grand mean is almost the same with male 31.52 mean and SD 15.68 while female is 31.47 mean and 16.32 SD.

Research Question 3:
What proportion of the pupils that perform better or show greater mastery of competencies than the other in the four test forms.

Table 3: Proportion and Percentage of Male and Female Pupils who passed each test form

Test Forms	Male = 3,261		Female = 3,430	
	No of correct response	Percentage of correct response	No of correct response	Percentage of correct response
A. Mathematics	1215	42%	1376	45%
B. English	968	32%	917	30%
C. Primary science	1029	34%	1014	33%
D. Social study	958	31%	1008	31%

The data in table 3 above, show that the female pupils have a high proportion of 45% that the male pupils with 42% in Mathematics. Then males have a higher proportion for English with 32% and female 30% , in Primary science male proportion is 34% higher than female's with 33 and sexes scored 31% each. Therefore, for the four test forms, males have higher proportion in two test forms (English and Primary science), and so performed better than the females; who have higher proportion **Ho₁**only in one test form; and that is 45% for Mathematics. There is no significant difference in the mean score (performance) between male and female primary 6 pupils in the test forms.

. Table 4: T- test analysis of mean scores between male and female primary 4 pupils in the test forms

Gender	N	X	SD	Dt	T-cal	T-crit	Decision
Male	3261	31.52	15.66				
Female	3430	31.47	16.32	6,689	0.64	1.96	HO1 Accepted

Table 4, showed the mean values of males and females on their performance in the tests. The males had a mean value of 31.52 and standard deviation of 15.68. while the female had 31.47 with standard deviation of 16.32. The T- test analysis indicates that t-cal had 0.64, while t-crit is 1.96. This analysis showed no statistically significant difference in the score (performance) of males and **Ho₂:** females pupils in the test formats. There is no significant difference in the proportion of primary 6 pupils' performance in the tests, based on sex.

Table 5: *Chi square (x^2) summary of the proportion of primary 6 pupils' performance in the tests based on gender/sex.*

Sex	Counts	Mathematics	English	Primary science	Social study	Total	X^2cal	Df	X^2crit
Male	Observe	42	32	34	31	139			
	Expected	19.5	14.8	15.7	15.3	65.0			
Female	Observed	45	30	33	31	139	6.93	2	5.99
	Expected	20.8	13.9	15.3	15.0	65.0			
Total	Observe	87	62	67	62	278			
	Expected	40.3	28.7	31.0	30.3	130.3			

 In the table 5 above, the analysis of male and female pupils on their proportional performance in Mathematics, English, Primary science and Social Studies have a x^2 calculated value of 6.93 and the x^2 crit of 5.99.

This analysis revealed a significant difference in the proportion of primary 6 males and females performance. This further confirm the findings in table 3. That out of the four test forms males have higher proportion in English and Primary science while females have a higher proportion only in Mathematics, with equal proportion in social studies.

3.Result and Discussions

The discussion is made under the following sub headings

- Primary 6 pupils level of competencies on Mathematics, English, Primary science and Social studies.
- The performance of male and female pupils in the four test forms.
- The proportion of the sex group that performed better than the other.
- If there is significant difference in the mean scores between males and females.
- If there is significant different in proportion in favour of any sex group.

The findings of the study showed that primary 6 pupils level of competencies in Mathematics, English, Primary science and Social studies are very low and poor as shown in table 1 with the mean 35.8 and SD 18.02 for Mathematics, English has a mean of 24.43 and SD of 13.14; and the average mean is 31.82 with SD at 16.82. This finding is in agreement with the findings of Falayago *et al* (1997), where they reported the pupils national performance thus:

Mathematics had 32.2 and SD 17.04, English mean was 25.2 and SD 18. 19 and life-skills had a mean of 36.86 and SD of 21.16. This they declared as a very bad performance. Equally, this finding is in line with the report of Ikoro (2009) on the poor performance of pupils in Common Entrance Examination where they had the state average mean performance of 19.75 for 2001 and 18.75 for 2005.

On the performance of male and female primary 6 pupils, the data in table 2, revealed that females have higher mean of 36.15 with SD 18.97 than males, who have mean of 34.3 and SD of 17.32 in Mathematics. Then in literacy, males have 25.26 mean with SD of 12.23 higher than females with mean of 23.60 and SD of 14.06. While in Primary science, males also performed slightly higher than females, with mean of 35.07 and SD of 17.66 as against female mean of 34.62 and SD, 15.81 while Social studies is 31.52 mean with 15.66 SD and 31.45 mean with 16.28 for male and female. However the grand mean performance of males and females is almost the same, because males have 31.52 with SD 15.68 and females have mean of 31.47 with SD 16.32. In all both performances are very poor.

For the proportion of the sex group that performed better than the other, the data in table 3 showed that for the four (4) test forms females have a higher proportion of 45% for Mathematics against the males proportion of 42%. On the other hand, males have higher proportion of 32% against females 30% for English and for Primary science males also have 34% higher than females with 33%. Both had almost the same percentage score for Social studies. Therefore, for the four test forms, males have higher proportions in two test forms which are English and Primary, while females have a higher proportion only in one test form and that is on Mathematics.

The findings in table 4, revealed in general terms that, there is no significant difference in the performance of males and females primary 6 pupils in the tests of Mathematics, English, Primary science and Social studies hence their performances are very low.

The findings of this study are in agreement with the findings of Falayojo et al (1997), kachii (2005) and Ikoro (2009) who variously stated and lamented on the very poor performances of primary school pupils and called for urgent

remedial measures to be taken.

However, data in table 5 showed that there is significant difference in the proportion of primary 6 pupils performance in favour of males. It implied that males have higher performance as can be observed from the data in table 3.

Conclusion and Recommendations

Primary Education is a foundation upon which every other education system rest and a key to the success or failure of the whole system (Federal republic of Nigeria 2004).Therefore the following conclusions are made based on results of the investigation achievement, which has a far reaching educational implications thus; The Learning outcomes indicated that the primary school pupils have a very low competencies in Mathematics, English, Primary science and Social. Both males and females performed poorly in the four areas.

This very poor performance of the pupils will be disastrous as they move to secondary and university levels. It therefore calls for urgent attention from all stake holders to forestall the ugly trend.

Based on the findings of this study. The following recommendations are made.

1.   Training and retraining programmes for teachers, in the subject areas, such as English studies, Mathematics and   Primary science

And Social studies should be mounted possibly during long vocations by the Governments.

2.   Government should supply to the teachers and pupils the relevant textbooks and materials in these subject areas.

3.   There should be effective supervision and monitoring of schools and teachers in the classrooms by the concerned authorities to ensure effective teaching and learning of the correct contents.

4.   Head teachers and teachers should be made to adhere to the official school time table and to ensure that all the lessons for each day are adequately taught and covered.

5.   Government and stakeholders should develop quality assurance mechanism to enhance sustainable better learning achievement .

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